

## **TRANSCRIPT**

**INTERVIEWEE:** David Parsons

**INTERVIEWER:** David Todd

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**David Todd** [00:00:02] Well, good afternoon.

**David Todd** [00:00:04] I am David Todd, and I have the privilege of being on the line with Dave Parsons. And with his permission, we plan on recording this interview for research and educational work on behalf of a non-profit group called the Conservation History Association of Texas, and for a book and a website that are underway for Texas A&M University Press, and finally, for an archive at the Briscoe Center for American History, which is based at the University of Texas at Austin.

**David Todd** [00:00:35] And I want to stress that he would have all rights to use the recording as he sees fit.

**David Todd** [00:00:40] And I just want to make sure that sounds like a good plan to you, Mr. Parsons.

**David Parsons** [00:00:50] I guess I must have missed something. What did you, what were you asking me to do?

**David Todd** [00:00:57] Well, I just wanted to make sure that this plan for a recording of your interview is acceptable to you.

**David Parsons** [00:01:05] Oh, absolutely. Yeah.

**David Todd** [00:01:07] Okay, good. Good. I don't want this to be a involuntary interview, and I want to make sure that you're signed on and agreeable to it.

**David Todd** [00:01:19] Okay. Well, good. Well, let's get started.

**David Todd** [00:01:22] It is Saturday, April 20th, 2024. It's about 4:15 P.M., Central Time, or 3:15 Mountain Time, where Mr. Parsons is.

**David Todd** [00:01:35] My name is David Todd, and I am representing the Conservation History Association of Texas, and I am in Austin.

**David Todd** [00:01:44] We are conducting this interview with, Mr. Parsons remotely. He is based in Albuquerque, New Mexico.

**David Todd** [00:01:52] Mr. Parsons received his B.S. In fisheries and wildlife biology from Iowa State University and his M.S. in wildlife ecology from Oregon State University. He has worked as the Mexican Wolf Recovery Coordinator for the U.S. Fish and Wildlife Service, and has had a number of other jobs as well.

**David Todd** [00:02:15] And he's also worked in the non-profit field at the Rewilding Institute, Project Coyote, and New Mexico Wilderness Alliance. He's been a consultant with Parsons Biological Consulting, and he's worked in the educational field at Prescott College and the University of New Mexico.

**David Todd** [00:02:36] Today we'll talk about Mr. Parsons' life and career to date, and especially focus on what he can tell us about the Mexican gray wolf, its natural history, its protection and its restoration.

**David Todd** [00:02:49] So, with that little introduction, I thought we might get started with a question about your childhood and if there might have been people or events in your early life that influenced your interest in animals and predators and wolves in particular.

**David Parsons** [00:03:09] Sure. I was born and raised in central Iowa on a family farm. We were sharecrop farmers on family-owned land that belonged to my mother's family. And, it was, you know, a typical rural upbringing on a Midwestern farm, I guess. A lot of work and a lot of open spaces to roam and things like that.

**David Parsons** [00:03:39] We, you know, we didn't have a lot of wildlife around because most of the tillable land was tilled and farmed. The habitat on the farm would have been fence rows, and we did have a meandering stream. But I can remember sometime in my youth when the government came in and channelized that stream right through the farm, which I thought wasn't necessarily needed, but it was done anyway. And any of the wet draws might have had vegetation were tiled and drained so more land could be farmed.

**David Parsons** [00:04:20] Wildlife we grew up with were pretty much rabbits and pheasants and. Occasionally, we had to go a few miles to find squirrels because we didn't have any trees, so.

**David Parsons** [00:04:37] We, like most farm kids, spent a lot of time outdoors. We hunted what there was to hunt, and ate everything we hunted. I did a little bit of trapping for muskrats in the streams and sold those pelts so I'd have a little money to spend at the state fair (waste at the state fair, as you might know).

**David Parsons** [00:05:02] So, it was, some people might think, I guess, pretty idyllic in that we were quite isolated from troubles of the world and eking out our living on the farm.

**David Todd** [00:05:18] Was there anybody in your early days that taught you some of these skills - you know, how to trap muskrat or how to shoot squirrels?

**David Parsons** [00:05:29] Well, you know, it was my father that taught us how to hunt. An interesting story. I mean rabbits and pheasants are pretty straightforward - you jump them and flush them, shoot them.

**David Parsons** [00:05:44] But my dad taught us a quite interesting technique for hunting squirrels. There was probably a square mile of timber about 3 or 4 miles from the house. He knew the owner, and the owner allowed us to go squirrel hunting there. We would always go with my dad when we were younger. And we would walk into this patch of timber and there was a little ravine running through it, and a big, tall cottonwood tree on one side of that ravine. We followed dad in, and he would go to the bank opposite in that cottonwood tree and

just lay down on his back and start looking. And we'd lay down our backs. And we'd start looking. We might even take a short nap. But, we'd look and he'd look for seemed like about an hour.

**David Parsons** [00:06:39] Then he'd look at us, and he would just start pointing out with his finger all the squirrels that were resting on branches up in that tree. And then he'd assign us each a squirrel to shoot at. It was not your normal, I didn't think it was a customary squirrel hunting technique, but it was very effective.

**David Todd** [00:07:06] Interesting. So, he was a very observant person.

**David Parsons** [00:07:09] Well, yes. Yeah.

**David Todd** [00:07:14] Now, were there any peers, you know, either your siblings or your friends from the community that also shared this interest or time outdoors.

**David Parsons** [00:07:30] Well, it was just me and my two brothers basically. I'm the middle. Older brother was two years older and my younger brother was four years younger. And we had maybe one or two people that we played with, associated with, because, you know, your neighbors were all about a mile away. So, it wasn't like you could just walk next door and find a playmate. So, mostly we hung out together, you know, in our youth.

**David Todd** [00:08:05] Okay. Well. So, I think, as we discussed before, you received several degrees - a B.S. in Fisheries and Wildlife Biology from Iowa State and a M.S. in wildlife ecology from Oregon State. And I'm wondering if there were any folks that you met, either in that higher education phase of your life, or maybe in grade school, who, you know, shared this interest, maybe encouraged your interest, in the outdoors and animals.

**David Parsons** [00:08:42] Well. Not really, I guess. So, the story is that because we did not own the land that we farmed ... There was 240 acres that were three connected 80-acre farms that belonged to my mother's parents. And my mother had two siblings. And so the inheritance pyramid would give her 80 acres. And if we wanted to stay in farming, my brothers and I would have to split 80 acres.

**David Parsons** [00:09:18] And I credit my father, really, and my mother, for telling us early on that they didn't think, because of the way farming was changing back then (it was a transition from family farming to more corporate farming that was just starting the late 60s), they told us straight out they didn't think there was much of a future for us in farming, that we should go to college.

**David Parsons** [00:09:45] Nobody in our family had ever gone to college. My dad had 12 brothers and sisters, and only one of those went to college. It was the one that had had polio in his youth - Uncle Lowell. So, we were strongly encouraged to go to college.

**David Parsons** [00:10:06] My older brother went first. He went to Iowa State University. You know, we had to go to a state school to afford it. So and there were only two in Iowa. And Iowa State University was the ag school, and University of Iowa was the liberal arts school. So, we knew we were going to Iowa State.

**David Parsons** [00:10:26] My brother went first. He majored in forestry - my older brother. It came time for me to go to college and I showed up on campus in I started signing up. And they

said, "What do you want to major in?" I said, "I don't know." And so, they handed me a book of all the possible things you could major in at Iowa State University. I hit on Fisheries and Wildlife Biology. And I thought, "Hah, I think that would be the one." And it was just serendipity, more or less, which I've discovered kind of guides most things in life.

**David Parsons** [00:11:06] So, I picked Fisheries and Wildlife Biology, and it was the right choice. I never looked back. Never thought twice about it, because it really fit with my appreciation for nature and my upbringing in nature. But that's how it went. I was not a person who knew what I wanted to be from the get-go or had great aspirations of wanting to be in some certain profession, you know, until I got to college.

**David Todd** [00:11:42] But there was just some sort of ring of appeal or truth to seeing that offer in the catalog of courses and disciplines and majors that just made sense to you.

**David Parsons** [00:11:58] That one spoke to me. When I saw it, I thought, "Aha, that's it."

**David Parsons** [00:12:03] But the other side of that story was, you know how you don't want to follow your brother. And so forestry was ruled out because he had already gone in that direction. I was looking for something different.

**David Todd** [00:12:17] That's great. Yes, I know. A little sibling rivalry is always a factor. I can totally understand.

**David Todd** [00:12:26] And while you were in, in college and grad school, or, for that matter, in grade school, were there teachers or classmates that, you know, were sort of companions in this journey towards work with wildlife.

**David Parsons** [00:12:43] You know, I'm one of the last people living who have gone to a one-room schoolhouse in the country. And it was not far from the house. There were usually about 20 to 21 kids there in grades K through eight, with one teacher. The old time, country, one-room schoolhouse, with nine grades.

**David Parsons** [00:13:16] Grace Auten was my teacher there for most of the years. After the fifth grade, they had decided to do away with the country schools and consolidated them after the sixth grade. Going into the sixth grade, I went into the small town for junior high. They had already taken the high school out of that small town and moved it to the county seat, so I spent six, seven, eight and nine in a small junior high in the town of Kellogg, Iowa, and then went to the county seat to high school where, all of a sudden, I've got 300 kids in my class. Very different.

**David Parsons** [00:14:06] But getting back to Grace Auten ... I don't know, I don't recall just, you know, how we were schooled in science and nature study. But every spring she would take a hike, take the whole school on a hike down a country road from the schoolhouse to a bridge over the Skunk River, which was probably about a three-mile hike one way.

**David Parsons** [00:14:34] And that was our outing. And we'd just hang out down by the river. Maybe dip our toes in, or jump in, hike back to the school. But I always remember those things. I felt like I was out in nature, even though we were walking through mostly farm country. There was some woods along the way and various things to do.

**David Parsons** [00:15:00] She was, she was a fabulous teacher. My older brother and I paid her a visit when she was 99 years old. And she was sharp as a tack, remembered most of the stunts we pulled when we were in school down there.

**David Parsons** [00:15:21] I don't remember really many of my junior high teachers. None stood out as being exceptional anyway.

**David Todd** [00:15:30] And were there some mentors in college or graduate school that you see as being important?

**David Parsons** [00:15:37] Yeah. Bud Harris. In college, we were all assigned an adviser in the Fisheries and Wildlife Biology department. Everybody had a student advisor. Mine was Bud Harris. He was fairly young at the time, but a good, solid adviser, and steered me in good directions.

**David Todd** [00:16:07] And did you have a graduate advisor who worked with you on your master's studies?

**David Parsons** [00:16:14] Oh, yeah. Yeah. He was. So, now I'm going to start blanking on names. Bob.

**David Parsons** [00:16:27] But back to Iowa State. I remember one of the faculty members that stood out, and one in particular was my ornithology professor. And, he was quite good. We did a lot of field trips and I'll remember his name in a minute here. I have it in my head an hour ago. It'll come back. So, he actually has some history in Texas. Because he, Milton Weller, Dr. Milton Weller was a fairly well known ornithologist. And he left Iowa State after I did, and was granted an endowed chair, I think, at Texas A&M University in ornithology. If you look, you probably find his name. It may have been a different university, but I think that's which one it was. Quite a well-known ornithologist and quite a fine instructor.

**David Todd** [00:17:39] And I guess, like Miss Auten, was interested in getting his students outside?

**David Parsons** [00:17:45] Yeah. And we had an outside school yard - middle of the country. There was a little creek that went through. We'd dam the creek. Had snowball fights, stuff like that.

**David Todd** [00:18:02] All right. Yeah. Nice. Nice.

**David Todd** [00:18:06] Well, and then, I think you mentioned in grad school you had an advisor, Bob ...

**David Parsons** [00:18:13] Bob Jarvis. Now my memory is starting to kick in.

**David Todd** [00:18:16] All right. And, was he a mammalogist? Or what was his discipline?

**David Parsons** [00:18:24] Oh, what would his discipline have been? I don't remember exactly. He was new on the faculty. I don't recall what his Ph.D. was in.

**David Parsons** [00:18:38] I was recruited there after a stint in the Army, which I don't think I revealed to you, I won the Vietnam War draft lottery. And that put a gap between, my Bachelor's degree and my Master's degree.

**David Parsons** [00:18:57] I was recruited for a study they had funding for, for a subspecies of Canada Goose, the Aleutian Canada Goose, that was not common. I don't know. It could have been endangered. The Endangered Species Act had not quite been passed when I first went there, or it was passed right as I got there in the spring of '72. Yeah, it was passed in '73.

**David Parsons** [00:19:28] So, anyway, when I got there and the funding fell through on the Aleutian Canada Goose study. And there was a group on campus - some of them were in the wildlife department, some of them were fisheries biologists - that were involved in a brand new program called the International Biological Program. IBP, it came to be known.

**David Parsons** [00:19:57] It was the early days, the very beginning, of ecosystem modeling, and looking at ecosystems from top to bottom, and how energy and materials flowed through them, and how different members of the ecosystem interplayed.

**David Parsons** [00:20:16] And they were mostly fisheries biologist and hydrologists and such. They had a study site on a experimental forest, called the H. J. Andrews Experimental Forest, up in, south of Eugene, Oregon. It was an old-growth forest - no logging or grazing. It was there primarily for ecological research.

**David Parsons** [00:20:48] And I came to know of a little bird called the American Dipper. That is the only aquatic songbird, only aquatic bird in the songbird group. It feeds entirely in and under the water. And they're about the size of a robin. And I'd never seen one till I got out West.

**David Parsons** [00:21:17] But, these guys were, you know, they were studying fish, and fish were eating, you know, bottom invertebrates, and small minnows and things. I went to guys and said, "What are you going to do about the dipper? Is that going to be in your model because it's eating the same thing that fish are eating." "No, we hadn't thought about that. So, do you want to be our dipper guy?" "Yeah. That's what I want to be."

**David Parsons** [00:21:42] So, I was one of the first people in a wildlife school, which is typically game species oriented, to do a non-game species study. So, there were two other guys that were doing similar things. There was Eric Foresman, who was one of the first experts on the spotted owl, was finishing up his Ph.D. Work there. And another fellow, whose name dropped, was studying accipiter hawks, which were non-game. So, there were three non-game studies going on at the time when I entered that program, which was fairly unusual in the, you know, the land-grant college wildlife departments.

**David Todd** [00:22:40] That's so interesting to hit, you know, right at that point, that sort of inflection point between, you know, a real focus on game species and then they're migrating into non-game, like the dipper and the accipiter hawk and of course, the spotted owl.

**David Parsons** [00:22:57] And more of an ecological focus than a game management focus.

**David Todd** [00:23:03] Well, good. That's very helpful. That's nice to know. It sort of helps us understand both your study on dippers, but also how it falls into this whole context of, you

know, ecological focus versus a game orientation, and then I guess the shift from game to including non-game as well as something worthy to look at.

**David Parsons** [00:23:29] Mm hmm.

**David Todd** [00:23:29] Well, let's talk about, whether there were things out in the general "mediascape", you know, whether it was TV shows or movies or books, radio shows - anything like that that might have been influential for you?

**David Parsons** [00:23:52] I didn't read much as a kid. I don't read a lot now in terms of books. Read a whole lot of scientific papers in a given year, and maybe two or three books at most. But, I might have read a Jack London book when I was a kid. I honestly don't remember for sure.

**David Parsons** [00:24:14] But I was addicted to the Wild Kingdom TV show, Marlin Perkins, which started right back when we first got a TV set, which I can remember when that happened. We didn't always have a TV set. But I pretty regularly watched Marlin Perkins, and I was always intrigued how he would lead you to the point of danger. And then Jim, Jim Fowler, would get strangled by the anaconda or whatever: "Jim, go grab that anaconda." Yeah, well, that had an impression on me.

**David Parsons** [00:24:57] Interestingly enough, Marlin Perkins went on to found the Wild Canid Survival and Research Center outside of St. Louis, which is where he lived, apparently. Which was one of the first facilities to house captive Mexican wolves, and the first facility to breed them in captivity, was established by Marlin Perkins. That circle kind of came all the way around.

**David Todd** [00:25:28] That is fascinating. A small world in a sense.

**David Parsons** [00:25:31] Yes.

**David Todd** [00:25:32] From your first sitting in front of the TV set, to work with Mexican wolves and, you know, then the return to this breeding operation that Marlin Perkins' nonprofit was doing.

**David Parsons** [00:25:45] Yeah. I never met the man. But, you know, spent some time at his facility.

**David Todd** [00:25:51] Yes. Cared about the same species, it sounds like.

**David Parsons** [00:25:55] Yeah.

**David Todd** [00:25:57] Well, you get a job, a series of jobs. But, I thought it would be helpful to know about your first full-time paid position, which I understand was as a wildlife biologist with the U.S. Army Corps of Engineers starting in 1974. And, I think it's sometimes really helpful to know how people get their start. And that first job can be a difficult one to nail down. How did you get started?

**David Parsons** [00:26:31] Well, I'm just finishing up my master in 74 and looking for work and what I discovered, even back then, there were a lot more wildlife biologists than there were jobs for wildlife biologists. Part of the reason I ended up getting a master's degree was

when I got out of the Army I thought, I really thought, I'd go to work. And for several months, applying for every fish and wildlife job I could find - state and federal - and got rejected every time. And would get notices back saying, you know, "We've got so many people with advanced degrees. So, that's all we're hiring now." You know, your bachelor's degree is not going to get your job.

**David Parsons** [00:27:18] So, that was emphasis: get back into grad school and even then, with a graduate degree, and alleged veteran's preference for federal jobs, there weren't that many to be had. And essentially I went shopping for any job I could get. My goal was to end up in the U.S. Fish and Wildlife Service, which I decided was the place I really want to be.

**David Parsons** [00:27:50] And but what came up first was this job with the Army Corps of Engineers. I had two offers, one with the Army Corps of Engineers, and one was a non-government offer, and it was a national laboratory in Tennessee that needed people to do environmental impact statements, kind of stuff like that.

**David Parsons** [00:28:12] Well, I opted to take the government job because once you're in the system, it's a whole lot easier to move from job to job within the system than coming in from the outside: gives you an leg up on moving around.

**David Parsons** [00:28:28] That job was in Vicksburg, Mississippi, which was not a ... It was an interesting place to live at the time we lived there, but, different, very different for me. Oregon was probably one of the most environmentally progressive states, and socially progressive states, in the country at the time. And moving to Mississippi was like a 20-year backwards time tunnel trip. Even though it was probably close to ten years after the passing of the Civil Rights Act, it wasn't quite evident yet, and a little off-putting.

**David Parsons** [00:29:05] But, the Waterways Experiment Station was a big research facility for the Corps of Engineers, their major national research facility, and they had an ecology group. I think there were five or six of us in the ecology group. We did some interesting things.

**David Parsons** [00:29:27] The first job I had there was, even though I was based in Vicksburg, Mississippi, they were looking at ways to make beneficial use of the material that's dredged out of shipping, navigation channels. And one of the places that they had a project going was the mouth of the Columbia River, out on the west coast.

**David Parsons** [00:29:54] I got assigned that project. And what we were working on is to take that dredged material and arrange it along the bank in a configuration, kind of a horseshoe configuration, the opening being downstream and constructing wetlands, turning those areas into productive wetlands. So, that was really what today we call rewilding. Not way back then.

**David Parsons** [00:30:29] Pretty interesting. We made some progress. We got some stuff to grow and critters to show up.

**David Parsons** [00:30:40] The other project I had was that they were planning to have a, they had a plan (I don't think it ever got actuated), to deepen the shipping channel on the Mississippi River for the barges up and down the Mississippi River from a eight-foot channel to a 12-foot deep channel. So, I was on the team that did the work for the Environmental Impact Statement about what kind of ecological effects there would be from that project.



**David Parsons** [00:31:16] Well, I know they never did actually build it. They would have had to revamp all the locks and dams. Would've been really expensive.

**David Parsons** [00:31:28] But, my goal, primary goal, in Vicksburg was to get out of Vicksburg and to get a job with the U.S. Fish and Wildlife Service. So, I started applying for jobs solely, solely within the Fish and Wildlife Service, because that was my target. It took just almost exactly one year. And I landed a job in Rock Island, Illinois.

**David Parsons** [00:31:57] And the Fish and Wildlife Service in the mid-'70s was in a big hiring mode because they'd created an entirely new division to manage all the 1970s legislation that gave the Service new focus - the Clean Water Act, the Endangered Species Act. And so, they created a whole new division called Ecological Services. And I was on the trend of that wave of employees that came into the division. They weren't the standard, you know, refuge manager jobs that people dream of having. I had that dream too, but I couldn't break into that system.

**David Parsons** [00:32:46] But, it turns out Ecological Services was a good fit, a deep dive into ecology. And started with the projects. Fish and Wildlife Service had a role to play in the Clean Water Act, because of an act called the Fish and Wildlife Coordination Act that was passed prior to passing - '50s or '60s, I don't remember exactly - that required agencies like the Corps of Engineers to consult with the Fish and Wildlife Service and allow us to do environmental impact studies on projects that they were proposing, including projects that they would be issuing permits for under the Clean Water Act, for example, dredging and filling projects. And all those had to be reviewed by somebody from the Fish and Wildlife Service, who would write a report and assess the impacts and make recommendations on how to mitigate those impacts.

**David Parsons** [00:33:58] I did that work for quite a number of years, 12 or 13 years, in the Midwest, along the Mississippi River, and all the way over to the Indiana boundary, and a lot of wetlands in and around Chicago that were under attack from, like, dredging and filling. Then moved from there to the middle of Tennessee, to continue the same kind of work. There was a new office being established in Tennessee under Ecological Services Division, to cover all of Tennessee, Kentucky and northern Alabama for those kinds of projects - Clean Water Act dredging projects.

**David Parsons** [00:34:50] So, I was there for ten years and most of my moves were, I made, because I had topped out more or less in terms of opportunities for advancement where I was. The move to Tennessee allowed me to come in as the senior biologist in a brand new office. And it was just me and my boss that started it, and we gradually added staff. They probably have 15 or 20 now. We were covering all the territory themselves. [

**David Todd** [00:35:27] [I need to ask your indulgence for a moment. I've run out of paper.]

**David Parsons** [00:35:31] [Oh.]

**David Todd** [00:35:44] [Okay. I should have expected that. All right.]

**David Todd** [00:35:49] Well, so it sounds like for many years, you had sought out a position with the Fish and Wildlife Service, and you managed to do that. And were working in the Midwest. But then at some point, I guess this is 1990, you begin service as the Mexican Wolf

Recovery Coordinator for the Fish and Wildlife Service. And I was wondering how you came to that position and what your role was there.

**David Parsons** [00:36:22] Sure. I'll start back at the end of my stint in Tennessee. Same thing happened there. I topped out as senior biologist. And back then, the Fish and Wildlife Service was very reluctant to advance somebody to a project leader position in the place they were. They liked to bring in new blood from other places. So, it's very unusual to make that jump to the director of a field station that you've already spent ten years in.

**David Parsons** [00:36:57] And so, I was looking for advancement and most of the opportunities for that would have been, were in regional offices and most of those regional offices were in places I didn't want to be, like Atlanta, and like you know Chicago and various places that didn't sound like a lot of fun. So... Actually, I don't think we had one in Chicago. Anyway, they were mostly big cities. And I had gone to the Atlanta office a number of times when I worked in that region, and that was not a place I wanted to be.

**David Parsons** [00:37:32] And so, I had come to know the Southwest because of my Army experience in Fort Bliss, Texas. And I'd spent most of my time in the Army in Fort Bliss, Texas. By the grace of some deity, I was not sent over to Vietnam. I spent about a year and a half in Texas, El Paso, Texas. And I had made a couple of trips up to Albuquerque, so I knew, I knew the Southwest, and, I knew that Albuquerque looked like a pretty decent town and we had a regional office.

**David Parsons** [00:38:11] So, toward the end of my career in Tennessee, I just started putting in applications for every job that I might be qualified for in the Albuquerque regional office, not really being particular about what the job was. I was just trying to make a transition.

**David Parsons** [00:38:31] Well, I ended up getting a job in the part of the division of the Fish and Wildlife Service that manages the excise tax money that comes from Pittman-Robertson and Dingle-Johnson excise taxes that process through the Fish and Wildlife Service to the state fish and game agencies.

**David Parsons** [00:39:02] Well, I worked in that office for, let's see - I came in '88 - so, for two years. I was in the federal aid division then. Got a different name now. It was mostly a desk job with some few trips out to states. State agencies would court people in my position, treat us nicely when we went out there because we were the ones that stamped the money that goes to them. So, I didn't take as much advantage of that as some of my colleagues did. But, you know, everyone once in a while.

**David Parsons** [00:39:46] But it was not such a satisfying job.

**David Parsons** [00:39:58] And the wolf job is a bit of a story. But the Mexican wolf was put on the endangered species list in 1976. But there were not any, there were no wolves left in the wild in the U.S., and only a handful left in Mexico, with an estimate that as many as 50. So in 1977, the Fish and Wildlife Service took the first step to save Mexican wolves by sending a trapper, a pretty famous Texas trapper, you'll know the name of him, I'm sure - Roy McBride, from Alpine, Texas, who had a career in trapping, mostly for ranchers, and most of those wolves he trapped ended up dead.

**David Parsons** [00:40:53] So, they did that back then. But he knew, he knew Mexico because he trapped for a lot of ranchers down there. So, the Fish and Wildlife Service hired him to go

down and trap as many wolves as he could, alive. He trapped from 1977 to 1980 in the areas where he knew there wolves.

**David Parsons** [00:41:16] And he caught six. And one died in his trap. And so five were brought back alive. And there had been an agreement made between the Mexican government and the U.S. Fish and Wildlife Service that those wolves could come to United States breeding facilities for propagation to save the species.

**David Parsons** [00:41:42] And, of those five, four were males, and one was a pregnant female. And she gave birth to that first litter of pups in captivity, I believe, at the Arizona Sonora Desert Museum in Arizona.

**David Parsons** [00:42:05] And all of her pups from that litter either died or they were males. I mean, some of both, I think.

**David Parsons** [00:42:13] But there are no surviving females from that first litter.

**David Parsons** [00:42:19] She was estimated to be about 11 and 12 years old at the time. We tried a year or two to get her pregnant again in Arizona, without success. And they moved her to Marlin Perkins' facility up in Missouri, and matched with one of those males that McBride had caught. And, which was likely some degree of relevance [closely related] because of where they were both trapped.

**David Parsons** [00:42:51] And she did get pregnant. And she had some surviving female pups.

**David Parsons** [00:42:58] And now, I'm remembering the first part of that story. Only one of the pups she had in her first litter was female, and one of them died. And it was the female that died, which left just surviving males.

**David Parsons** [00:43:12] But she had a litter in in Missouri with two or three females, and those survived. And they went on to be bred.

**David Parsons** [00:43:18] As you can imagine, there was a high degree of inbreeding going on because there were so few of them. And it was only two of those males that McBride caught that actually entered the breeding pool because there were no mates for them. They just, they grew old before there were mates available.

**David Parsons** [00:43:45] In the meantime, there were. You know, I'll save this because now I'm going to get into my job, which I didn't have yet.

**David Parsons** [00:43:55] So, Fish and Wildlife Service, as they were trying to breed wolves in captivity, started looking at how they might engage in recovering the wolf. And so they started by engaging the Southwestern states of Arizona, New Mexico and Texas. This would be in the mid to late 1980s. That's when we started looking at where they might put wolves in the wild, if that ever became a possibility. Engaged the states in that process.

**David Parsons** [00:44:34] And. There was, they asked the states to identify areas that meet the standards that were set forth in a recovery plan that was written in 1982 by actually, an Arizona Game and Fish employee named Norma Ames.

**David Parsons** [00:45:00] And that recovery plan was self-admitted to be not a recovery plan, but essentially a extinction prevention plan because this species was so close to extinction. It couldn't envision a full path at that point in time all the way to recovery. So, they recommended captive breeding.

**David Parsons** [00:45:19] And if we could get to 100 wolves or so in captivity, then just start peeling some off to start a wild population with a goal of 100 wolves in an area of about 5000 square miles.

**David Parsons** [00:45:33] The recovery plan set forth criteria for what suitable wolf habitat would be in terms of habitat and prey base, and human densities, human activities.

**David Parsons** [00:45:46] So, the Fish and Wildlife Service asked each of the states to identify areas in their states that met the criteria set forth in the recovery plan. Texas replied and said they didn't have any places like that. It ended right here. New Mexico replied and said, "We've only got one place like that. And it's the White Sands Missile Range." Arizona played the game up front like they were asked, and said, "We have about five places like that."

**David Parsons** [00:46:31] So, time went on. And the Fish and Wildlife Service did something that upset the State of Arizona along the way in the late '80s. And they withdrew their support for the sites in Arizona.

**David Parsons** [00:46:53] That left the only site on the table at that point was White Sands Missile Range, which is run by a one-star Army general.

**David Parsons** [00:47:01] And, in the meantime, unbeknownst to me, when I did get my job, the regional director at the Fish and Wildlife Service had cut verbal deals with the states and other federal agencies that the Fish and Wildlife Service would not force a reintroduction of Mexican wolves on any state agency or federal land management agency that opposed it, that did not support it, wolf recovery. It was strictly verbal, but it was passed on from one regional director to the next, I learned later, but not made public to anybody, not even the person in charge of the program.

**David Parsons** [00:47:51] So, about 1989, I think it was, the White Sands Missile Range changed jobs, and a new general came in, General Jones. And he asked for a briefing from his wildlife staff because they, you know, they had wildlife management programs on Missile Range. It's huge: about 400,000 acres or more, or so, but giant because they'd send up missiles and they had to have a lot of space for them to drop back down to the ground. It included the entire mountain range, including the San Andreas Mountains, from one end to the other, which is 60 or 80 miles long.

**David Parsons** [00:48:39] The only thing that might have been wolf habitat was on the higher end of that range, where there was some pinyon-juniper habitat and a few mule deer.

**David Parsons** [00:48:51] But the new general came in and he got a briefing from the staff, and the staff said, "You know, general, the Fish and Wildlife Service has a policy, if you don't want to play in the Mexican wolf recovery game, you can opt out." And he said, "Well that's easy. I'm going to opt out." He wrote a letter to the U.S. Fish and Wildlife Service Regional Director, Mike Spear at the time, opting out of being a site for the recovery program, which left the Fish and Wildlife Service with no site that any agency would support.

**David Parsons** [00:49:27] Well, Mike Spear held a news conference, a press conference on the steps of the Federal building. This is, all this is still before I was actually hired. There wasn't a Mexico recovery coordinator. There was a staff person assigned, as part of his other duties, but there was never anybody dedicated to job.

**David Parsons** [00:49:48] Mike Spear went to the steps, and he told the press, he said, "We're hereby suspending, not suspending, but terminating the Mexican wolf recovery program for lack of a suitable recovery site." And what he really meant was, because there were plenty of suitable recovery sites, there was a lack of a recovery site that any agency would agree to.

**David Parsons** [00:50:12] And that triggered, almost immediately, a lawsuit by the environmental community.

**David Parsons** [00:50:23] And what I've learned over the course of my career with species like wolves, and a lot of other endangered species, most of which become controversial, no forward movement comes from agency initiative. It comes from being forced by environmental lawsuits.

**David Parsons** [00:50:46] So, this one had some big guns. It had Environmental Defense Fund and Natural Resources Defense Council, and some regional environmental groups like the regional Sierra Club and others who formed a coalition called the Wolf Action Group, and they filed a lawsuit in 1990, early 1990.

**David Parsons** [00:51:13] [I'll be hoarse by the end of this.]

**David Parsons** [00:51:17] So, that lawsuit proceeded. And they also, they sued the Fish and Wildlife Service. They sued Forest Service. They sued the Bureau of Land Management, and they sued the U.S. Army. Because all federal agencies have an absolute legal obligation under the Endangered Species Act to take measures to recover endangered species, not just the Fish and Wildlife Service. Every agency has the obligation.

**David Parsons** [00:51:58] And so, the lawsuit was settled. And General Jones ... The lawsuit was settled, and it settled on the terms that the Fish and Wildlife Service would create a position with a dedicated biologist whose job was solely to manage recovery of Mexican wolves, that they would complete NEPA process within a certain period of time, EIS and all that. And get the authority, and seek the authority, in this case from the Secretary of Interior to release Mexican wolves back to the wild, and move forward with a general timeline to complete Mexican wolf recovery.

**David Parsons** [00:52:56] General Jones, I think was the smartest of the bunch, realized that he knew he had an obligation under the Endangered Species Act. He couldn't get out of that. So, he wrote a second letter to the director, the regional director of Fish and Wildlife Service, and he said, "I'll come back in as a potential release site, but on the condition that you complete a legitimate Environmental Impact Statement that looks at all the available habitat in the Southwest, which does science-based analysis of which of those habitats are most suitable for the wolves."

**David Parsons** [00:53:38] He knew he would lose. See, he had mostly desert. So, I give him a lot of credit for setting the stage for it to be done right. But it might not have otherwise.

**David Parsons** [00:53:55] And so, as this lawsuit went forward, I was still in the federal aid job. I came home one night and had a postcard in the mail. From the Wolf Action Group. And they were soliciting funds to finance their lawsuit to force the Fish and Wildlife Service to initiate Mexican wolf recovery and to hire a biologist to run it.

**David Parsons** [00:54:26] And my wife was across the table and I looked at her, and I said, "I'm going to send these people \$100 because I think I might want the job." And I did send them a hundred dollars and. As fate plays out, by that fall, I had that job. I was the first Mexican wolf recovery coordinator. That's how it started.

**David Todd** [00:54:58] Well, so if I can clarify this for me. So, this postcard, from the Wolf Action Group was, wasn't soliciting you in your official capacity.

**David Parsons** [00:55:11] No, I was probably a member of one of those groups.

**David Todd** [00:55:14] But not as somebody responsible for the Pittman-Robertson funds? They just wanted your personal wallet to open and send them money.

**David Parsons** [00:55:24] They were just seeking money. Yeah.

**David Todd** [00:55:25] Yeah. They weren't looking for a staff member on the non-profit side to advocate for the wolves?

**David Parsons** [00:55:33] No, they wouldn't have known probably who I was or what job I was in at the Fish and Wildlife Service. They were just canvassing people who probably were or had been members that they had addresses for to get enough money to run the lawsuit.

**David Todd** [00:55:49] I see.

**David Parsons** [00:55:50] I had nothing to do with the lawsuit. It all played out before I was hired. Well, I did have, actually, I did have something to do with it because they suspended the lawsuit, but it wasn't actually settled till three, three years later. And the Fish and Wildlife Service, the Justice Department, chose me to be the negotiator for negotiating the terms of the settlement. One of those terms being that there would be a permanent employee, whose job was guaranteed until Mexican wolves were recovered, or it was determined that they couldn't be.

**David Parsons** [00:56:35] So, I had a hand in guaranteeing the longevity of my job as negotiator for the settlement agreement. But it wasn't anything that I made up. It's what, you know, what they were asking for.

**David Parsons** [00:56:53] So, yeah. So, that started the job. At that point, there were so few wolves alive. It was generally assumed because no wolves had been documented anywhere after 1980 that they were completely wiped out of the wild. And they were. Never have any more been found in the wild.

**David Parsons** [00:57:26] Early on, we went down and joined up with Mexican biologists, did a lot of field surveys down there to see if we could find any evidence or any stories from locals about wolves. And we never, we didn't turn up anything. No. We never had any responses to howling surveys. So, they were in fact completely exterminated from the wild.

**David Parsons** [00:57:55] So, our first focus is on captive breeding and starting the environmental impact process under the National Environmental Policy Act. And, like, I remember my regional director saying, "Well, we can probably do this with an environmental assessment." Well, I knew how controversial it was going to be, and I said, "No, I think that'd be a waste of money because we'd be forced by lawsuits to do a full EIS, even if we did an environmental assessment."

**David Parsons** [00:58:24] So, we saved some time and money when my regional director agreed that this goes straight into a full EIS, and finished that process. It ended up taking seven years, first seven years of my job. I never even had wolves on the ground, so.

**David Todd** [00:58:48] Well, tell me, I mean, based on this EIS that you worked on, can you give us sort of an introduction to the life history and ecological role that a Mexican wolf might have?

**David Parsons** [00:59:02] Well, you know, they're a gray wolf. They're 98, 99% related to all the gray wolves all the way to the Arctic. Just a different subspecies, southernmost subspecies.

**David Parsons** [00:59:20] Because they evolved, the geneticists now can pretty reasonably predict that there were three waves of gray wolves that came across Asia, across the Bering land bridge, three different times. And the Mexican wolves were probably in the first wave that came across. They managed to get far enough south that they were not beaten back by the various iterations of glaciation. They got south of the glaciers. So, they had the longest time to evolve, in habitats that were very different from those up North.

**David Parsons** [01:00:10] And eventually, you know, wolves up north came from two additional waves of migrants between glaciation events after the first one.

**David Parsons** [01:00:20] So, they evolved in the most different, extremely different, environment, where prey was smaller. The climate was drier. And so, that's why most scientists believe, you know, that Mexican wolves top out at about 80 pounds. That's a really big male Mexican wolf. A big female might be 65.

**David Parsons** [01:00:50] Well, Canada and now Yellowstone, which are wolves from Canada, you know, females can be 100, and males can go up to 125 and sometimes more - really big. And it kind of follows what scientists for years have called "Bergmann's Rule", that is, in related species that have a broad north-south distribution, the ones further south are smaller, than ones to the north.

**David Parsons** [01:01:27] They believe that one of the primary drivers in this case with Mexican wolves is probably the size of the prey and the other being essentially body mass-to-volume ratio, and how that plays into giving off heat, or retaining heat. A large body will retain more heat; a small body will dissipate more heat, because it's got a larger surface to volume ratio. And that's kind of what drives that. That theory plays out in Mexican wolves.

**David Parsons** [01:02:03] So behaviorally, they're just like other wolves. They live in packs.

**David Parsons** [01:02:07] And it's speculated ... There were no ecological studies done on Mexican wolves because they were wiped out before those studies were ever done. And what the early naturalists saw was a very broken-up situation because wolf eradication was well under way. Packs were being broken up.

**David Parsons** [01:02:33] But generally it's believed that the packs in Mexican wolves also smaller, maybe in the range of 6 to 8 wolves total, on average, whereas some of the northern packs can be twice that.

**David Parsons** [01:02:50] And that their prey was generally smaller, or at least the prey that drove their evolution, which is believed to be kind of centered in the Sierra Madres of Mexico, where the largest prey would have been the smallest subspecies of white-tailed deer, Coues white-tailed deer, which only got to be about 80 pounds, and then another prey would be javelina and beavers, which would also be considered to be prey. And they're prey for northern wolves too - very common.

**David Parsons** [01:03:33] So, they live in packs. They hunt in groups. They chase down prey larger than themselves. It turns out that our Mexican wolves, because they've been now restored in an area with elk, they're very efficient elk-killers. They take down elk.

**David Parsons** [01:03:56] They regulate their own populations, which is a ecological adaptation for top predators that have no predator above them to keep their population in check, like wolves do for deer and elk, for example. That's their ecological role: one, it is to keep populations in check below them in the food pyramid, so they don't breed out of control, which deer often do without predation, as we know today, you know, and have lots of examples of, going back to Leopold's time and the Kaibab Plateau.

**David Parsons** [01:04:35] And now, deer are everywhere and the elk population in Yellowstone got about four times bigger than it should be and greatly altered the ecosystem up there until the wolves were put back.

**David Parsons** [01:04:53] So, they have that regulatory role that plays all the way down through the system.

**David Parsons** [01:05:01] They are referred to as keystone species. Their presence actually results in healthier ecosystems and actually results in more biologically diverse ecosystems. A lot of the prey they leave on the grounds is available for other critters to scavenge on, which has been well documented down in Yellowstone. Ravens and magpies and beetles and fox and coyotes, and you name it, benefit. Even grizzly bears are in better shape now because of the prey that wolves live on the ground year-round. Some grizzly bear apparently bypass hibernation because there's prey available during the winter. Wolves are still hunting, dropping animals on the ground.

**David Parsons** [01:05:59] So, but that self-regulation is key. People, you know, will argue, "Well, we got to, we got to manage wolves. We got to kill wolves. We got to regulate them, or they'll just breed out of control. They'll eat everything."

**David Parsons** [01:06:11] But you've got to look at this and say, "Well, if that were the case, why are they still here today? They would have wiped out their entire prey base." They would be wiping themselves out. But, they have those self-regulating mechanisms that are really difficult to get people to believe in, but they're real, and they do it, because of several factors. One, is that it impacts, they behaviorally suppress the animals in the pack might be of breeding age, but they're subordinate to the dominant breeders.



**David Parsons** [01:06:49] There's just one dominant breeding pair. We used to call them, "alpha". That term's kind of going out of vogue now. They're just the dominant breeders. But there might be two or three generations of wolves that stay in the pack and choose not to disperse, but they're behaviorally suppressed from being breeders. So their pup output is regulated.

**David Todd** [01:07:18] And that's just done through behavior. It's not that the alpha male would take out some of the younger betas.

**David Parsons** [01:07:26] They don't take them out, they just don't allow them to breed. Those wolves are important to the pack.

**David Parsons** [01:07:31] They would take out any neighboring pack member that tried to get into their territory. So, that's the other mechanism. They establish and defend territories. And any wolf that's not a pack member that tries to come into their territory, they will take them out.

**David Todd** [01:07:49] And, but within their own pack, I guess they would want to retain these younger beta wolves just to help with the hunt. Is that right?

**David Parsons** [01:08:01] Yes. They help with the hunt. They help with raising the pups. They're just as good a parent as the breeders, if not better.

**David Parsons** [01:08:12] So, they establish their own cap on how densely they're distributed on the landscape. And, you know, that plays out in that way they don't over-eat their prey base. And their prey base is, in turn, regulated in the process.

**David Parsons** [01:08:38] And then, you know, occasionally an animal will disperse, and it'll have to try to find a vacant territory, establish its own pack. Through that territory establishment, and through breeding suppression and the interspecific aggression of non-pack member wolves, they establish their own limits in the landscape.

**David Parsons** [01:09:05] Whereas, animals below them in the food pyramid don't have those mechanisms. They require predation to stay within the carrying capacity of their ecosystem. So, it's, you know, a finely-honed relationship that's been established over eons and eons of evolution. We, homo sapiens, have kind of seriously mucked that up. Mostly what we see today in wild ecosystems is less than as nature would have it if we weren't interfering. Different anyway.

**David Parsons** [01:09:54] You have to convince a state game manager that predators don't need to be managed through hunting. But you don't. And in fact, hunting might actually cause their populations to increase rather than decrease because, and, this is true, and it's been pretty well established by research for species like coyotes and wolves, if you break up that pack structure ... let's say, a hunter takes out an alpha breeder. Often the pack will break up. That whole pack will disperse and those breeding-age animals, any animal two or more, will disperse, find their own mate, establish their own packs, and there'll be more breeders on the landscape, at least for a period of time, than there were before the pack was broken.

**David Parsons** [01:10:56] And try to convince a coyote hunter that he thinks he's doing a service in managing coyotes? He's probably causing there to be more coyotes on the landscape than fewer. It's kind of a lost cause. It's hard to get somebody to actually believe

that. But it's the way it works. So, that's the ecology of it, pretty much. It's like all gray wolves everywhere, just different players in the ecosystems. Well.

**David Todd** [01:11:38] And, my understanding is that, a wolf is not a wolf is not a wolf, and that there are these subspecies, different lineages and that some of this plays into the conservation strategies in modern times. I was hoping that you could sort of help us sort out the distinctions between the three that I'm aware of - Texas gray wolf, Mexican gray wolf, and then this *Canis lupus*, *Mogollonensis*, that was in the history books, and may be extinct now.

**David Parsons** [01:12:23] Yeah. Well the early naturalists came out West. And Young and [Edward] Goldman, I don't remember his first name, and Bailey, Vernon Bailey, were among the early naturalists to come out West. And they started looking at wolves, trapping wolves and classifying them. Young and Goldman put out one of the early treatises on wolves in the West. And they, those taxonomists, back in that day had nothing to go on but physical measurements - body weight and size and bones and measuring skulls and such - morphometric methods for taxonomy.

**David Parsons** [01:13:20] And so, they saw different pelt colors and they saw wolves of different sizes. And they saw skulls with different measurements. And they parsed all that out into 24 subspecies of gray wolves that they thought existed from, that ranged from essentially Mexico City to the Yukon.

**David Parsons** [01:13:42] Today that's been pared down to five by more modern methods that involve genetic, looking at the genetics.

**David Parsons** [01:13:53] So, the southernmost three of those, the southernmost, was *Baileyi*, the Mexican gray wolf. The one in West Texas was *monstrabilis*, *Canis lupus monstrabilis*, gray wolf. And the one in northern Arizona, northern New Mexico, was the *mogollonensis*. The Mogollon Mountain range is in southwestern New Mexico and Arizona.

**David Parsons** [01:14:31] Those were originally thought to be separate subspecies, and there were subspecies to the north. One called the buffalo wolf and others.

**David Parsons** [01:14:46] So, when we started the program ... and in fact, all three of those ended up being put on the endangered species list in 1976 as being separately listed. But as we thought of moving into, well, recovery, and a very strong recovery plan was being developed, other taxonomists were tasked with looking at that data in those museum, pieces and skulls and pelts and such to validate that taxonomy. And two researchers out of the University of New Mexico, Bogan and Mehlhop, looked at it with a more modern eye, still using morphometrics. It still didn't have the genetic methods to deal with.

**David Parsons** [01:15:53] But they couldn't, they couldn't come to a conclusion that those three subspecies were enough different to be parsed out as separate subspecies. They proposed lumping those three subspecies together and calling them all *Canis lupus baileyi*, the Mexican gray wolf.

**David Parsons** [01:16:21] That expanded, because the Endangered Species Act requires that you first look at the historic range as the area available for recovery. And so that actually allowed us to expand the historic range further north, gave us more areas of suitable habitat to work with for proposing recovery sites.

**David Parsons** [01:16:53] Well, today, those are no longer considered to be subspecies. Like I said, there are only five recognized subspecies now, and it's thought of as sort of obsolete now. With wide-ranging species like wolves, talk more about what they call "ecotypes", as opposed to subspecies. You know, what are the characteristics of the ecosystems of these wolves that may look a little different, rather than the genetics, because they are very closely related genetically. You could breed a white Arctic wolf with a Mexican wolf and get a fine litter of pups. So, they're that closely related.

**David Todd** [01:17:51] And I guess the decision to lump these three species together had an effect on the conservation strategy, is that right? That it extended the range of where these animals could be reintroduced.

**David Parsons** [01:18:12] It did. It's what brought Texas into the game early on. So just, the original *Baileyi* would have, might have touched the tip of Texas, but not much. But bringing in the Texas gray wolf, brought Texas into play.

**David Parsons** [01:18:41] So where does that leave us? Me starting the job, I guess, in 1990. I had had no prior research experience with wolves. And people often asked me that. And how was it that I got the job with having no history at all in studying wolves? And, my response was, "You know, that in wildlife biology we'd studied everything. We study ecosystems and we know how the players work in ecosystems."

**David Parsons** [01:19:25] And I said, "Besides, when I took the job, they didn't need a wolf scientist. They needed somebody who could manage the bureaucratic process through the Endangered Species Act and the National Environmental Policy Act. How you actually get authority from higher-ups to put the wolves on the ground."

**David Parsons** [01:19:55] So, by the time I did all that, I had a very thorough understanding of wolves and their ecology when it came time to put them on the ground. Because we were doing the bureaucratic stuff.

**David Todd** [01:20:13] So in a sense, you were hired as kind of a navigator, it sounds like, for dealing with all the federal agencies and laws and regulations.

**David Parsons** [01:20:25] Yeah. What we called the "bullshit and paperwork" part of biology, mostly done from a desk. People have visions of, you know, of all biologists banging around out in the field, you know, doing really cool stuff. But, that's only part of it, usually a small part. We were seven years doing that paperwork.

**David Todd** [01:21:01] You know, I think it would be helpful. And there's probably lots of nuances that we don't need to dwell on here, but just to give us a little bit of background, I would appreciate if you could tell us why the wolves were in such grave shape when you came along. I mean, what was responsible for the decline to such a small number - none in the U.S., maybe 50 in Mexico. What was responsible for that fall?

**David Parsons** [01:21:35] Well it was European occupation of the continent. That was the trigger. The native people here apparently, as far as we know, found ways to coexist with wolves, even maybe learned some hunting practices from them.

**David Parsons** [01:21:55] But the Europeans had a different outlook about nature, and about domination of nature, and manifest destiny and all that. And started marching west,

intercepting anything that interfered with their enterprises, which back then was mostly bringing livestock with them to the West, sheep and cattle primarily. Anything that got in the way of that, they chose to wipe out.

**David Parsons** [01:22:21] Cattle barons back then were prominent individuals with good political connections, and had influence over their Congressional representatives and got laws to create agencies, federal agencies, to wipe predators off the face of the continent.

**David Parsons** [01:22:43] And those agencies, they carried out their mission quite well. And if you want a deep dive into that, you can read my friend Michael Robinson's book called *Predatory Bureaucracy*, where he wrote an entire book on that process, and what drove it, and how those folks were so successful in the sense, finally, in the end, it was very hard to kill all the wolves with the traps and guns and what really finished them off was the poison baits that they employed. They would fly around in airplanes dropping chunks of poison meat all over the landscape, strychnine, that would kill anything that ate it, to the point that, by about the mid-1940s, it was believed there were no breeding pairs of wolves left in the Southwest, or in the entire continent, except for extreme northern Minnesota.

**David Parsons** [01:23:51] There were probably, I'm just going to say, a million wolves or so, when Europeans hit the shores. And they were knocked down to about 100 wolves that found refuge in the Lake Country in extreme northern Minnesota. And wiped out everywhere else. Somewhere between a million and 2 million wolves.

**David Parsons** [01:24:20] This is an estimate. The geneticists can look at the genetics and make some of those estimates.

**David Parsons** [01:24:26] In the West, it was, I think, nearly 400,000 or more. And, you know, they knocked Mexican wolves down to seven. And luck would have it, in addition to those the McBride trapped, later we found, after I was in the job, two breeding groups of Mexican wolves that we thought were likely Mexican wolves, but could not be traced to a wild origin.

**David Parsons** [01:25:01] And by about the 90s, the geneticists developed the molecular techniques to better parse out species' relationships and purity. So, I commissioned a group of the best geneticists, canine geneticists, in the land, in the mid-nineties to look at the Mexican wolves, a group of wolves that derived from a pair of wolves that were in a zoo in Mexico City called the Aragon Zoo. Those became the Aragon line of wolves.

**David Parsons** [01:25:36] And another group of wolves called the Ghost Ranch line, that were, there was, the biggest group of them was held in a zoo on the Navajo reservation. And also the Ghost Ranch, that, you know, I've forgotten who owned it. I think that a famous artist that owned the Ghost Ranch. And they had a little zoo. And Norma Ames, who ran the recovery plan had, had gotten a pair of those animals and had bred some on their own.

**David Parsons** [01:26:20] Early on, when the recovery plan was formed. And Roy McBride was a part of that. He declared that the Ghost Ranch and the Aragon wolves were hybrids. He claimed he could tell just by looking at them. He actually convinced the recovery team to put a good number of the Ghost Ranch wolves down, kill them.

**David Parsons** [01:26:44] But, not all of them. Some survived. And they determined, when they looked at the genetics, they were pure wolves. There were no genetics of dog or coyote in

them at all. They matched up with Mexican wolf, but there was just enough difference in the genetic diversity within them that they felt like those three populations came from different source populations in Mexico.

**David Parsons** [01:27:15] So, because there were only three of McBride's wolves that ended up in the breeding pool, there were two founders from each of these other groups that brought four more founders into the breeding pool. Well, that's how we come to seven founders and that in effect, they were killed off down to the last seven wolves basically, and brought back from the breeding base.

**David Parsons** [01:27:44] And that's all the genes we have. We can't create more genes. The only way you can do that is to get wolves in the wild, and let natural selection play out, and genes change to evolve based on ecological conditions. And that's, that process takes place over long periods of time, adaptation to changing environments.

**David Parsons** [01:28:15] But that's, you know, that's how natural selection works. And that's why we need a diverse gene pool to make it work, because genes come in different forms on the same gene locus and chromosome, and there might be two, three, four, five, sometimes six different alleles with slightly different genetics on a locus. And, you know, in a breeding situation, only one of those genes gets transferred - one from the female, one gets transferred from the male.

**David Parsons** [01:28:47] But it's a roll of the dice of which of those gene forms moves forward, that maintains a diversity that allows the environmental conditions to play out and allows natural selection to choose those animals that are best fit for survival.

**David Parsons** [01:29:11] If you look at the Mexican wolf's genome compared to, say, northern genomes, you can look at every one of these locuses on a given chromosome. There'll be a bar graph that goes up that shows you how many alleles are at that locus, which that establishes how much gene diversity you have. And there's a nice chart that shows different wolf populations throughout the U.S., and even the world, gray wolves, because they're worldwide. And they all have, you know, an intact comb and lots of gene diversity to play with. And Mexican wolf got these, it's like you broke big sections of it, teeth of the comb, out. And there are these, it'll have these sections where it's called, the allele is fixed because it's the only one left from that place on the chromosome.

**David Parsons** [01:30:06] So, it's the only gene that can be passed on, and if that's not favorable to survival, the animal loses its capacity to adapt. And that's where we are with Mexican wolves. They're down to, it's the population in the wild, it's down to the point as genetically as if it came from only two founders, basically. They're all related to each other, not one on one, but as a group. All the wolves in the wild population now are related, essentially, as brothers and sisters. There's no way to pick a mate that you're not closely related to, at least with your cousin.

**David Todd** [01:31:00] Well, so, it sounds like the founder population was limited by the number of animals that could be found and retrieved from the wild 40, 50 years ago. And I was curious, I was reading a little bit, I think this may have been in Mr. Robinson's book and understood that in 1981, there was an effort to send out another group to go look for any remaining wolves that might still be in the wild, and that that was nixed. Is that correct?

**David Parsons** [01:31:43] Well I can't honestly say. The first effort that I'm aware of to send a person out to see if wolves were left was McBride, in 1977.

**David Todd** [01:31:58] Okay.

**David Parsons** [01:31:59] Only place really to look was in Mexico. I think, had there been wolves in the United States by then, there would be evidence of them.

**David Todd** [01:32:14] Yeah. And I think this was supposed to be a search in Mexico, if I'm not mistaken.

**David Parsons** [01:32:20] Well, they did that search. And it may have been just McBride. But he took advantage of the cattle ranchers he knew down there and the individuals he knew down there. He was in two or three states of Mexico - Chihuahua and Sonora, Durango. He covered all those areas.

**David Parsons** [01:32:45] I went down in the early '90s with some, and joined some Mexican biologists, and another U.S. wolf expert. And we spent some time down there looking, but again, searching. And you do howling surveys: you find a road through remote areas and stop every, every few miles and howl for them during the night. And if the wolves are out there, they'll usually howl back. And we talked to Mexican biologists. We did some surveys and we turned up nothing. Nothing after McBride had finished his trapping in 1980. And, as far as I know, McBride never learned of another animal after 1980, anywhere.

**David Parsons** [01:33:38] So, maybe what Michael's talking about: but McBride was actually commissioned and paid by the U.S. Fish and Wildlife Service to find and catch wolves alive from 1977 to 1980.

**David Todd** [01:33:57] Okay.

**David Todd** [01:34:00] Well, so, I guess the next phase of this, if I'm understanding this, is that you have this founder group, and there was a need, of course, to do captive breeding to try to expand the group of wolves that can be worked with. Is that right? Can you say anything about that captive breeding effort?

**David Parsons** [01:34:22] Two things that had to be done: and that was to breed up enough wolves, and to get the permission to put them out, which was the bureaucratic process that we spoke about.

**David Parsons** [01:34:32] When I took the job and set up my desk, I had a piece of newsprint with a diagram drawn with crayons of the family tree of known Mexican wolves. I think it was 29 at that point. And in a handful of breeding centers. Maybe eight. And they all had a number. And that's all we had. We had a long way to go to have enough wolves.

**David Parsons** [01:35:07] So, a group of captive breeding facilities, the Arizona Sonora Desert Museum, and Marlin Perkins' outfit, Wild Canid Survival and Research Center, some zoos in Mexico and a few other places. The zoo here in Albuquerque was an early player in the captive breeding of Mexican wolves. Joined together. And they weren't officially sanctioned under the American Zoo and Aquarium Association at the time, but they followed the model that was called Species Survival Plans, which is a science-driven breeding model for how you can save the most gene diversity through match-ups in captivity.

**David Parsons** [01:35:54] And they started meeting just as if they were a sanctioned group under the American Zoo and Aquarium Association. Later they applied for being accepted as a species that qualified and were accepted, and they were a formal Species Survival Plan Group. Every zoo that came on would be a new member of that. There were very precise protocols for mate selections, protocols for genetic testing, and genetic matching, for the kinds of facilities, you know, size of the holding pens, any special provisions for any wolves that might be candidates for release, they couldn't be on public exhibit. They had to be in remote enclosures that were off-limits to the public with minimal human impact.

**David Parsons** [01:36:59] And eventually I commissioned the building of one of those on the National Wildlife Refuge that was off-limits to the public south of Albuquerque as a place to move wolves to that might be on a path to go into the wild. And it was completely off-limits, and we would just send keepers in maybe once a week to make sure the watering system was working and they had road-kill deer or elk to feed on.

**David Parsons** [01:37:27] So, so those kinds of protocols were very, very professional, professionally done. They would have a meeting of the group every year, decide which wolves would be mated that year, which wolves would be moved from one facility to another to be paired up with the right wolf genetically. And all the organizations agreed to follow the rules, and if they were asked to give up a wolf, they would give up the wolf, put it where it needed to be.

**David Parsons** [01:38:01] There's close to 60 zoos now in that program in the United States and Mexico. Changed the name of it, but it's still the same program. And there's somewhere in the neighborhood of 340 wolves in the captive population: more than are in the wild. Last count in the wild was 257.

**David Parsons** [01:38:37] And the program is still highly reliant on that captive population as the source of wolves to grow the wild population. In fact, there's still some diversity in the captive population that has not yet been transferred to the wild, which is a bone of contention amongst the conservation community, that the agency is putting more focus on showing numbers than they are improving the genetics. And there are wolves in captivity that would be more valuable to the survival of these species if they were in the wild. And, well, that's another longer story.

**David Todd** [01:39:25] Well, well, maybe that's something to talk about in that next phase about how they decide which animals should be released, and whether they're released as pups that are put with wild mothers or released as groups. I understand that there's a debate about that, and then, of course, the location. Is that something that you can tell us about, any of those aspects of the releases?

**David Parsons** [01:39:54] The first rule, the first criteria, that we set was that you have to have genetic redundancy in the captive population. We wouldn't put out an animal that would jeopardize genes if it died in the wild, because its chances of dying in the wild were much higher than in captivity.

**David Parsons** [01:40:26] We only use genetically redundant animals. And so, that was the first part of the emphasis of the breeding programs is to produce a large number of genetically redundant animals so that we could put them in the wild without fear of reducing gene

diversity in the captive population. And that's still a top priority for the captive populations: not jeopardize.

[01:40:55] [Can I take about a five minute break? Unbelievably, I'm having rain and I've got some tools up in the yard.]

**David Todd** [01:41:03] [Of course. Yes. I'll be here whenever you get back. Thank you.]

**David Parsons** [01:41:12] [Gosh! There was no rain in the forecast.]

**David Todd** [01:41:15] [Oh. Well, happy day. I'm glad you're getting some moisture there. That's great.]

**David Parsons** [01:41:20] [We're happy to get it.]

**David Todd** [01:41:22] [Yeah, absolutely.]

**David Todd** [01:41:24] Well, so, when you went to go tend to your tools, I think we were talking about this next set of questions: after the captive breeding program was all rolling, is how you decide, and where you put, in what numbers with what families, these released animals.

**David Parsons** [01:41:49] Yeah.

**David Todd** [01:41:49] Well, and you were saying, I think that your first rule is one of redundancy, that you don't release an animal that you don't have a backup for - that protects those genes that are unique.

**David Parsons** [01:42:04] That's still pretty much the rule, because there's still a little bit of gene diversity in the captive population that has not yet been moved to the wild. And the agency is not pushing very hard to get that done.

**David Parsons** [01:42:20] But, there's a part of the story that has to do with the interplay of agencies, of course, and the effect of the decisions of state fish and wildlife agencies on what the U.S. Fish and Wildlife Service does. And there's an important story, and this might be the right time for it, because it plays into this whole situation of getting the right wolves out in the right numbers and such. But it mostly has to do with the, you know, paperwork part of the process.

**David Parsons** [01:43:08] As I mentioned earlier, unbeknownst to me when I started to develop the plan, and the Environmental Impact Statement that wraps around it and analyzes it from a scientific point in view. And of course, the first rule of the Endangered Species Act is that you're absolutely required to use the best available science in making decisions under the Endangered Species Act. The founders were very clear that they didn't want politics playing into that process. They wanted it based on the science.

**David Parsons** [01:43:47] So, we had to put together a team, to write the EIS. And, I actually hired a young environmental attorney to manage the process because almost every EIS ends up being litigated. And we wanted to make sure ours was tight and litigation-proof. And it turned out it has been. Cattle growers tried a couple of lawsuits and didn't get anywhere with them because we had a process that was legally sufficient and supportable.



**David Parsons** [01:44:26] And we had a, we put together a team of biologists, called the Interagency Interdisciplinary Team, with different scientific disciplines that you need and agencies that might be players - the states and the federal agencies. And you work your way through the process.

**David Parsons** [01:44:48] And first we did an analysis of all the possible habitat in the Southwest - in Arizona, New Mexico, and Texas. And looked at the, you know, prey base, human densities and livestock grazing practices and various things that would dictate the suitability of the habitat for wolves. And ownership was a big part of it, which eventually was a big issue in Texas and there weren't large areas of public lands outside of Big Bend National Park in that region down there available.

**David Parsons** [01:45:37] That and the fact that Texas flatly refused, and actually passed legislation to prohibit releasing wolves in Texas. Legislation was just for show because if push came to shove, the Supremacy Clause could have overridden state legislation, but, you know, that would have never played out that way.

**David Parsons** [01:46:04] So, as we went along, we looked at all these areas in Arizona, New Mexico and Texas. And as we progressed in our writing of the statement, we had public hearings. We held 24 public hearings throughout Arizona, New Mexico and Texas. The ones in Texas were in Austin and Alpine. And, to keep the public informed as to where we were in the process of refining our analysis and what our recommendations might be. Ultimately, you put out a Draft Environmental Impact Statement. And that gets public review. And then you look at comments from that. And eventually you end up with the Final Environmental Impact Statement.

**David Todd** [01:46:55] And that was, we had that done by late 1996. We finally got to the final stage.

**David Parsons** [01:47:11] During that process, I had a change in regional directors. I had a regional director, throughout most of that, named John Rogers. He succeeded Mike Spear and it was Mike Spear who had assured the state agencies primarily and the federal agencies, that they would have a say in the process and they could say "yes" or "no" to wolves, but that was not a publicly known process. It wasn't even known to me, that those backroom deals had been cut.

**David Parsons** [01:48:02] But on two occasions in the middle of all this process, when we were finally getting words on paper, it was pretty clear what we were finding with our scientific analyses of habitat suitability, John Rogers, in a private setting outside of the office, twice, let's say it's a, you know, office Christmas party or something at his house, pulled me aside. And, I can't remember if his arm was around the shoulder or not, but I like to picture it that way. He'd say, "You know, Dave, I see where you're going with this process. And I just want you to know that we're going to start, we're going to put the wolves on White Sands Missile Range."

**David Parsons** [01:48:50] I would nod, get out of the conversation as fast as I could. And we'd press on. That happens a couple of times.

**David Parsons** [01:48:59] But John Rogers left, ultimately, toward the end of the between the Draft and the Final EIS. But he went to the Washington office. We had a new national director

named Molly Beattie. She came out of the Northeast somewhere, and was largely thought by most of the staff in the Fish and Wildlife Service that she could possibly be one of the best directors we ever had. Highly qualified.

**David Parsons** [01:49:35] But she brought John Rogers to be her deputy. So, John Rogers was now the deputy director of the Fish and Wildlife Service. Well, Molly didn't last very long. She developed a brain tumor. And died within a year or less of having been placed in that position, which is a presidential appointment, confirmed by the Senate.

**David Parsons** [01:50:09] And John Rogers was then in the position to ascend to the acting director of the Fish and Wildlife Service. You can be acting for up to a year without being appointed or affirmed. Ultimately, you have to go through a process.

**David Parsons** [01:50:27] Well, the wolf programs were three prominent wolf recovery programs in the United States: red wolf, Yellowstone wolf, and the Mexican wolf. And they were so controversial that the Secretary of Interior did not delegate authority, even down to the agency director, let alone to the regional director as such. For the most part, regional directors have authorities to make decisions on most things in their region. Some things would be elevated to the national director.

**David Parsons** [01:51:10] But the wolf programs were held by the Secretary of Interior, Bruce Babbitt, at the time. And if you wanted to go forward, you had to get him to sign a document called the Record of Decision. You moved forward with the recommendation and the Environmental Impact Statement.

**David Parsons** [01:51:33] We got to that point in 1997. It was time to take the recommendation. And I had a new regional director, Nancy Kaufman, who put her stamp on our EIS, recommended as the first priority the best habitat, which wasn't, as you might imagine, White Sands Missile Range. It was the big national forests that combined across New Mexico and Arizona - 7000 square miles of land teeming with elk and deer and lots of things to eat. You know, one could have done the analysis by just spreading out maps and looking at the biggest green blob, but we put the science to it. Science predicted what we predicted. Yeah, that's the best place for wolves.

[01:52:37] So, the process to get a decision out of a Cabinet Secretary, Babbitt, is for an entourage from the level where the work is being done, the region, to Washington with a briefing package and then you'd, what we call "brief your way up the chain of command". So, I had my regional director on board. I should have been suspicious. She chose not to go on with the group to Washington. She chose one of her deputies to be the highest ranking regional officer to go to Washington for the briefings.

**David Parsons** [01:53:22] So, we start with the chief of the Endangered Species Division. At that time it was Jamie Clark, who later became the Director of the U.S. Fish and Wildlife Service, and now is heading up Defenders of Wildlife. And you'd brief that person. And this is always thought to be totally pro forma. You know all the I's have been dotted and T's have been crossed. And it's just a formality. And so, Jamie agrees and joins our briefing team. We move to her boss, which is the Deputy Director for Ecological Services. That person is on board. Next stop is the agency director's office. Last stop being the Secretary of Interior.

**David Parsons** [01:54:09] So, we roll into the director's office and of course, it's John Rogers, because he was acting director. And I figured it had all been ironed out by then. I got five

words out of my mouth in my formal briefing. And he cut me off. And he literally gave me an ass chewing for the rest of the 30 minutes for not selecting White Sands Missile Range as the preferred alternative.

**David Parsons** [01:54:44] And I, I was stunned, just almost in shock that this is what was happening.

**David Parsons** [01:54:55] Tried to reason with him, with John, and he was throwing stuff at me that was not even true. And he said, "We have studies that showed White Sands with 60 wolves or so." I said, "John, we didn't have those studies, and our studies don't show that. And it's just not so." He was relentless. He did not let up.

**David Parsons** [01:55:21] But the time came to brief Secretary Babbitt. And you don't, you don't hold up the Secretary just because you're being chewed out by your director. Director has to be part of that. And that briefing room was just around the corner in the Interior Building in Washington.

**David Parsons** [01:55:46] First of all, it's very unusual for field-level biologists, like I was, to end up in a position where you're briefing the Cabinet Secretary. And it was only because, you know, the authority had not been delegated beyond the Secretary. So, the project manager was the guy to give the briefing.

**David Parsons** [01:56:14] So, we go around the corner, John Rogers with us. I went into the Secretary's briefing room. And, there was a big long table, beautiful hardwood rooms in that old Interior building. It's just gorgeous - hardwood tables and about 20 chairs around the table. And somebody sitting in every one of them - assistant for this, and the undersecretary for that, and, you know, all the people we had briefed along the way, and the acting director of the Fish and Wildlife Service, John Rogers.

**David Parsons** [01:56:49] The Secretary's handler a young woman, comes into the briefing room. She says now the Secretary is going to come in. She said, "He's going to sit right here at the end of the table. Your easel is right here beside where he's going to sit for your maps and things you're briefing." She said, "And now you just direct your briefing to the Secretary. Don't you worry about these people around the table." "Yes, ma'am."

**David Parsons** [01:57:22] The Secretary strolls in. Of course, Babbitt was from the country, a ranching family in the country where we were going to put the wolves in eastern Arizona. He knew the country. He was a big wolf supporter, you know. He, you know, he had authorized the Yellowstone two years earlier, and was on board with the red wolf stuff. That was kind of part of his legacy as Secretary of Interior.

**David Parsons** [01:57:49] So, he strolled in, and engaged in a bit of small talk about the country and, you know, gets into Aldo Leopold and the story about the green fire. And says, "You know, I know where, I know where that bluff was, where Leopold fired the shot that he wrote about in his story about green fire."

**David Parsons** [01:58:14] Nobody knew at the time. And it turns out Secretary really didn't either, it was discovered later. But it was fun that he was making that connection and interesting.

**David Parsons** [01:58:25] So, maybe 5 minutes or 7 minutes of small talk like that.

**David Parsons** [01:58:33] We had called the area that we were promoting as the preferred alternative the Blue Range wolf recovery area, because that was a mountain range that was in the middle of it, right along the state line between Arizona and New Mexico. And we had, we were forced to carry the White Sands Missile Range all the way through to the final document as an alternative site. But we presented it as being less suitable. And we chose the Blue Range as our preferred site.

**David Parsons** [01:59:08] And so, the Secretary turns and he looks straight me and says, "So, I hear we're going to put these wolves in the Blue Range." And I've never been so relieved in my life. I mean, I was, I was a wreck, since you can imagine being chewed up by your agency chief, right before you're briefing the Secretary. And I broke the rule that the lady said about not looking. I made a check on Rogers to see whether he was throwing darts out of his eyes. And he had his head down, and there was no eye contact.

**David Parsons** [01:59:52] And I turned back to the Secretary and said, "Yes, sir," and finished the formal briefing. And we got that stamp of approval to put the wolves were they needed to be.

**David Parsons** [02:00:05] The program would be a failure if we were forced to put them on White Sands. Dismal failure. Big waste of money. Waste of wolves.

**David Parsons** [02:00:16] But that's the kind of internal politics that still exists between states and federal agencies.

**David Parsons** [02:00:24] And that's why we see so many environmental lawsuits, and I've been involved now just as long in the environmental community as I was with the Fish and Wildlife Service - 24 years with Fish and Wildlife. And I've been retired now for 25 years. And I've been a part of some of those lawsuits because it's the only way progress is made to break these political logjams.

**David Todd** [02:00:51] It's ironic. As you were saying, the Endangered Species Act is supposed to be science-based, but gosh, it gets political and money gets involved and, you know, powerful people, in so many cases.

**David Parsons** [02:01:06] Yeah. Finally we got, in 1998, we got put the first wolves out, because we had more than 100 in captivity.

**David Todd** [02:01:17] Well tell us about that. So, you get the approval to do this. And now you're on to the next phase. How did you actually do this on-the-ground part of the work.

**David Parsons** [02:01:31] Well, we had another twist that was purely political. And it goes back to that deal that was made between the regional directors of the Fish and Wildlife Service and the states that they wouldn't put wolves in a state that didn't approve of it.

**David Parsons** [02:01:50] We finally got a little bit of approval from Arizona. They weren't real happy about it, but they were willing to put up that area that we chose. They still thought it would start at White Sands Missile Range until Babbitt changed that. When he did, they decided it was in their best interest to stay in the game rather than trying to fight it as an agency. And so, they went along with wolves being placed in the Arizona part of this New Mexico / Arizona zone.

**David Parsons** [02:02:28] But the New Mexico Game and Fish was still absolutely opposed. So, we were only allowed, we the team, to start the releases in Arizona. We couldn't start them in New Mexico.

**David Parsons** [02:02:46] We wrote a provision in the Environmental Impact Statement, in the project plan, that gave us the authority to translocate wolves, if a legitimate management need arose, from sites in Arizona to sites in New Mexico. We were prohibited from taking a wolf from a zoo and putting it in New Mexico. But, you know, if situations arose with conflicts with humans and livestock and such, eventually we had reasons to be moving wolves around.

**David Parsons** [02:03:31] And two years later we started moving some wolves into New Mexico.

**David Todd** [02:03:38] But, nothing directly from a zoo to New Mexico?

**David Parsons** [02:03:41] Translocating wild wolves over to New Mexico.

**David Parsons** [02:03:46] It wasn't until years later that the regulations got changed, and the position of New Mexico changed because of change in governors and the game commission, that we got the authority to take them from zoos into New Mexico. Now we can take them from zoos anywhere into those two states, inside the bounds of the recovery area.

**David Parsons** [02:04:16] There still are things to talk about that are politically motivated, like Arizona wanted limits on where they could be. So there were hard boundaries. They couldn't go outside those national forests. Any wolf going outside the National Forest boundaries had to be captured and brought back in. Later that was changed in 2015 to allow them to go all the way to the Mexican border and north to Interstate 40. But the states absolutely were opposed to having any wolves go north of Interstate 40, even though the habitat continues to go across the interstate.

**David Parsons** [02:04:58] And that stands to this day. So, any wolf that crosses I-40 looking for a better place to live has to be captured and brought back. And that's been happening more and more now.

**David Parsons** [02:05:10] Anyway. That was a sidetrack. I'm not sure where we were in the conversation.

**David Todd** [02:05:15] Well, we were just talking about these reintroduction efforts. So, I've heard that there is a debate about whether to release pups and put them with wild mothers, versus taking intact families or groups, I guess, and releasing them as a larger number.

**David Parsons** [02:05:43] Yeah.

**David Todd** [02:05:44] Can you tell us anything about that whole discussion?

**David Parsons** [02:05:47] Well, you probably got most of that from Michael Robinson, I imagine. I saw notes. But I'll summarize it again.

**David Parsons** [02:05:58] Up until 2006, all the releases were either adult males or usually adult family groups. We played around with which scenario was better to put a pair out that

we knew were bred, and put them out shortly before the pups would be born, and allow them to choose a den site. Or put them in, actually, a holding pen, to acclimate them to a site, maybe even with their pups, and then let them go. So we played with it either way: to let them pup in the wild, or have pups in holding pens, or even have pups in a zoo and then be moved to a holding pen.

**David Parsons** [02:06:51] Because they have strong homing instinct to go back to where they came from. So most of ours were done with what they call a soft release, where you had a big holding pen in the place where you want them to be for a month or two or three, before we actually open the gate, which is the way they did it in Yellowstone National Park. And that tends to suppress their desire to head off in the direction of where they just came from.

**David Parsons** [02:07:24] But it was always family groups, and with or without pups, at the time.

**David Parsons** [02:07:30] But the states decided because we had, you know, we had interaction between wolves and humans, both around residences and with livestock. And it was decided, mostly by the state managers, that those wolves from captivity didn't have wild enough instincts to stay away from humans.

**David Parsons** [02:08:03] And there might have been a little bit of validity to that.

**David Parsons** [02:08:11] But as we had wolves, as they spend more time in the wild, we could detect that they were becoming more and more wary of humans, and less and less engaging in what might be called nuisance activities.

**David Parsons** [02:08:28] There was always going to be livestock depredation because livestock were everywhere, nearly everywhere. We weren't in Yellowstone National Park that was cattle-free. We had to put them in the middle of active livestock grazing. That was very hard to change. So, we predicted there would be livestock depredation and there was.

**David Parsons** [02:08:55] And we championed methods for ranching that would minimize that, and foster coexistence between ranching and livestock. And with the public lands had, you know, multiple-use mandates just as strong for endangered species recovery as they are for livestock grazing.

**David Todd** [02:09:17] So, while we're on that point, I think that's a really interesting issue, I guess with national forests, unlike national parks, you've got multiple use, you know, multiple stakeholder requirements. And so you've got to deal with these livestock owners. How did you figure out the mitigation? You know, how did you make that that difficult conflict work out?

**David Parsons** [02:09:47] Well, we're trying to promote methods to minimize that in the first place. For example, the grazing that takes place in that country is open-range public lands grazing. The livestock owner has a base property that can be 100 acres. And in that country, you know, you need a thousand acres for 20 cows because the forage is so limited. And so, all the forests are cut up into livestock grazing allotments. There's no gap in a place that's not a livestock grazing allotment, except now in the middle of the Gila Wilderness. And that's only because the ranchers have abandoned them, because it's more difficult to ranch, because you can't use mechanized equipment.

**David Parsons** [02:10:52] And we had provisions in the rules. You know, if wolves are engaged in three depredations within a year, they'd be either pulled back to captivity or killed in many cases. And a lot of that was done. The wolves were taken out because of the conflict.

**David Parsons** [02:11:14] So, where was I? Let's see, where was my next train?

**David Todd** [02:11:21] Was there any option for paying the livestock owners for cattle that were lost?

**David Parsons** [02:11:28] Yeah. You know, that evolved over time. In the beginning, the conservation groups took that on, especially Defenders for Wildlife, had a compensation program in place, from day one. Eventually, more sources came into that. Some were federally allocated through legislation and different programs. And so, there's a substantial compensation fund now, and the rules for how you document a kill and that sort of thing. Same as it was done in the northern Rockies outside of Yellowstone.

**David Parsons** [02:12:07] But a lot of the ranchers thought that was way too onerous a process to have to go through that.

**David Parsons** [02:12:17] We've, you know, gradually gained some acceptance through some ranchers. And there's now a livestock coexistence group that's in play in the wolf recovery area, that has a number of participants, participating livestock operators and federal agencies and the conservation groups, particularly Defenders of Wildlife, that work on methods to abate conflict, avoid conflict.

**David Parsons** [02:12:53] You know that ranching model at the time when wolves were first released was just a person with a base property is granted first choice on having the federal grazing allotments that touch around their base property. So, a ranch that has a 400-acre base where, you know, the ranch operation is might control 80 or 100,000 acres of grazing allotments that surround their base property.

**David Parsons** [02:13:27] And the ranching model in there is to just throw cows and bulls out onto the range, while breeding whenever they choose to. Allow open-range calving, which is sporadic. It's not timed to any given period of time. And very little hands-on management with cowboys and range managers.

**David Parsons** [02:13:57] And they will put those out in winter or spring and ride up in fall and round up the calves and send them off to feedlots.

**David Parsons** [02:14:07] Ranchers would count the number of cows and the number of calves, and if the calves would be less than the number of cows, then they'd blame the wolves for everything that's missing.

**David Parsons** [02:14:17] And there are ways to get around that. You could bring, you could synchronize the breeding. You could bring them into an enclosed pasture for breeding purposes. And if you have a calf aged four weeks or so, it's way more capable to escape than one's newborn. And then put them out and pulse the calf production. So you kind of like schooling fish. You know, you minimize the chance that you're the one that gets caught. This will help too. Elk calve in early June, and they all calve out about the same time, and so there's just this slug of elk calves, and so many that the wolves can't, they can't eat them all.

**David Parsons** [02:15:08] Cow calves, cattle calves, were just really easy to get. That's the kind of things, you know, different paygroups and the agencies have been working on trying to effect some change in husbandry practices and also offer compensation.

**David Parsons** [02:15:29] The other thing is that public-lands ranchers pay \$1.35 to have a cow and its calf on the public range land for a month. And if you go to the U.S. Department of Agriculture and look at the statistics on range and grazing. I wrote an op-ed on this. The average grazing lease on unirrigated western rangeland, like you would find on public land (this was two or three years ago), it was over \$20 an animal unit month, cow and calf. And they're paying \$1.35.

**David Parsons** [02:16:19] I calculated that the subsidy for a ranching operation, say a thousand cattle, and it was a subsidy of about \$200,000 a year over what they would have to pay if it was all private land, and not theirs.

**David Parsons** [02:16:39] And if you go deep into the weeds of Taylor Grazing Act and you look at the language, you know why they've set the rates so low, it's to accommodate, you know, the effect of other public uses in the multiple-use public lands that might have an effect. And predation is one of these. It's kind of built into the formula. Yeah, you might lose some animals to predation.

**David Parsons** [02:17:13] But nobody goes there. Every act of predation is treated as something that should be compensated, must be compensated. It's, it's a mess. And it all goes way back to the way ranching was established and the way rangelands were originally established, forests were established, and grazing allotments were established based on base properties. And the key factor that keeps the rate low and keeps the stocking rates high is that, at some point in time, originally, ranchers with the base property were just granted the privileges to use the grazing allotments that adjoined their base property, and just charged rent based on, you know, animal unit month.

**David Parsons** [02:18:06] And it hasn't changed in decades: \$1.35. In fact, it's gone down sometimes.

**David Parsons** [02:18:15] But they didn't pay for that. It was just granted as a privilege. They had to have to follow agency rule.

**David Parsons** [02:18:23] But, at some point in time, ranchers decided to sell their ranches. And real estate agents and bankers began to put a price on the value of the privilege of those using those grazing lands and a value on the number of animal unit months that were allotted.

**David Parsons** [02:18:53] Say, a rancher had an allotment of 500 AUMs, and wants to sell his ranch. In the interim, the agencies have done their field reviews and have decided that's 200 cows too many. The range is degrading, being damaged ecologically, and really they need to set the number quite a bit lower. But that rancher's already taken a deal with a real estate agent and the bank based on being allowed to run 500 head, and he wants to sell.

**David Parsons** [02:19:33] Everybody is up in arms. Rancher's up in arms. The banker's up in arms. The banker's good friend, the congressman, is then contacted. The Forest Service wants my constituents to cut his herd in half. He'll have to go out of business.



**David Parsons** [02:19:51] That dynamic has been in play for decades and that's really hard to overcome, even today. Because now ranches have gotten sold all the time. And, you know, we talk to rancher, who says, "Yeah, I got the X Bar Ranch. It's an 80,000-acre spread and I run 500 head." And you dig into it, and he might own 200 acres, and the rest is public grazing.

**David Parsons** [02:20:20] So it's "the ranch", once that's been established.

**David Parsons** [02:20:26] I don't want to come across as anti-rancher. They're doing what they're allowed to do in order to make a living. But that's the system that we've inherited. And when you try to overlay something new on it, like the Endangered Species Act, you push all those buttons and it's, it's really difficult to overcome and to achieve some kind of harmony and kind of consensus over those issues.

**David Todd** [02:20:57] Well, I guess those habits and traditions don't go away easily. And thanks for the explanation there.

**David Todd** [02:21:07] So, one thing that's sort of related to this is, is I gather the Mexican wolf is considered, its status is considered "non-essential experimental". Is that right? What does that mean?

**David Parsons** [02:21:24] Boy! Now we're getting into the weeds, the bureaucratic weeds.

**David Parsons** [02:21:29] Well, that provision was added to the Endangered Species Act, I believe, in a 1983 amendment to Section 10 of the Act. It was kind of sparked by the first efforts to release red wolves in either the late '70s or early '80s. They had bred up red wolves, and there was a place that spanned the border of Tennessee and Kentucky that was excellent red wolf habitat. It was called the Land Between the Lakes National Recreation Area. And it was decided that that would be a good place to release them. And so, they proposed to do that.

**David Parsons** [02:22:30] And all kinds of constituencies went berserk. I don't think it was even available for agriculture at all. But it became highly controversial, highly political, to the point that they backed off, and did nothing for the next several years until Congress decided that there needed to be a way to deal with the endangered species that came with that level of controversy.

**David Parsons** [02:23:05] And so they created Section 10(J) of the Endangered Species Act. And it was something entirely new and allowed the Secretary of Interior a new category of listing called experimental listings, and it set up a whole new set of rules.

**David Parsons** [02:23:32] And, it also developed two levels of experimental population. It could be here either essential or non-essential. And the words the people never say are the words that follow those: either "essential to the continued existence of the species", or "non-essential to the continued existence of the species".

**David Parsons** [02:24:02] And they used that for the Northern Rockies. And there they could get away with it because, the wolves being used there were drawn out of Canada. The subspecies that evolved there was completely extinct. There weren't any in captivity. So, if that population were wiped out, it would not result in the extinction of the species because the source population was still there.

**David Parsons** [02:24:41] You also could not release an experimental population into an area that still had an extant population of that species in the wild. Those would have to be labeled "endangered" and have all the protections of the Endangered Species Act, which prohibits all take, including harassment, for fully endangered species. So, it was a measure to try to address these controversial situations.

**David Parsons** [02:25:11] The non-essential is followed by "non-essential to the continued existence in the wild". And it's really not applicable to the Mexican wolf and a lot of other species. But, the moment that provision was in play, every species that the Fish and Wildlife Service had to reestablish from captivity - black-footed ferrets, whooping cranes, and you name it - were either classified if they weren't already, or reclassified as experimental non-essential populations.

**David Parsons** [02:25:52] The reason being is that created the least friction for state and federal agencies. Under "essential", they would be treated as if they were threatened instead of endangered, which still carried almost all the provisions of the Endangered Species Act, except that you could write a special rule to deal with some of these kinds of situations. That was done in Minnesota with the wolves that repopulated up there from a wild population. It still allows you to have a rule that would allow you to take some wolves under certain conflict situations.

**David Parsons** [02:26:33] But it also leaves Section 7. Section 7 requires all other federal agencies to implement the Endangered Species Act, and to consult with the U.S. Fish and Wildlife Service on everything that they proposed to do that might affect an endangered species, and to write a biological opinion as to whether or not the activity they're proposing will jeopardize the continued existence of the species.

**David Parsons** [02:27:10] The other federal agencies always found that to be a pretty onerous provision, but it was followed, and was necessary. It's why General Jones of the Missile Range knew that he didn't have really a legal opt-out, so.

**David Parsons** [02:27:29] But if you go "endangered non-essential", it eliminates Section 7 and eliminates that agencies must consult with the Fish and Wildlife Service in anything they do, or write biological opinion, because the language itself says you can kill them all and it won't jeopardize the continued existence of the species.

**David Parsons** [02:27:56] Fish and Wildlife Service justified that. I wrote the rule. That was one where I was given no choice, because they had done it in Yellowstone. They had done it with red wolf. And then there was no way I could float a rule with anything but "experimental non-essential".

**David Parsons** [02:28:17] But the trade-off was to get them in the right place. We got the wolves in the right place. And that could be addressed later with rule changes. In fact, the rules changed twice now, and that's been considered. It's still not agreed to by the agencies, because they still get pressure from states and other federal agencies to keep them in non-essential status.

**David Parsons** [02:28:40] But the language says, the language basically says, "You can kill every wolf you put out or lose it, and it's non-essential to the continued existence of the species." The only thing left are, you know, are captive animals. And they're genetically eroding over time. Time's running out. You know, there were seven founders. But now, if you

look at the genetics in captivity, it only looks like they came from three founders. And that's just a fact of life in captivity, is you lose genetics over time because you have a minimal gene pool.

**David Parsons** [02:29:15] So, it's bogus. And, you know, I'm the original culprit because I went along with it. But, I really wasn't given that choice. It was either that, or you have no program, basically.

**David Todd** [02:29:29] And it seems like there's a trade-off between that non-essential status and getting the release site that you felt would allow them to survive with enough prey, and not too much harassment.

**David Parsons** [02:29:41] Yeah.

**David Todd** [02:29:41] Okay.

**David Parsons** [02:29:42] We could have, if we went to White Sands, you know, there were no public uses there. No livestock. We could have been essential, I would imagine, but they wouldn't have survived there eating, so they wouldn't have had a prey base. But yeah, you got the trade-off correct. It was a trade-off that had to be made to put them in cattle country basically.

**David Todd** [02:30:00] Well, tell me, you know, so there's some animals out there in the wild now, these Mexican wolves. What sort of impact do you think they're having on the prey species, the whole ecological balance in the Blue Range.

**David Parsons** [02:30:19] Well, that's a good question. We had a little meeting just a couple of nights ago with somebody who asked that. For a keystone predator to carry out its role in ecosystems as being a controller, basically, of prey populations, which then controls and they also control predators, the mid-sized predators or the mesopredators, you know. They also kill coyotes. They kill foxes. They catch them. They keep those populations in check too, which allows a more diverse population among small mammals, and among small birds, and go all the way down like that.

**David Parsons** [02:31:10] But, for them to actually exert that pressure, ... they have to exist on the landscape in what's now called ecologically effective densities and distributions. The term was coined by the famous conservationist Michael Soule, back around 1980. He was world class conservation biologist, founded the Society of Conservation Biology. He became a friend and colleague of mine.

**David Parsons** [02:31:49] And that plays out in Yellowstone, but it doesn't play outside of Yellowstone. It has to do with the wolves in Yellowstone. They aren't regulated in any way, for any reason. They're allowed to establish their own density. The hit Yellowstone and they had 11,000 elk on day one, and the population shot up in a really steep growth rate for the first ten years or so to (this is just an estimate) of 140 or 150 wolves in Yellowstone. And then they started impacting the elk herd. Today, the elk herd is, last I read, is 2000.

**David Parsons** [02:32:38] That's what caused, you know, a lot of the restoration on the streamside vegetation, to allow them to grow again, because it wasn't, they weren't being grazed and browsed.

**David Parsons** [02:32:54] And once the elk population started coming down, the wolf population started coming down. And it stabilized right around 100 wolves.

**David Parsons** [02:33:04] And it's humming along at that, you know, it's a dynamic equilibrium, but it's humming along with wolves ever since because they've found the equilibrium that sustains enough prey to sustain them. But there's no overkill in their prey, so that their population would even go down further.

**David Parsons** [02:33:28] That's how that works. But you have to exist. The highest mortality factor, by all means, in Yellowstone National Park is wolves killing other wolves, because of the territorial disputes, the territorial nature of the beast.

**David Parsons** [02:33:51] A few get hit by cars. Also some are killed by other wolves, or die of old age. Outside of the national park, even up there and down here, human-caused mortality is the top, top form of mortality, bar none: wolves killed by people, mostly poaching. Some wolves are killed to honor the agreements that are made to deal with quote, "problem wolves". Some are hit by cars, but very few. Very few die of old age, but occasionally. But human-caused mortality.

**David Parsons** [02:34:37] One of those papers I listed was by a group of researchers at the University of Wisconsin. The head of that runs what's called the Carnivore Coexistence Lab at the University of Wisconsin, looking for ways for humans to coexist with carnivores, large carnivores, like wolves, primarily. And poaching is a big factor.

**David Parsons** [02:35:06] And he wanted to know, and brought me on as part of his research team, because I had access to a lot of data and the experience with the wolves. How many wolves ... we know how many are shot and found. That gets reported by the agencies.

**David Parsons** [02:35:24] But what we don't know is how many get shot that aren't found. They developed some statistics techniques that I can't even begin to understand, to analyze that, and it was kind of based on the fact that. The Mexican wolf population is highly populated with wolves with radio collars. More than 50% of the population is collared most all the time.

**David Parsons** [02:35:55] I have mixed feelings about that. Because it would be nice, and the ultimate goal should be, wolves living like every other beast on the face of the earth, unmolested by a man and not having to wear a radio collar. But because of what they are and what they do, they're still monitored very heavily.

**David Parsons** [02:36:16] Well, very often, they'll fly every two weeks to see where every wolf with a radio collar is. And they try to have a collar on every pack, that they know that exists. So they can map the distribution of the wolves.

**David Parsons** [02:36:32] But, very often they lose a signal. It just goes off the air. They call that "lost to follow-up". That wolf is now lost ... because there's no way to know where it is...

**David Parsons** [02:36:49] Using that data and the data on the model and batteries on these radio collars, and the performance that they normally have in terms of how many years the battery will stay on the air and how long the battery will last, primarily, and a few other things. They developed statistical methods, and they looked at all the data from collared wolves and looked at the ones that were "lost following". And those collars were not lasting

anywhere near the lifespan of a wolf, or the lifespan of a battery in the collar. They were winking out way too soon.

**David Parsons** [02:37:36] Well early on, the poachers were naive as to the fact that if they left the collar on that wolf and didn't disable it, they could be found. They learned very quickly, you know, if you disable the collar and shoot, put a bullet through it, and that will put a collar out of commission. You know, "shoot, shovel and shut up" is an open game, as long as you disable that collar before anyone can know where it was when it died.

**David Parsons** [02:38:13] The collars emit what's called a mortality signal. If they don't move in something like over eight hours, the beeps come twice as fast. So, you know when a wolf dies., or it's immobilized for some reason.

**David Parsons** [02:38:30] So, our analysis showed what's now called "cryptic poaching". It's poaching that you don't actually document. But you know it's happening. It was 118% of the known poaching, so, over twice as many wolves were being poached than ones that were being found.

**David Parsons** [02:38:53] Agencies don't base their management ... they still base their management on only that known factor. But they in fact were being challenged in the scientific journals for that paper by agency biologists that our methods are bogus. They were first established in Sweden, the phenomenon was first elucidated. You know, we think we've got the scientific integrity and accuracy on our side. We're working on that rebuttal right now. But they say, "Wolves disappear. Nobody knows why."

**David Parsons** [02:39:48] That's partly why this year, the end of the year, population at the end of 2002 was 242. The end of the year population at the end of 2003 ... And they do that, they count in January and February, they do a year-end population for the previous year. It's an intensive survey - helicopters, and radio receivers, and snow tracking and everywhere they can, anywhere they can get them. The estimated number of wolves is 257.

**David Parsons** [02:40:23] Well, that's only 6%, it's only 15 more wolves than there were the year before. Well, 6% is a pretty low growth rate for a wolf population that's below carrying capacity. Like in Yellowstone, they average a growth rate of 25% and you would expect a growth rate of around 20% in a growing population until they reach capacity of the ecosystem.

**David Parsons** [02:40:54] Six per cent. They documented 138 pups that were born. Yet only 15 more wolves were added to the population.

**David Parsons** [02:41:06] You know, 16 of those big pups or 21, whatever it was that we lost that year, something in that range, 15 to 20 of those pups that were brought out of captivity, poked them into wild dens. They've released 99 of those now since they first started in the mid-teens. That was in '16 or '17 when they first started doing that, because the agencies put the nix on putting out any adult wolves, because they thought they were too habituated to humans. And that they would all become what's come to be known as "nuisance wolves".

**David Parsons** [02:41:50] But the survival of those is really low.

**David Parsons** [02:41:57] They do select them to add genes to the gene pool. But survival has not been enough to have any effect on the numbers if you look at genetic diversity in different

measures of it. And of those wolves are just meeting a fate that's unknown. But they're not becoming adults.

**David Parsons** [02:42:22] That has kind of a animal humane aspect to it. A lot of the groups that are more on the animal humane side of things are not real happy about the chances of survival have gotten pretty small.

**David Parsons** [02:42:37] You don't know which ones are going to breed. They only count for anything if they grow to breeding age and finally find a mate and breed. That's when their genes have a chance of getting into the gene pool.

**David Parsons** [02:42:48] Whereas the argument for the bonded adult pairs with pups is those genes add to the gene pool on day one, with new wolves in the system.

**David Parsons** [02:43:00] See? That's the basic argument.

**David Todd** [02:43:03] I see. Okay.

**David Todd** [02:43:05] Well, so is the upshot of the fact that it seems like there's a lot of cryptic poaching, and then known poaching, that there are not enough Mexican wolves in the Blue Range area to have an ecological impact? Or are you seeing some impact in how prey species and competing predators?

**David Parsons** [02:43:26] That has not been seen. The agencies have seen no drop in ungulate, deer and elk, populations. They have seen no drop in hunter success. I don't think there's been any drop in the number of hunting licenses issued.

**David Parsons** [02:43:40] Those biologists that first studied that in Yellowstone - Bill Ripple and Bob Beschta - came to our wolf recovery area some years ago to see if they could detect any ecological changes, that they could tag to the wolves and they didn't find it.

**David Parsons** [02:44:02] And the estimates of the carrying capacity of that area for wolves are three to four times the number of wolves currently out there, what the prey base can withstand, and, you know, for the maximum population of wolves.

**David Parsons** [02:44:25] But the pressure from the states is never going to allow the population to achieve ecologically effective density and population numbers and even distribution. The distribution's addressed reasonably in that the size of the recovery area are greatly expanded from the original one, by ten-fold or so. They get a lot more space. And that space that they have would probably support three times as many wolves as are out there.

**David Parsons** [02:45:06] But it still only supports one population. Most population biologists think you need redundant populations, a ... structure that's called, a metapopulation, where you have disjunct populations that have connected, wildway corridors, travel corridors, where wolves can disperse between them and exchange genes. But if some catastrophe hits one population, and wipes it out, the other two populations are still there to fuel the repopulation.

**David Todd** [02:45:41] Insurance, I guess.

**David Parsons** [02:45:43] The plan that was developed by non-agency scientists that proposed that three-population scenario in the Southwest was overruled by the states. It never got into play.

**David Todd** [02:45:59] Well, you know, this...

**David Parsons** [02:46:00] Force a cap. Force the Fish and Wildlife Service to insert a cap into the regulation that the population of Mexican wolves in the United States part of the range cannot exceed 320 animals. Absolutely arbitrary nonsense-based assessment of what the agency calls... Let me see, think of the term. Acceptance is the last part. The public acceptance, the human acceptance. Something like that. It's not quite right.

**David Todd** [02:46:48] A political term.

**David Parsons** [02:46:50] It's a political term. And it's a term that's based on how many wolves people can tolerate, not how many wolves the ecosystem can handle and needs to operate as an intact ecosystem.

**David Parsons** [02:47:09] And so, they have forced that into the last two sets of regulations, and into the last iteration of the recovery plan. And the recovery plan says that there needs to be 520 wolves in the one population in the Southwest, split between United States and Mexico to achieve recovery.

**David Parsons** [02:47:45] Well, the U.S. part of that is 320. And the regulation allow wolves to be taken out. If they're declassified, they could be hunted, anything above 320. Because that's the limit. Social tolerance, it's social tolerance is what they call it. But that's the limit and it was set in federal regulation.

**David Parsons** [02:48:12] And if Mexico can achieve a population of 200, then the wolves can be taken off the endangered species list. The management would be transferred to the states. And the Fish and Wildlife Service would no longer have a hand in managing that population. States would manage it at this cap of 320 wolves.

**David Parsons** [02:48:38] It's not that far from the cap right now. But, ecologically effective population for the Southwest? Something more like a thousand or twelve hundred. But.

**David Todd** [02:48:53] Well, so one of the things (and I see that we're probably running on here, and using up too much of your day), and I wanted to ask a few more questions.

**David Parsons** [02:49:05] Sure.

**David Todd** [02:49:05] That that really may take us into the next phase of your career after you leave Fish and Wildlife Service. I hope that's okay. But, as you pointed out, you've spent a number of years since leaving the agency and I'd be really curious about what your experience and perspective has been after entering the non-profit role.

**David Todd** [02:49:29] And I understand that you've worked for the New Mexico Wilderness Alliance, Project Coyote and then the Rewilding Institute. And can you give us some insight about what that world is like, versus the many years you spent at the Fish and Wildlife Service and the Corps of Engineers?

**David Parsons** [02:49:50] You know, the Corps of Engineers really had nothing to do with this. That was a totally different game there than at Fish and Wildlife Service.

**David Parsons** [02:49:59] My role has been as a science and policy advisor, because I am the guy who understands, the guy they come to if they want to understand how NEPA works or how the Endangered Species Act works, and what's required by law and what's allowed by law and what's not.

**David Parsons** [02:50:17] And, I also act as a carnivore conservation biologist, which is my title with the Rewilding Institute, and with Project Coyote as the science advisor. So, what my main role is ... those agencies are totally committed to, or those organizations, those non-profit organizations, are totally committed to scientific integrity and scientific accuracy, and to not playing politics, and to exposing the politics that is in play.

**David Parsons** [02:51:04] All of those agency decisions are subject to public review. And that's where the non-profit world comes in. So, most of what I would do is draft comments for these organizations to sign on to, on various proposals being floated by the Fish and Wildlife Service or other federal agencies that were off track, that were politically motivated, that were not based on best science. And we would counter that in our comments.

**David Todd** [02:51:42] Can you give us an example of maybe a place where you've commented about Mexican wolf policy?

**David Parsons** [02:51:49] Yeah. Well, largely on Mexican wolf policy, but it could spread over into other issues of endangered species, carnivores in particular, usually bears and some red wolves, but mostly I'm focused on wolves in the Southwest, primarily.

**David Parsons** [02:52:07] I'm guessing that I, and people who join me on those, probably submitted a thousand pages of comments over 25 years. A set of comments often went 40 pages, with 30 or 40 scientific citations, maybe 100 scientists signing on to them.

**David Parsons** [02:52:31] And believe it or not, I think you'll believe it at this point, not a single recommendation ever put forth in those comments by me or those non-profit organizations has ever been adopted by a government agency in that phase between draft and final, where they can do that. If you submit a legitimate comment, they can make changes. The recommendations they get from the states are almost always adopted.

**David Parsons** [02:53:07] That's why the only avenue left for those groups is the courts. We had a decision. It's really rare to get on the 2015 version of the Mexican wolf plan before a judge, who agreed with us that it was not based on the best science. And they had to go back and do it over. They agreed with our scientific experts. And, in the do-over, what they produced was no better than what we challenged. But, that one stood the scrutiny of the courts.

**David Parsons** [02:53:53] And so, and the same with the recovery plan... The courts forced a do-over on that. But the do-over was just pabulum, but it was enough to get them off the hook. So, in that re-do of the Mexican wolf, we argued hard that the cap, the 320 cap, had to come out. And a draft ...



**David Parsons** [02:54:26] [My wife and a granddaughter are coming into the house. And what I could do is put on my earbuds and then you won't hear them, and I won't hear them either.]

**David Todd** [02:54:36] [Okay. Fair enough.].

**David Parsons** [02:54:39] [And that should drive it to my earbuds. Yeah. Okay. I think we're good now].

**David Todd** [02:54:45] Well, so maybe just explain to us this challenge to the 320 cap.

**David Parsons** [02:54:52] Yeah, we challenged them on that, and they redrafted that, because we had challenged that in advance. There's what's called a scoping process before the draft. And then in that re-do of the whole process, we said, "You know you need to drop that cap. There's no science behind it. Just leave it open. Let the wolves decide on their own what the cap is."

**David Parsons** [02:55:21] They produced a draft where they actually put that one recommendation - the first time that they've ever taken a recommendation from us. And, generally that would carry to the final. Well, the states raised holy hell over them dropping that cap. Well, lo and behold, here comes the final, with the cap back in. So, that's the way it plays out. That's why, you know, we're always in the courts.

**David Parsons** [02:55:57] And the court cases are almost always, they are either based on not following the proper bureaucratic process, or they have not used best science. It's almost impossible to win on best science. It's happened in once in my last 25 years, even though it didn't result in any better science. It resulted in a do-over. Because the agencies have their own scientists. And the courts are reluctant to get into the game of, whose scientists are the best, whose science is the best science? That falls to the academics, and the realm of academic journals. And so you rarely get that call from a court.

**David Parsons** [02:56:49] You can very often get a call that they haven't followed the right process, and they often don't. And so, you get do-overs. You often don't get anything any better.

**David Todd** [02:57:02] Okay.

**David Parsons** [02:57:03] Huge frustration.

**David Todd** [02:57:06] [Dave, I'm going to ask you a favor here. Yeah, I hope you can hear me. Well, but I cannot hear you as well when you're using your AirPods. And so, what I'm hoping is that we can.]

**David Parsons** [02:57:21] [I thought the background noise is a problem.]

**David Todd** [02:57:24] [Yeah, we can probably deal with a little background.]

**David Parsons** [02:57:32] [Let me adjust my hearing aid. I can't hear without my hearing aid probably. Let me take these off. Am I coming through?]

**David Todd** [02:57:50] [Now I can hear you. That's great. Okay.]

**David Todd** [02:57:55] It may be just as well, because I think that I'm going to see if we can wrap up before I just wear you out. This is a marathon.

**David Todd** [02:58:08] Let me ask you two more questions. If you can indulge me a little bit more.

**David Todd** [02:58:12] The first one is just when you think back about your career as a wildlife biologist, what do you think about the role and the value of that place in trying to protect animals, live, earn a living, have an ethical existence. You know, what sort of value and purpose and role do you find in that kind of career?

**David Parsons** [02:58:44] You know, I have changed my thinking over a pretty broad spectrum. And a lot of people in my profession don't. They buy into that. I mean, I went to a college, an ag college. What are those called? Anyway, they're setup, those departments are set up for agriculture. Call them ag schools.

**David Todd** [02:59:22] Sort of land grant?

**David Parsons** [02:59:23] Land grant universities. Yeah. Land-grant universities, which are generally considered agricultural schools. And both my degrees were from those departments, in land-grant universities, not liberal arts universities. And both were pretty old school - wildlife biology, as practiced by the state game agencies back then, except for that little twist of Oregon State where I ended up engaging, not in a huntable species, but in a nongame species. That might have been the first flip, you know, in my thinking on that.

**David Parsons** [03:00:02] Most of the fish and game agencies are still in the early 1900s' mindset of an agricultural model of game management, you know, which would be create the habitat, grow the animals, issue hunting licenses and fishing licenses and take them out - a consumptive use model.

**David Parsons** [03:00:27] I've made a big shift from the consumptive-use, utilitarian, traditional thinking is what they call it now, to what's now called the "mutualist" way of thinking, about humans and animals having equal rights to existing on the planet, and that consumptive use shouldn't be done for necessarily as sport. It would be okay for subsistence for example. But the trophy hunting for example: I can't support that at all anymore.

**David Parsons** [03:01:05] At Project Coyote, we worked really hard and I was involved in the legislation on that in New Mexico as an expert witness of getting states to abolish wildlife-killing contests, which at that point every state allowed. They happened way more often than you would imagine. In Texas, they probably happen once every weekend - a contest to kill as many animals as you possibly can. You get prizes: money? It's predators that they target.

**David Parsons** [03:01:42] There's no science behind it. It's an absolute bloodsport. And it's sanctioned by every state except those where we've managed to get state legislation. And that's now up to eight states.

[03:01:56] And Project Coyote's the co-lead on a national coalition to change that paradigm. There's a documentary that's based largely in Texas called "Wildlife Killing Contests", a really good video, by someone on the National Geographic Explorer team. And his name is Filipe Andrade. He didn't do it under National Geographic. He did it under his own film company

called Comfort Theory. It's not all that long - 27 minutes. And it's an eye-popper, what these killing contests are, and what the mentality of the people that are participating in them.

**David Parsons** [03:02:51] So, I've, I've made a really broad shift in this. And there's lots of papers, sociology papers that bridge that gap now, that look into that attitude change. The agencies and agency personnel that are heavily on the utilitarian, traditional side. And the public is shifting very significantly toward mutualist view of humans' relationship to non-human animals.

**David Parsons** [03:03:21] And, I'll add one more thing to that, and I'll come up with up it here in a minute.

**David Todd** [03:03:31] That's so interesting when the public and the government are out of sync although we, you know, presumably have a representative form of government, but there's sometimes some, some, dissonance there, I guess you might say.

**David Parsons** [03:03:46] Yeah, yeah.

**David Todd** [03:03:48] Well, can we talk ... one last question. When you think about wolves, how do you look at them? I mean, do you see them in a sort of ecological role as a population, as a, you know, a predator function? Or do you look at them as sort of an ethical reason to protect a fellow creature.

**David Todd** [03:04:12] And then I guess a related thing, do you think of them as a population, as a group, or do you appreciate them and are interested in them as individual animals?

**David Parsons** [03:04:23] That's the other aspect of what we were just talking about. How do you look at populations of non-human animals? And 30 years ago, I would have been a person who supported the idea that what's most important is to sustain a population.

**David Parsons** [03:04:43] Now, I'm way more on the side of valuing those animals as individuals. And that's in part a mind shift, and in part the shift in the science that now is showing all kinds of animals' levels of sentience that were never suspected before, that individual animals are individuals, and they have feelings of their own. Every animal fears death, including us. Even the cockroaches that I chase out of my house, obviously fearing death because they try to run away from me, but I ultimately feed them to the chickens. That's my humane solution.

**David Parsons** [03:05:29] So, you know, I've had a big shift there, too. You know, I think there's lots of knowledge to that. There's a huge socioecological literature now building around the role of individuals and the ethics of all this.

**David Parsons** [03:05:50] And like these wildlife-killing contests: there's no ethics anybody can justify for that.

**David Parsons** [03:06:08] ...Wildlife management has no discernible effect on what they think they're doing. They think they're managing predator population so there's more game for them to hunt and whatever. That can't, that will never be proven with science and it's often the opposite that happens, as we talked about earlier.

**David Parsons** [03:06:35] You can disrupt a coyote population in a way that actually causes more coyotes to be born. You split up family groups and free up these suppressed breeders. There's a term for that in ecological literature. It's called compensatory reproduction. And it occurs in these apex predators. They actually have a mechanism to increase the reproduction if they're knocked down.

**David Parsons** [03:06:58] So, yeah, so I'm a person that has made that change. And it was really triggered, and that's where I wanted to go, the last person I mentored at Prescott College was named Camilla Fox, who went on right after she got her master's degree under me to found Project Coyote. And she always worked in the animal humane realm. And she was very instrumental in my transition from being, you know, the old school management model, so-called - utilitarian management - to the mutualistic model of how we view animals. And I attribute a large part of the transition to her. And I probably would have gone there anyway over time, but I think she accelerated that.

**David Parsons** [03:07:55] She's still running that organization, and I'm still one of her science advisors. And we rock along.

**David Todd** [03:08:05] It's a great thing when we're all evolving and learning as time goes on. And I got to say, you've taught me a lot. So, I would just ask you, is there anything, before we wrap up, that maybe we've skipped over that you'd like to mention or point to?

**David Parsons** [03:08:28] Well, I can't think of it. I often just marvel at where I am, how I got here. I never would have dreamed as a farm kid in Iowa that I'd be the guy putting wolves back in the desert Southwest. But I think I said in an email, it's all, most of those changes were sheer serendipity or how the dice rolled at a given point in time. And you hit a good roll, and you run with it.

**David Todd** [03:09:02] Well, I'm glad the rolls have gone your way. Thank you so much. I feel the same way. Very grateful that you were able to participate.

**David Parsons** [03:09:12] And well, thank you for inviting me and I'm glad we found a time to do it.

**David Todd** [03:09:16] Yes.

**David Parsons** [03:09:16] But this will come out in the form of what - a book or print?

**David Todd** [03:09:21] Well, that's a good question. I think that these interviews have value in themselves. That's really the primary reason we're doing this, to document and recognize people like yourself who've been involved for many years in wildlife conservation.

**David Todd** [03:09:42] That aside, we are working on a book for Texas A&M Press. And so, you know, a lot of this is sort of grist for the mill to try to better understand the world of wildlife conservation.

**David Todd** [03:09:57] And so, thank you for introducing me to it and help me get a better sense of it.

**David Parsons** [03:10:04] Good. Glad to be a part of it.

**David Todd** [03:10:06] You're very generous. Thank you.

**David Todd** [03:10:07] I will take this audio and back it up, send you a transcript, and, you know, we'll go from there. Okay?

**David Parsons** [03:10:17] Great. Thank you so much.

**David Todd** [03:10:19] Thank you, I appreciate it. Well, have a good day. Bye now.

**David Parsons** [03:10:23] You too. Bye.