

## TRANSCRIPT

**INTERVIEWEE:** Lisa O'Donnell

**INTERVIEWER:** David Todd

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**David Todd** [00:00:00] All right. Well, good afternoon. I am David Todd, and I have the privilege of being on the line with Lisa O'Donnell. And with her permission, we plan on recording this interview for research and educational work on behalf of a nonprofit group called the Conservation History Association of Texas, and for a book and a website for Texas A&M University Press, and finally, for inclusion in an archive at the Briscoe Center for American History, which is located at the University of Texas at Austin.

**David Todd** [00:00:35] And I wanted to add and stress that she would have all rights to use the recording as she sees fit as well.

**David Todd** [00:00:43] And I wanted to make sure that's okay with you.

**Lisa O'Donnell** [00:00:47] Yes. Yes, absolutely.

**David Todd** [00:00:49] Okay. Well, good. Well, then let's, let's get started. It is Thursday, June 30th, 2022. It's about 2:45 Central Time. And again, my name is David Todd, and I am representing the Conservation History Association of Texas, affectionately known as "CHAT". And I'm in Austin and we are conducting a remote interview with Mrs. O'Donnell, who is based in Austin as well.

**Lisa O'Donnell** [00:01:21] She is an endangered species biologist and has worked for a decade for the U.S. Fish and Wildlife Service and then with the City of Austin's Watershed Protection Department from 2001 to 2007. And since then, as senior biologist with the city's Balcones Canyonlands Preserve, where she is responsible for managing and monitoring and researching the preserve, ecosystems and species. Through much of her career, she has been involved in study and care for the golden-cheeked warbler, and she also was involved in work with the black-capped vireo dating back to the 1980s.

**David Todd** [00:02:06] Today we will talk about her life and career to date, and especially focus on her work with the golden-cheeked warbler. And I very much hope that we'll also have time to discuss her efforts on behalf of the black-capped vireo as well.

**David Todd** [00:02:24] So with that little introduction, I wanted to ask you about your childhood and early years, and if there might have been some people or events, occasions of some kind, in your life that influenced your interest in animals?

**Lisa O'Donnell** [00:02:44] Yes, I was going to say my, at least my parents have told me that I have, I've always been interested in animals. And they actually would tell me the story of my first word, which I guess I started talking at a later age. I don't know how old I was, but they said my first word was, "flower", and they were just thrilled to hear me actually start talking. But that that was my first word.

**Lisa O'Donnell** [00:03:12] And then, you know, we always had animals, and my grandparents had animals. And so I just grew up thinking I was going to be a veterinarian. And I also grew up, you know, when I was ten or so, you know, a little bit younger, just I grew up during that time when all this environmental legislation was being passed, so the Endangered Species Act and the Clean Air Act and the Clean Water Act. So even if that wasn't affecting me, you know, directly, if I didn't know exactly what was going on, I think that it had to have had, you know, an influence.

**Lisa O'Donnell** [00:03:51] I do remember my parents talking to me about the Endangered Species Act. I remember going around raising money. I would go ask my neighbors for money to send for endangered species. So, so, yeah, something I've always been interested in, and also just in science and conservation.

**Lisa O'Donnell** [00:04:15] And I remember one time being upset about, I think it was like a proposed mine or something that was a mine that was proposed in the Rocky Mountains. And I was really upset about it. And my mom said, "Well, you don't sit there and feel bad about it. You need to do something about it. You need to write a letter." And so she helped me craft a letter that I then sent off to whoever. And I don't remember who at this point. But, you know, just in terms of, you know, you don't just sit around and feel bad, you need to do something about things. So that sense of responsibility came in early.

**Lisa O'Donnell** [00:04:53] And then my dad, I remember being, just trying to instill, you know, the importance of conservation, like even water, like, you know, you need to, you know, not waste water and be conscious of that. And so, and he was really interested in conservation as well and worked with prairie dogs.

**Lisa O'Donnell** [00:05:14] And then science, you know, I was interested in science too. I remember having like a little study group with my friends and I think I was in the fourth grade at the time, and we would come up with like a science question and try to answer it in our own way, which wasn't very good. At the time we didn't know what we were doing, but we at least tried and at least had the interest.

**Lisa O'Donnell** [00:05:35] So yeah, I think those are some of the some of the highlights for me.

**David Todd** [00:05:40] Well, and you mentioned your parents and your grandparents, and then this study group. Were there, were there any teachers or folks who were outside of your immediate friend group or your nuclear family who might have said, "You know, this is something that's of value, or this is something that might interest you."

**Lisa O'Donnell** [00:06:06] Yes, I remember a teacher that I had in the fifth grade who worked on, she was part of a group that worked on animal protection, like protection from cruelty. I think it was called. What was it, CAP, like... I don't know. Anyway, but it was a group to try to protect animals from, you know, cruelty. And so she actually got me to go to a meeting with her. I mean, I went with my mom and I met her there.

**David Todd** [00:06:42] That's interesting. So there was kind of a political angle to some of this that you were going to meetings and you were writing letters. But then on the other hand, you had this interest in the science of it, with your study group. It seems like you had a kind of multi-faceted interest in animals.

**Lisa O'Donnell** [00:07:09] Yes, I think, I, you know, I was always convinced, even going up to, you know, where I was going to apply for college, I just assumed I was going to be a veterinarian. And so when I was looking for colleges, that's just what, I guess that's like, kind of the next thing we'll talk about. But, but yeah, I, I, even though my focus was on, on animals and animal health at the time, I think of the broader influence. I think of that environmental legislation, of my parents and that one teacher, I think that there was enough broader influence that would kind of steer me in the direction that I ended up on in.

**David Todd** [00:07:56] Here's something else I heard you say. You said you grew up at that time when there was just a whole raft of of environmental laws that were passed - I guess, Clean Water, Clean Air, Endangered Species and so on, in the early seventies. And that you were sort of maybe picking up on the tenor of the times. Were there, were there possibly other things that were kind of in the air, you know, like literally on the the broadcast signals in TV shows, or maybe movies that were common at the time, or books that were were out in the press that you might have read or seen?

**Lisa O'Donnell** [00:08:36] You know, I don't remember anything at that young age. Like, my grandmother would always send me books on, you know, like wildlife books, type books for, you know, birthdays or Christmas or whatever. But I don't, I mean, my parents might be able to remember something, but I can't think of anything that was, like, really obvious, that really stands out. I think it was just kind of, just stuff that I was sort of absorbing, if that makes sense, sort of subconsciously?

**David Todd** [00:09:12] Yeah, sort of by osmosis. It was just something that was in people's, on people's minds.

**Lisa O'Donnell** [00:09:17] Yeah.

**David Todd** [00:09:18] That you might have heard. Okay. All right. So you said that you were kind of on a trajectory for vet school or, you know, to study animal medicine, I guess. Can you describe your arc through higher education? You went to the University of Texas and got a B.S. in zoology. Can you talk about your experience there?

**Lisa O'Donnell** [00:09:48] Yes. And before that, I actually went to the University of California at Santa Barbara, and then I transferred to the University of Texas. But when I was at, we just called it UCSB, they had an environmental studies program and there was a professor there. I think he's even still there - Rob Nash. And he was the one that kind of headed up this environmental studies program. And that was huge for me because I had not actually been exposed to any of that in Texas. So when I was out in California, people were talking about, you know, conserving water. Interestingly enough, I don't remember any fires or any issues on those lines that we hear about now, but it was all about saving water and people, you know, even had little signs up, you know, all around the school of like, "turn off your faucet".

**Lisa O'Donnell** [00:10:37] Those were things I had never heard of, aside from my dad telling me. But, I didn't hear it like generally. So when I was at UCSB, I, you know, again, I just thought, "Oh, I'm going to take my science classes, I'm going to end up going to A&M or someplace like that." And my college roommate, who was also, you know, in the science group (we were all kind of in the environmental studies dorm; there was a floor). And she was the one that after a while she said, "You know, you really like animals and really want to help them being a veterinarian", she said. "But you really ought to think about being an ecologist

because you can do more. You can help more animals by focusing on the habitat." And that really clicked.

**Lisa O'Donnell** [00:11:27] So I think between having that environmental studies influence. You know, we read books like, "Do Trees, Should Trees Have Standing?" I mean, that was like again, like all of the stuff that they were teaching were just huge and, you know, really eye-opening for me. And so that's when I decided to switch. I was like, "Yes, I definitely want to be an ecologist."

**Lisa O'Donnell** [00:11:54] I also, during that time, when was it, must have been 1984, I signed up to go out on a field expedition to Glacier Bay, and it was with the School for Field Studies. And so we spent four weeks in Glacier Bay kayaking. And we didn't do any heavy research, but it was just, that was another like, just this huge experience for me. It also taught me, being from Texas, I was cold and wet for four weeks. It was really uncomfortable. The whole time, I kept wanting to go home because I was so cold and wet.

**Lisa O'Donnell** [00:12:37] But the experience was amazing. I mean, we were, we're surrounded by whales and seals and, you know, just, birds and I mean, it was just, it was just phenomenal and just beautiful. And so, and then I just learned that, you know, I learned how to stay warm. I learned that it's better to be warm than have clean clothes that are wet and cold.

**Lisa O'Donnell** [00:13:06] So yeah, so that was definitely a growing experience because it kind of took the city girl out into the field.

**Lisa O'Donnell** [00:13:13] But after that, I did a couple of more, you know, outings, I guess, volunteering at that point with the U.S. Fish and Wildlife Service. I went back to Alaska for two different summers to do, and we actually did real fieldwork at that point. I went to Cape Pierce, which is like on the tip of Bristol Bay. And we did, like, we counted walrus, we counted seabirds and monitored productivity. You know, that was just another really phenomenal experience.

**Lisa O'Donnell** [00:13:52] And then the following year, I went to the Seal Islands with just one other person and we lived out on these islands and studied sea birds. Actually, it was puffins. We were looking at what they were eating. And so we studied puffins for a couple of, a couple of months. And so that was between the Glacier Bay and even though I was really cold. But those two subsequent field excursions as a volunteer, that's when I just, I just got hooked. I'm like, "Yeah, this is what I want to do. I want to be a field biologist, and be outside and collect data."

**Lisa O'Donnell** [00:14:30] And so, yeah, so it all kind of started coalescing at that point.

**Lisa O'Donnell** [00:14:35] I was going to say one other really influential person at that time was at the University of Texas, and he was a teaching assistant for an ecology class that I took. And he, I would ask him questions periodically. I'm like, you know, I can't even think of a question that I did ask him, but I know I asked him a lot of questions and his response was always, "Look it up." And I remember that was like the first time because you're, you're used to being spoon-fed. It's like, "Hey, I'm paying you for this college education. So tell me, you know, you're supposed to give me the answers." And I remember that I got basically throughout all of my college career by having somebody tell me that.

**David Todd** [00:15:30] Yeah. So you became sort of an autodidact, I guess, at an early, early age.

**Lisa O'Donnell** [00:15:37] Yeah. It's critical thinkin. It's like, you know, like don't have people just spoon-feed you. You need to go look things up and research it yourself. And so I think that was really instrumental. And I'm hoping that more professors and teachers, you know, teaching assistants are doing that for for students. It actually does a disservice in a lot of ways to just keep giving you information. You need to, at some point, get off on your own and start looking things up and questioning and finding answers for yourself.

**David Todd** [00:16:09] Right, right. Well, so I am sort of struck by one thing, that you seem to have a broad interest in not just a particular creature. I mean, that you've studied everything from walruses to puffins to sea birds of various kinds, and then more recently, these warblers and vireos. And I think you mentioned that you had an interest in ecology as much as biology, perhaps. Is that fair to say?

**Lisa O'Donnell** [00:16:49] Mm hmm. Yeah. Yeah, and I would say endangered species science, kind of as a general rule. It's, I think, another just common theme throughout my life is just, you know, sticking up for the underdog. I think endangered species are underdogs, but whatever people don't seem to like or take on, or they're having trouble, but those are the things I naturally sort of gravitate toward.

**Lisa O'Donnell** [00:17:19] But yeah, like Ashe juniper is one of the things - I think we'll be talking about that later. Yeah. Just rare species and, yeah, even species that are not rare, but get picked on a lot. Coyotes is another one. But yeah, anything that I, that I happen to research, I get real attached and kind of throw everything into it. And it just happens to be I just kind of landed in Austin and golden-cheeked warblers and cave invertebrates and salamanders and vireos. Fortunately, it's a hotspot. It's a biological hotspot. So, you know, you can cover lots of different things in this one area.

**David Todd** [00:18:03] Well, but underlying the vireo and warbler and other endangered species work you've done, is it fair to say that there's a kind of current of.

**Lisa O'Donnell** [00:18:16] [Oh, David, just lost you.]

**David Todd** [00:18:19] [Yeah, it still seems unstable. Can you hear me now?]

**Lisa O'Donnell** [00:18:23] Uh oh.

**David Todd** [00:18:23] Can you hear me? Are you breaking up now? I can't. Huh. Are you there, Lisa?]

**Lisa O'Donnell** [00:18:35] [I can hear you now. You just came back on.].

**David Todd** [00:18:38] [Okay. So I think we may have a little problem with the computer connection.

**Lisa O'Donnell** [00:18:48] [Oh.].

**David Todd** [00:18:48] [So what I'm going to suggest, just so that we don't lose valuable things that you are trying to tell us, is that we use a telephone hook-up.

**Lisa O'Donnell** [00:18:59] Oh, okay.

**David Todd** [00:19:00] And and so what I'll do is email you a phone number you can call and we'll just resume here. And that is, is usually much more reliable if there's a funky thing going on with the computer.

**Lisa O'Donnell** [00:19:19] Okay.

**David Todd** [00:19:20] Connection. If you have a landline, that's often wise to use.

[00:19:29] I don't. I'm sorry.

[00:19:32] Okay. You've got a cell phone. Does it, does it use Wi-Fi? Does it have a pretty good signal there?].

[00:19:40] [Yeah, I think so. I've never had a problem with it.]

[00:19:44] [Okay. All right, well, let's try that, and, yeah, so if you could just regroup in just a minute or so. Call me once you get the number and, and we'll go forth.]

[00:19:57] [Okay.]

[00:19:59] [Do good stuff!]

[00:19:59] [If it okay just for me to, let me, I need to run get a, it looks like the battery is going down on it. So let me go get a charger for it.]

[00:20:06] [Yeah, sure. Absolutely. You do that.]

[00:20:09] [If that's okay, to charge it?]

[00:20:11] [Yeah. Yeah. Why don't we do that? All right.]

**Google Voice** [00:20:17] [This call is now being recorded.]

**David Todd** [00:20:20] [Hello, Lisa?]

**Lisa O'Donnell** [00:20:22] [Well, hey, David.]

**David Todd** [00:20:24] [Well, we meet again. Thank you for trying this other route, I think, this is a little bit more stable.]

**Lisa O'Donnell** [00:20:34] [Hopefully you're able to get some of that.]

**David Todd** [00:20:37] [Oh, yeah. Yeah, no, I think we'll do just fine. But I just would have made sure that we didn't lose the thread. Sometimes it can be kind of disjointed if you know, you can't get a complete thought in without wondering if the recording is not being made. So...]

**Lisa O'Donnell** [00:20:55] Right. Right.

**David Todd** [00:20:56] Thank you very much.

**David Todd** [00:20:58] Um, so I did have a question that I wanted to ask you. You know, listening to you talk about your interests in sort of sticking up for endangered species and underdogs in general, made me wonder if there's a kind of a thread of, of seeking justice and fairness in the work that you do, aside from the biology and ecology.

**Lisa O'Donnell** [00:21:29] Oh, yeah. That's huge. I hate injustice. It's like the worst, especially these days. So, yeah, it's kind of an ongoing work of resistance. But absolutely. It is definitely that. Yeah. Yeah. Justice is definitely a key thing. I hadn't really thought about it, you know, articulating it specifically, but yeah. Yeah, it definitely is.

**David Todd** [00:22:04] Okay. Well, this helps sort of understand maybe some of the motivation. I mean, you know, it's not something you think about front-of-mind every day. But I guess this maybe is behind the scenes?

**Lisa O'Donnell** [00:22:19] Yeah. That reminds me of one other thing too. I've been told since I was really small that I'm very persistent. And I remember asking my parents and I'm like, things keep happening. And they said, "Well ..." (I think they thought I was kind of annoying, but they said, "It can be a good thing if you use it right." And so I think about that a lot too is that yeah, hanging in there, being to persistent is real key too - the kind of personality trait that I got saddled with may help.

**David Todd** [00:23:00] Yeah. Well, it's interesting. You can get worlds of education and training and career experiences, but maybe some of this really hinges on what sort of personality you have.

**Lisa O'Donnell** [00:23:17] Yeah.

**David Todd** [00:23:17] So I thought we might move on to talk a little bit about your career. I understand that you began your work as a consultant for a firm called DLS Associates doing biological surveys for rare birds. And sometimes that first job can have a big impact. I was wondering if you could talk about.

**Lisa O'Donnell** [00:23:42] Yeah. Yeah. David Steed, that's actually what "DLS" stands for: David Lewis Steed. So he was my boss. He actually hired me because I wrote not a very good paper on some of the work that I'd done at Cape Fears. But he said he really liked it and that was why he hired me and I worked for him for four years.

**Lisa O'Donnell** [00:24:03] And, you know, again, I was really interested in doing field work and so I was able to do that with him. He had contracts with the county and the highway department. I think those were the two main funding sources. And so at that point, you know, often the Texas Department of Transportation was looking at building an outer loop, Austin's outer loop. I think they just called it the Austin Outer Loop. I forgot what they called it, but it was going to be this big loop around the city and it would go through some of these really environmentally sensitive areas.

**Lisa O'Donnell** [00:24:41] And I started working for him in 1987, which was the same year that the black-capped vireo got listed as endangered. And so our job was to go looking for black-capped vireos, both, you know, to see what the impact might be from the highway, and

so finding them and locating them. And then also for the county: the county had a different project that they were working on as well.

**Lisa O'Donnell** [00:25:11] And so, yeah, so we just were able to go hiking all over the place back then. So I think a lot of it was like old ranch land. There was a lot of land that also went into, you know, when they had that whole Savings & Loan thing that kind of bailed out, where a lot of lands went into the RTC. So we, we weren't really on like small like private property, so we never had anybody give us a hard time being out there. They were just more curious. We'd have people stop us and ask if what we're looking for. But yeah, so it definitely got me out in the field, got me very familiar with what was out in western Travis county, and in particular, the black-capped vireo at that time.

**David Todd** [00:26:01] Okay.

**Lisa O'Donnell** [00:26:02] Golden-cheeked warblers singing in the background.

**David Todd** [00:26:05] Right. Right. Most have been similar sites.

**David Todd** [00:26:10] So I guess the next step for you after working in DLS was to move to the U.S. Fish and Wildlife Service, where you were from '91 to 2001 and then after that, the City of Austin's Watershed Protection program, 2001 to 2007, and then most recently to the Balcones Canyonlands Preserve, under the City of Austin, since 2007.

**David Todd** [00:26:39] And what I thought was really intriguing about that is that you seem to have worked on sort of similar problems and similar habitat, but wearing different hats. I mean, going from working for the private sector to then working for the feds, to working for a municipal agency. You know, can you compare what those were like, those different experiences, different employers and offices?

**Lisa O'Donnell** [00:27:09] Yeah, yeah, I mean, they were all big learning experiences, I would say DLS Associates was just getting familiar with the species and the habitat, and learning all about that. And I'm so glad I got out there when I did, because, you know, I was able to go out on a ranch when it was still a ranch and when there were still cows and, you know, just getting to see all of that before, before it got developed. So, I think just learning about the species and the habitat at that time.

**Lisa O'Donnell** [00:27:39] Um, and then also I guess it was around 1987, 1988, that the discussion started about, "we need a habitat conservation plan", because there were, fortunately we had a lot of people with foresight and said, "Look, this area is going to go. This is a really unique, special area, very rich biologically, ecologically." And so they started working on this regional habitat conservation plan.

**Lisa O'Donnell** [00:28:09] The vireo was kind of the initial focus. But it really isn't at the heart of the vireo's range. So it gradually became more about the golden-cheeked warbler, once the warbler got listed as endangered. And then, of course, the cave invertebrates were listed. And then the salamanders got listed, which was kind of a political curveball for the politicians.

**Lisa O'Donnell** [00:28:31] But when I was at DLS Associates, David Speed was on the Scientific Advisory Committee. And so, I was able to sit in on those meetings and just listen.



We would also go to the executive committee meetings. And so, as the field biologist working for David, you know, I had access and just listening to these conversations.

**Lisa O'Donnell** [00:28:53] And then when I moved over to the U.S. Fish and Wildlife Service, it was right after the warbler got listed as endangered. And, you know, they opened up the Austin office. So I was there when they opened the office up and it was mainly in response to the listing of the warbler, that, you know, people were so upset, you know, what are we going to do? You know, we need help with, you know, can we move forward with this project or not?

**Lisa O'Donnell** [00:29:20] And so my job there was to say you know, because I knew the species, I knew the habitat well enough at that point, I would review what we call, "bird letters". People would send something on and say, "This is my project, this is my property. Do you think it will cause "take" or impact?" And so that was my job all day long, was just to sit and review, you know, and they ended up with like filing cabinet drawers full of these letters and our responses.

**Lisa O'Donnell** [00:29:49] And I was also there when they were working on the golden-cheeked warbler recovery plan and the black-capped vireo recovery plan. And then I kind of switched over to working on that Barton Springs salamander and I worked on the proposed rule to list that species, and then also the final rule.

**Lisa O'Donnell** [00:30:07] And so, I think the difference was like, you know, when I worked for David, you're on the ground. You're looking very close at something. And then when you go to work... so that was a learning experience. And I think really, really key and really important to take with me to the Fish and Wildlife Service.

**Lisa O'Donnell** [00:30:26] And at the Fish and Wildlife Service, you've got to stand back. So you're just looking landscape-wise, you're looking big-picture. And so that was like a huge, you know, another big broadening experience for me, because when you're looking at recovery plans and listings, you've got to just look at the, you know, like the, yeah, the big picture, I guess.

**Lisa O'Donnell** [00:30:52] And I don't think everybody has that opportunity, you know, to be able to see at both levels kind of the, you know, the very, very close up and then the farther away.

**Lisa O'Donnell** [00:31:03] And then I decided after ten years of being in an office, I just felt like I was still too young and my heart was, you know, working in the field. And so that's when I went back to work for the City. I knew they had a job coming open working with salamanders, doing the field work.

**Lisa O'Donnell** [00:31:24] And then the other thing I forgot to mention when I was with the Fish and Wildlife Service, even though I wasn't directly involved, my boss at the time, Joe Johnson, was involved in working on the Fish and Wildlife side of things of the, you know, the regional habitat conservation plan that became the Balcones Canyonlands Conservation Plan, and ultimately the Balcones Canyonlands Preserve. So I heard all of those discussions, was privy to some of the meetings, and, you know, the documents and things that they were putting together.

**Lisa O'Donnell** [00:32:00] And then when I, then when I went to work for the BCP, where I work now, it's like, yeah, this is, this is it. This is where I wanted to be all along really.

**David Todd** [00:32:17] And it's neat that you were there, you know, in early days, as you said before some of this land got developed, and before some of these institutions really got created, whether it was the Fish and Wildlife Service offices in Austin, or the Preserve being created in the Hill Country near, near the city.

**Lisa O'Donnell** [00:32:39] Yeah, and one of the first regional habitat conservation plans in the country. I don't think it's the first, but it was one of them. And yeah, it was, it was huge. It was just an amazing undertaking. And I'm so privileged to be able to work, you know, in this place now.

**Lisa O'Donnell** [00:33:07] [Hope you're there, David. Oh no, did I lose you there?]

**David Todd** [00:33:19] [Hello?]

**Lisa O'Donnell** [00:33:20] [Oh, yeah. So it's doing it here, too. That's very weird.]

**David Todd** [00:33:26] [Did you lose the signal for a little bit?]

**Lisa O'Donnell** [00:33:30] [No. I mean, I'm looking at my what is it, a router? I don't know what this thing is, but...]

**David Todd** [00:33:36] [Yeah.]

**Lisa O'Donnell** [00:33:38] [But I'm, yes, I'm losing you. I, I lost you there for a couple minutes.]

**David Todd** [00:33:45] [Oh, no. Well, um, well, so maybe I can just try to restate it or ask the question again.]

**David Todd** [00:33:55] I thought it was interesting that you were at Fish and Wildlife Service as a pretty young person. And you were being asked to issue these bird letters to decide whether a take was likely to be involved in a given development or project. And that just seems like a a huge amount of responsibility, sort of godlike. Did it strike you that way, or did you feel like you were just sort of another cog in the chain and, you know, you were just doing your job as you came in each day, it wasn't terribly dramatic.

**Lisa O'Donnell** [00:34:35] Yeah. I felt like it was just my job. When I first started, we were, I was in Arlington for three months, and so there was a little bit of a buffer and distance from people. And then I got to know my boss in Austin really well. And Joe was the one that ultimately would decide everything.

**Lisa O'Donnell** [00:34:57] Um, but they wanted, at least what I was told, was that they wanted me because I had that on-the-ground experience and I could identify habitat and look at the particular impact. But I try to remember if my name ... I'm sure my name was on those letters, too, but I think ultimately, you know, the field supervisor is the one that signed off on those things. So they, I would be like the first call, and then my supervisor would review it, and then the field supervisor for the office would ultimately, you know, make the final call.

**Lisa O'Donnell** [00:35:35] So, so I never, I just more felt like I was glad that I had the experience and, you know, the ability to at least identify habitat.

**David Todd** [00:35:47] Got you. Well, so, you know, you talk about about this experience that you got when you were first working with DLS and and the chance to be on the ground. And I was hoping that you could tell us about what your first encounter.

**Lisa O'Donnell** [00:36:08] [Oh, you just broke up again.]

**David Todd** [00:36:12] [Did I! Oh gosh.]

**Lisa O'Donnell** [00:36:16] My first encounter ...

**David Todd** [00:36:18] With the golden-cheeked warbler?

**Lisa O'Donnell** [00:36:22] Right.

**David Todd** [00:36:23] So could you describe what that was like?

**Lisa O'Donnell** [00:36:27] Yeah. So the world of the golden-cheek was kind of in the background for me for a long time. And so, I, I can't remember my first experience with the golden-cheeked because I was so focused on black-capped vireos. I do remember taking somebody out to show them their first golden-cheeked warbler and I was working for David Steed, and, you know, and he was just, you know, in awe of this little bird.

**Lisa O'Donnell** [00:36:55] But I didn't really get to know the warbler really until I came to work for the City, basically. So I knew it. I knew the habitat. I knew, you know, I knew generally about them. I was able to sit in on the recovery planning, but I didn't feel like I had a real strong connection until, until I came to work for the City and worked with them first-hand.

**David Todd** [00:37:23] I see. Okay.

**David Todd** [00:37:25] Well, and, you know, once you did some sort of get some sort of familiarity with the bird, what did you learn about its life history? Is there kind of a 101, basic introduction you could give us to the bird's life.

**Lisa O'Donnell** [00:37:47] Well, just as a general rule, I'm, I'm actually always fascinated by birds like the golden-cheeked warbler, a migratory bird that, for the golden-cheeked anyway, so I think you already know this. It's a native Texan. So all golden-cheekeds, you know, are born in central Texas. It's got one of the smallest breeding ranges of any North American songbird. Its tiny. Most birds span multiple states, but this one's only in one.

**Lisa O'Donnell** [00:38:17] But the thing that really impresses me about migratory birds is that they are able to go back and forth these long distances. And in the case of the golden-cheeked, it goes to southern Mexico, Central America, that's where it spends its winter, and then it comes up to breed in Central America.

**Lisa O'Donnell** [00:38:35] And there's really high site fidelity in terms of like, you know, where they nest. And so older birds will come back to the exact same territory year after year after year. Over 90% of them will return to the exact same spot.

**Lisa O'Donnell** [00:38:50] And when I'm out there with my GPS unit and my compass and my map and I'm still trying to figure out where I'm at, I am just in awe at this little thing that's like feathers and bone and weighs ten grams that is able to do this. It's just, it's just this miraculous feat, I think, you know, to be able to go back and forth.

**Lisa O'Donnell** [00:39:13] And I've heard from the folks on the wintering grounds, they haven't banded a lot of birds down there, but for the very few that they have, there's only three that I can remember that they've banded, and they came back to the same spot back in the wintering grounds as well. They're really hard to find on the wintering grounds because they're not singing. But, but it's a very small sample size. But still, you know, just the fact that these birds are able to do that is just just miraculous.

**Lisa O'Donnell** [00:39:46] So, so that's a little bit of the life history there. They eat insects. They depend on mature Ashe junipers. The peely bark is required for the nest that they build, but also it provides food for them too. They tend to build their nest in Ashe junipers too. They're very cryptic and hard to find.

**Lisa O'Donnell** [00:40:08] But yeah, the oaks and the junipers together just provide the insects, the caterpillars and spiders, the beetles, that that these birds feed on.

**David Todd** [00:40:23] Okay. Well, that helps.

**David Todd** [00:40:25] And, and then so the ecological niche is that the bird is, is an insectivore and is, I guess feeding on the bugs that would be found on the, the oaks principally, or also on the junipers? Is that right?

**Lisa O'Donnell** [00:40:42] It's both. And it, it kind of progresses as the season goes on. Like, um, the Texas red oak, um, is a huge favorite of theirs. So they'll kind of start, you know, the beginning of the southern nesting season when they first come back. A lot of times the the red oaks haven't even leafed out. When they do, they're first leafing out, that's when the caterpillars attack.

**Lisa O'Donnell** [00:41:08] Um, that's why these birds are so important to keep our trees healthy. So they're there to kind of feed on, you know, at the beginning of Texas red oak, then later you've got the live oak kind of dropping its leaves, um, and then leafing out again. And so they'll kind of switch over to live oak.

**Lisa O'Donnell** [00:41:26] And then later when their young come out, um, out of the nest, they're feeding a lot in the juniper at that point, and which is good because the junipers make these little fledglings, you know, when they first get out of the nest, um, they're very cryptic because they're kind of gray, they're little and they're just kind of sitting in these junipers and it's much harder to find them in juniper trees than when they're in oak. So, so the adults kind of switch over at that point to feeding primarily in the oaks.

**Lisa O'Donnell** [00:42:01] So, the junipers are really important for, you know, again, not only the nesting material, the nest substrate, but also for that food source and camouflage for the, for the young.

**David Todd** [00:42:22] You said ten-gram birds and they are pretty clever about camouflaging themselves in these junipers in pretty thickety woods, as I understand it. How do you go about monitoring them and locating and tracking them from year to year?

**Lisa O'Donnell** [00:42:43] So when I first started working for the City, there was a monitoring plan that was already set up and there were these hundred-acre plots that were kind of located in prime habitat, you know, across the city, part of the BCP. Our other partners, like the county, and I'm trying to think who else ... there were other people who also had plots that they were monitoring too.

**Lisa O'Donnell** [00:43:09] But it was spot-mapping without having the bird color-banded. And so when I started, there were biologists saying, "You know, hey, this biologist found 20 birds on the plot. The other biologist found ten. We're trying to figure out who's right. And, I just said, "Well, there's no way to know unless you color-band them."

**Lisa O'Donnell** [00:43:31] And so it was a little bit of an evolution, but we gradually switched over to color-banding these birds. And the plots changed a little bit as well. But it's essentially, you know, they're not all 100 acres anymore. But if you have a fixed area that you go in and you color-band, it's essentially males; every now and then you catch a female, but it's usually accidental. We're really targeting the male.

**Lisa O'Donnell** [00:43:59] But you band them with a unique color combination that we get from Fort Hood military reservation. They actually will issue us like, here's your color combos that you can use this year. And so by having, they have like a silver band that they get from the U.S. Geological Survey that has a unique number on it. And then there's three color bands that go on their legs and that with the different combinations, you can identify the individuals.

**Lisa O'Donnell** [00:44:31] And so now, you know, the biologists will go out. And we also have two biologists to kind of back each other up in verifying, you know, what you're finding on a plot. But you go out and you just you know, you identify the bird, you identify the color combination, and it's great having GPS. You know, that's a big difference from when I worked for the agency. But you just, you click a point every time you see one. And then by the end of the breeding season, you have this really nice map of here's where we've seen the birds.

**Lisa O'Donnell** [00:45:06] And then you can come up with an estimate, a really reliable number, of how many birds are on that plot. And we have about 15 plots. And so you're able to say, "Okay, this is how many birds we have across these plots, this is what our density is."

**Lisa O'Donnell** [00:45:24] And then we also currently have our plots set up to where the habitat, like the height, the canopy height within each plot, is comparable to what we see across the Preserve as a whole, so that we can just say, roughly, "This is how many birds we think we have on the Preserve overall.

**Lisa O'Donnell** [00:45:43] And then we can look at, you know, whether the population seems to be increasing or stable or decreasing over time.

**David Todd** [00:45:56] Well, you know, it's intriguing to me how you count. I mean, I guess, you know, we all learn when we're little kids to count on our fingers and maybe our toes. But what you're doing seems more complicated because you're going from these 15 test plots to tens of thousands of acres and, you know, the entire range of a bird. And I guess this is difficult enough where there have been controversies about it. And I was wondering if you could talk a bit about, you know, this recent controversy regarding Doctors Collier and Morrison and the numbers that they came up with versus those that the City felt more comfortable with. And,

you know, I guess there's the whole issue of how you monitor, how you model, how you extrapolate. And maybe you can try to open that whole bag of worms, can of worms, up for us.

**Lisa O'Donnell** [00:47:00] Right. Yeah. I think, you know, the way I look at ours, is, I mean, ours is very specific. It is labor-intensive. But it's the most accurate estimate you can get. Um, and I think doing point counts, I mean, we've, we've done point counts too, which is what the A&M folks have done and recently Fish & Wildlife has done as well, and a lot of people use them. Um, but I think you can use point counts. It's just a really rapid quick method, but you have to validate it. You have to see, because they all overestimate, the point counts overestimate. And we know that for, you know, if you're trying to come up with a density or abundance.

**Lisa O'Donnell** [00:47:42] So if that's your goal is to try to say how many birds you have, you really have to get in there and say, "Okay, here are some people who are doing intensive monitoring. They're counting every bird. You know, they've got them color-banded. They, you know, everybody's got a unique ID. They know where the nests are. They know how many fledglings.

**Lisa O'Donnell** [00:48:00] So use that intensive data to validate this rapid method and just see how much you're off.

**Lisa O'Donnell** [00:48:11] I, I'll just throw out this, you know, and let me know if, if this is a good analogy. But I'm thinking about like, like the human census for the United States. So you do a census and you go in and you look at every household and you're counting the number of people and their ages and, you know, their occupation and whatever. All right, then. That's really labor-intensive, right?

**Lisa O'Donnell** [00:48:35] Um, but, if you were to do a rapid method, doing something like a point count, you would say, "Okay, well, I'm going to pick "X" number of points. I'm going to spread them out across our cities, primarily where we got a lot of humans. And we're going to stand at these different points and we're going to stand there for 5 minutes or however long. Usually it's like anywhere from 3 minutes to 5 minutes. And we're going to just, we're going to listen and we're going to count the number of humans that we hear, and how far away are they.

**Lisa O'Donnell** [00:49:08] And we don't need that census anymore. We're just going to use, you know, these point, point estimates. And we're only going to do it once. And we're mainly going to focus in on the cities with the highest densities of people. And then we're going to extrapolate it, you know, across the state, across the country, whatever.

**Lisa O'Donnell** [00:49:27] Um, and, you know, I just say, please try that and see how accurate it is. But that's essentially, you know, what the point counts are doing. I, I think, and I don't know if I explained it well enough, but the difference, you know, between what we're doing and this other method is that you pick a point and you just stand there and you listen to how many birds you've got. And then you extrapolate.

**Lisa O'Donnell** [00:49:54] I think that's fine if you want to look at presence/absence. I think it's fine if you want to see relative abundance: you know, like this site seems to have more than this other site.

**Lisa O'Donnell** [00:50:04] But to actually come up with a population estimate based on that is really questionable.

**Lisa O'Donnell** [00:50:10] And when we have compared it with our numbers, we've found that they really overestimate and we have some really good habitat. What we found is that they tend to do okay in the estimates where the habitat's really good and the densities are high.

**Lisa O'Donnell** [00:50:27] Where they're really problematic are where the densities are really low.

**Lisa O'Donnell** [00:50:32] And yeah, so we ended up writing a paper on that because we thought, "Well, this is interesting, this is an interesting phenomenon", because again, we've used point counts as well, we've used models to try to predict how many birds we have, and there are predictive models. They're not really estimates. They are predictions.

**Lisa O'Donnell** [00:50:51] So we've found with the models that we've paid for and funded, that they have the same tendency that all of the models that we've looked at. Fort Hood has done the same thing. Becky Peake at Fort Hood did a couple of different papers that found that, you know, Fort Hood has overestimated what, you know, the intensive monitoring data was showing.

**Lisa O'Donnell** [00:51:12] So the question is how much? What we were hoping to do with the paper that we wrote where we looked at the A&M paper in addition to ours, or their model in addition to our model, was just encourage people to look at that phenomenon and say, "What's, what's going on? Why is it, why are they really, really overestimating the birds in these areas?"

**David Todd** [00:51:38] Well, you know, just as a layperson looking at this from the outside, it would seem like point counts would be tricky for a bird that's such a specialist, and that's really sensitive to the habitat that's available to it. And then you've got a place like Austin that's developing so fast, and the habitat is changing and probably degrading in a lot of places. Is that, is that a fair concern?

**Lisa O'Donnell** [00:52:14] You know, I think it probably would be a concern for any species. Yeah. I mean, I am, you know, I've, I've heard point counts that they just tend to overestimate, across the board. But yeah, you're right. I mean, for a habitat specialist like this, um, you know, especially one that's really rare, I, I would guess that, yeah, it is really problematic.

**Lisa O'Donnell** [00:52:43] My, my goal, like when we wrote this paper that ended up being controversial when it really shouldn't have been, but, yeah, it was just to kind of point this out and then just to say, so we didn't, we didn't delve into like the "why" so much. We talked a little bit about it in the discussion of our paper of some reasons why, but it was really to encourage people, you know, to do the modeling, to figure out why, and figure out what was going on with it.

**Lisa O'Donnell** [00:53:14] And so, yeah, so we, we didn't go into that too much, but, but when, when we were writing the paper, we looked at other studies that had also found that, you know, point counts tended to overestimate based on different, you know, different factors. Um, yeah.

**David Todd** [00:53:39] So you mentioned a couple of times that this is a rare bird, and I guess it's sort of by definition since it's an endangered species. I was curious if you could comment a little bit about these genetic studies that you worked on with Dr. Athrey and Dr. Moulton. And, you know, whether Dr. Athrey's work, I guess which is, you know, you've seen some results. The other is apparently still pending. But have you seen any issues of inbreeding or hybridizing with this small population of warbler?

**Lisa O'Donnell** [00:54:21] So Dr. Athrey's paper, the one that published, it was published, I think, in 2011, it was really interesting because he was looking at, you know, birds. I think he looked at them in three different areas in central Texas and compared the DNA, the genetic diversity at that time, which was probably, yeah, would have been right before 2011. But a more current assessment of the genetic health of the species with these museum specimens that were over 100 years old. And so he was able to look at this a long time period to say, "Okay, is there a difference between, you know, what the genetic diversity was back, you know, a hundred years ago versus what we saw today? And he found a significant decline in genetic diversity that correlated with habitat loss and fragmentation. And also found more differentiation. So the populations were getting more isolated.

**Lisa O'Donnell** [00:55:33] He, I remember him mentioning inbreeding, but the main focus of the paper was this genetic diversity and genetic differentiation and that there had been a decline, essentially, in the overall genetic health of the warbler due to habitat loss and fragmentation.

**Lisa O'Donnell** [00:55:53] And so what we're looking at now, because he was very focused on - I'm trying to think, I think he he looked at maybe Fort Hood, Kerr Wildlife Management Area, and San Antonio, I think. I'd have to go back and look at the paper, but it was a fairly small area.

**Lisa O'Donnell** [00:56:12] And what we've done is collaborated with Dr. Athrey and Laura Moulton. Dr. Moulton has collected over 280 samples from individuals across the entire breeding range, including the northern part where the habitat is really small and patchy, to compare to the area to the south where the patches are much bigger. And so that's going to be really, really interesting.

**Lisa O'Donnell** [00:56:39] Dr. Athrey is still working on the sequencing of the samples, but hopefully we'll have something. I'm hoping any day he's going to call and say, "Okay, we got everything done and we're ready to analyze it. And here's what it looks like."

**David Todd** [00:56:58] Well, and I think you have been explaining how the genetic changes seem to correlate with the habitat decline. And I was hoping that this might be a sort of segue to talk about what you've learned about the historical ecology of the Texas Hill Country and and, you know, maybe touch on some of the debates that have been had about the the past extent of grasslands versus juniper forests in the Hill Country. Is that something you could talk about?

**Lisa O'Donnell** [00:57:35] Oh, sure. Yeah. And it's actually a nice segue too, just thinking about the historical ecology, because Henry Atwater, I'm actually going to pull out this quote, Henry Atwater said back in 1892 that, "the golden-cheeked warblers are nowhere abundant and only to be met in the thickest cedar breaks. As these are fast being cut and burnt out, The bird will no doubt become still more rare. So Henry Atwater, over 100 years ago, was concerned about the plight of the species because there was so much deforestation going on.



**Lisa O'Donnell** [00:58:16] And yeah, just backing up to how I got interested in the historical ecology was when I was working for the U.S. Fish and Wildlife Service, and again, it was right after the warbler was listed as endangered. And I remember being out with, um, actually there was some developer and they were looking out across the landscape and saying, yeah, all this juniper is invasive. You know, this used to be grasslands.

**Lisa O'Donnell** [00:58:47] And I went back and I talked to Carol Beardmoore, who was our lead for gold-cheeked warblers at the Fish and Wildlife Office at the time, she's the one who worked on the recovery plan, and I said, "So what's up with this about all this grass." And, Carol is the who introduced me to Dale Whitaker's book, *The Explorer's Texas*, which I would say is my all-time favorite book. And so I got interested in that and then pulling out of the information kind of again first-hand, so I think it goes back to that professor at UT saying, "You know, don't just let people spoon-feed you. You need to go look up everything yourself." So I just spent, you know, lots and lots of time over 20-some odd years, just spending time in the, in the archives, in the library, you know, the historical libraries, and pulling out, you know, historic accounts, the original eyewitness accounts, and looking at what people said first-hand, pulling out old photographs, looking at old maps, anything I could get my hands on.

**Lisa O'Donnell** [00:59:55] And then I just kind of compiled that into a presentation that items, you know, made into this kind of a report that was based on my PowerPoint, but it just kind of summarizes all the information. But yeah, the eastern edge of the Edwards Plateau was heavily wooded. And, you know, there's photos that go back to the 1890s that show that, so basically looks like it what it does today. And and yeah, as you go farther west, you know, the western edge of the Edwards Plateau becomes more like like black-eyed vireo habitat. It gets more shrubby and more sparse. And then you eventually either get to the Trans-Pecos and you've got more desert vegetation or the High Plains where you really have, that's where your grasslands are undisputedly, you know, prairie.

**Lisa O'Donnell** [01:00:49] Well, and so how, how has that habitat changed since, you know, maybe take as a starting point, . Atwater's visit in the 1890s, what he might have seen then, both the kind of activities then, to today? Could you track that?

**Lisa O'Donnell** [01:01:12] Yeah. Well, you know. So what's the, so after the Civil War, when, you know, we had settlers moving in and we got rid of the buffalo and we replaced them with cattle and sheep and goats. So, you know, you've got the agricultural expansion. Um. Yeah, you're wanting, you're wanting it grassy so that those animals can, can eat. And so big changes going on.

**Lisa O'Donnell** [01:01:44] And not only with, you know, the livestock, but also with the barbed wire fencing, which was patented in the 1860s, I think. And so for your barbed wire fences, then, you're clearing all of this juniper. So juniper becomes like a really important commodity for, you know, for the fences. They were shipping it out to other states, all the way up to Nebraska for, you know, for barbed wire fencing, for telegraph poles, for building materials (like our house is even built on juniper piers). I don't know if it's Ashe juniper, but it's definitely some kind of juniper.

**Lisa O'Donnell** [01:02:25] Um, so, yeah, you've got this whole culture of people that they referred to as, "cedar choppers", and they even had a special axe called the "Kerrville Cedar Axe", which was meant specially for cutting down juniper. And you can still see those old hatchet marks when you go look at, you know, places that still have junipers. There's hardly

any, I don't know of any place, where I don't see an old cedar stump or some axe marks. But, but, yeah, for a really long time, and that started, I mean, the clearing of juniper started, you know, around the time of the Civil War or even a little bit prior to that. And so I'll have people, you know, kind of refer to what was going on in the 1900s. I'm like, I know, but you're talking second or third growth at that point because that was being cut way back.

**Lisa O'Donnell** [01:03:20] There's a great report by a guy named William Bray. He actually wrote a couple of reports and he was a botanist who worked at the University of Texas for a while, but he wrote about the timber of the Edwards Plateau and he documents all this change that's happening. And then his reports were in 1904. So and again, he's got photographs of the Austin area, some of the places where we currently work. And he just, he talked about the impact that it was having on the landscape, that as you cut these trees down, you've got these steep slopes, you're losing all of your soil whenever it rains. And you have very sparse vegetation that's coming back. And so that's all the way back in 1904, all these big changes that are happening.

**Lisa O'Donnell** [01:04:08] And also about the same time, you know, again, that Attwater was, you know, talking about concerns about the golden-cheeked warbler.

**David Todd** [01:04:20] Well, so this was, I guess a time when these trees were being cut for themselves, for, as you say, telephone poles or piers or fence posts. But it sounds like in, in later years, you know, maybe simultaneously, the trees were being cut for grazing and then for development and road construction. Is that right?

**Lisa O'Donnell** [01:04:52] Yeah, yeah. Yeah, definitely. Yeah. Definitely changed over time. I, I would say, you know, probably, up through about the 1930s, 1940s, the 1950s, we had a big drought that killed a bunch of trees as well. But that was kind of, you know, sort of the heyday of, you know, the cattle and the livestock, you know, the other livestock, but goats and cows, probably primarily, I think sheep were early on. And then later it was more goats and cattle.

**Lisa O'Donnell** [01:05:25] But then after the 1950s drought, something happens with the livestock industry where it didn't seem like it was quite as profitable. I'm not sure exactly what happened, because my focus has always been up to about 1900. But there was regrowth, I guess, of the forest, and the shrubs were starting to come back. And if you look at old aerial photos, you can see that. So, say, like 1940, uh, somewhat wooded, then 1950, the drought hit. But 1960, 1970, 1980, you've got kind of the woodlands coming back. And then 1990 hits and then you start seeing that development. So yeah, so and in a lot of places, it's kind of converting over from agriculture to development because it's whatever's profitable, right?

**Lisa O'Donnell** [01:06:23] Well. And I guess part of what's going on aside from the land use is that you start having people occupy this country with, you know, the animals and the vehicles that accompany their occupation there. And I was wondering if you could speculate at all about, you know, some of those companion animals, whether it's feral cats or dogs. And if they might have had an impact on the golden-cheeked warbler.

**Lisa O'Donnell** [01:07:04] So, I haven't witnessed that first-hand. I'm sure if there was a big population of feral cats that they, if they were releasing them along, you know, along the boundaries of warbler habitat. The thing with the golden-cheek is that they're, they nest pretty high up off the ground. So it'd be a lot harder for feral cats to get to them, except when they're young, come out of the nest, they're really vulnerable. A lot of times they fly to the ground, they flap around.

**Lisa O'Donnell** [01:07:40] I remember when I was out at Hippie Hollow once because we used to have black-capped vireos there. And there was a guy who I don't even know how we found out about it, but he reported this little baby bird that his dog had brought to him, and it turned out to be a black-capped vireo. So, yeah, they definitely can have an impact. I would say the most vulnerable time for them is going to be when they leave the nest, and, you know, they're kind of flapping, running on the ground. They're going to be easy pickings for just about anything.

**David Todd** [01:08:17] Okay. And then I guess another factor I'd like to hear your thoughts about is, is the impact of the brown-headed cowbird. Do you think that they had a significant effect on the the warblers' fate?

**Lisa O'Donnell** [01:08:38] So not as much as like the black -capped vireo. The black-capped vireo, it was devastating for them, wherever, wherever there were brown-headed cowbirds. Because they, they pecked the eggs, they put holes in them. And those holes tend to sometimes get run over, you know, overrun with fire ants. And then they lay their own eggs in there, too. So, you know, there's pretty much a 100% mortality of the black-capped vireo young.

**Lisa O'Donnell** [01:09:11] And so cowbird trapping, you know, trying to remove cowbirds from areas where you've got black-capped vireos nesting, actually has been really successful. Um, there's some problems with it too, because they also get non-target birds. They don't not always just get brown-headed cowbirds.

**Lisa O'Donnell** [01:09:27] But for golden-cheeked warbler, because the habitat tends to be closed-canopy forest, the brown-head cowbirds tend to lay their eggs and tend to, you know, yeah, tend to inhabit more open areas. I mean, they moved, they evolved to kind of move with the, with the bison. And so they're, they're preferring more open, scrubby-type habitat, and not in a forest.

**Lisa O'Donnell** [01:09:56] And so the golden-cheeked warbler tends to not be as vulnerable for that reason, habitat-wise. But that is a problem with the fragmentation. Whenever you do have fragmentation, you potentially can get birds like cowbirds, you know, invading those areas. But also it's been reported that they can fledge some of their own young in addition to a cowbird.

**Lisa O'Donnell** [01:10:22] I actually watched a brown-headed cowbird fledge out of a golden-cheeked nest one time. And I had been monitoring this nest for a while and I could see little heads in there. And then at one point, I notice, my God, I'm only seeing this one head. And it just seemed like there, you know, I couldn't figure out what was going on with the other one. And then I actually watched it literally get out of the nest and it was just this big thing that kind of towered over his parents. And he's got orange legs. He's not cute. He's got a weird sound. And, you know, I swear the parents were embarrassed.

**Lisa O'Donnell** [01:10:58] But, but, that's, yeah, it's, it's kind of rare, at least in our area. And also, you know, you tend to get brown-headed cowbirds more where you've got livestock nearby. And with the development, you know, we've seen kind of a shift of livestock out of this area. And so the cowbirds don't tend to be as abundant as they were. I mean, we still see them in some places, but but not nearly in the numbers that we had, like in the '80s, when we had all the ranches and stuff.

**David Todd** [01:11:37] Well, you talked about the the changes in land use and in the habitat and a little about the, I guess domestic animals and about the brown-headed cowbirds. Is there any other kind of issue that may be in play that would be responsible for the warblers' decline over the past number of generations?

**Lisa O'Donnell** [01:12:07] Yeah. It's really just habitat loss, you know, and you can't, you can't get it back. I mean, these trees grow, like all of the trees, but Ashe junipers grow really, really slowly. And one common denominator in the habitat is that you tend to have these really, really old trees. I've had people ask me like, do I know of examples of old-growth forests? And no, I don't know of any places that haven't been cut, but I do know places where we have old-growth trees and that's where we tend to have our golden-cheeks, and this is where you've got these really, really old trees, and you may have younger trees around them, but it takes a really, really long time.

**Lisa O'Donnell** [01:12:51] We've measured it. Independently, Warren Pulich documented this. William Bray sort of inadvertently documented it by showing a picture of regrowth juniper. And then we done some measurements. And then a researcher on the Balcones Canyonlands National Wildlife Refuge, also looked at diameter growth rates of Ashe juniper, and that, on average, it grows about an inch per decade, expanding. So if you've got a ten-inch tree in diameter, you're looking at about 100 years old.

**Lisa O'Donnell** [01:13:27] That's a really long time, you know, for habitat to grow back and then and then that's just the tree, that's not like all of the other things that go along, you know, within that, that ecosystem. So yeah. So once you lose it, I mean, you lose an old-growth forest, or old-growth trees, it's very, very hard to get back. So that's that's really the main, the main thing.

**Lisa O'Donnell** [01:13:50] But then I also ought to say, I mean, I think people's perceptions, you know, the kind of the myth of Ashe juniper, and the vilification of juniper, and people just cutting it because they think it's bad. Um, that's, that's another big threat. But again, it goes back to that habitat loss.

**Lisa O'Donnell** [01:14:11] Well. And why do you think a tree would ever be considered a hero or a villain or have any kind of, sort of stature like that. It's, it's a plant.

**Lisa O'Donnell** [01:14:25] Oh, yeah. You mean, like, why do people hate on the Ashe juniper so much?

**David Todd** [01:14:29] Yeah.

**Lisa O'Donnell** [01:14:30] Yeah, that's a good question. I've always wondered about this. What's up with this? Do we have this issue anywhere else in the world, you know, where there's this one tree that that everybody hates? Um. I don't know. I don't really have an answer to that.

**Lisa O'Donnell** [01:14:46] Um, except that it's, it's not great for cows. I don't know. Yeah, it's kind of beyond me. But you know, I remember in the, I took a class at UT in the early '80s, and I remember hearing that, you know, this was all grass. This is all invasive. Um, and then in the '90s, it just seemed like it picked up, you know, and just everybody was on that bandwagon at that point. So it seemed like that vilification really picked up in the in the '90s and onward. So,

you know, whether it's development or agriculture, I pick a question, but it's everything from, you know, it sucks up water. It's a water hog. It's a fire risk. You know, I I've heard people from Oklahoma tell me that it increases mosquitoes and ticks. And I'd like to see those data.

**Lisa O'Donnell** [01:15:48] Um. But yeah, I know. It's just like I look at it completely different. It's, it's, it's the foundation of our ecosystem. It's the pioneer and the climax species. It creates the soil, it provides the shade. And, you know, we talk about plants needing light and always trying to reach for the light. But now, try that in August, try that right now. Who wants to be out in the light right now? It's fairly hot out there. So shade is really so important here.

**Lisa O'Donnell** [01:16:21] And we've done studies on oak seedlings, and if you don't have shade, they're all dead by the end of August because it's just too frigging hot. So yeah, plants and other things, you know, and what else can survive in that besides something like juniper? It provides, like the perfect dappled light. Um. Yeah.

**Lisa O'Donnell** [01:16:44] We're looking into the mycorrhizal fungi and some other things right now, potentially as well, you know, that might be benefiting the plant community as a whole.

**Lisa O'Donnell** [01:16:57] But yeah, I just see so many benefits and, hopefully, I don't know, we'll see if we can get that information out there. Talk about the underdog.

**David Todd** [01:17:07] Yes. Yes. Well, one last question about the, I guess, the risk that the warbler faces in its habitat. I've heard people say that the warbler is part of this group of wood warblers that tend to be in cooler environments than the golden-cheeked warbler. And that it, the golden-cheeked is sort of an outlier and that the increasing heat that we're seeing is, is putting a stress on the bird and it also is the droughts that we've been having a tough on the juniper itself. Do you see that as a factor or is that hard to isolate?

**Lisa O'Donnell** [01:17:53] Oh, my gosh. Yeah, I'm glad you brought that up. No, that's huge. Climate change is huge. And this season has been especially bad. I've been monitoring golden-cheeks since 2008. I've never seen a year like this year, where it's hot, dry, windy - windy every single day. And yeah, we, we were noticing golden-cheek females actually standing on the rim of their nests, holding their wings out over the nestlings. I don't, I'm sure they've done that in the past, but that's something that a lot of our biologists were noticing this year.

**Lisa O'Donnell** [01:18:35] I'm sure it makes it harder for them to find food for themselves, for the young, to make that trip back to Central America. They've got to get these, you know, lots of fat reserves to make that trip down there.

**Lisa O'Donnell** [01:18:46] Um, so yeah, and then the impact it has on the plant community itself and, yeah, with the tree mortality. I was noticing dead trees, even some of the really big old trees, this year on some of the plots that I was working on.

**Lisa O'Donnell** [01:19:06] So no, climate change is another huge, huge factor.

**Lisa O'Donnell** [01:19:11] But I think also, you know, with that, you know, if you look back in time historically, our species just tends to want to clear stuff out. So the response to that is like, oh, these are fire risks. So you get more and more clearing. And, and I think that just exacerbates the problem. You know, I'm not a meteorologist, but hopefully somebody at some point will look into, you know, the role of our forests with the hydrologic cycle and rain and

climate. But we definitely know it cool things off and you've got higher humidity, and when you lose your forests, it's drying things out and making it, you know, hotter, drier.

**Lisa O'Donnell** [01:20:03] And then we know about carbon sequestration. So that's an easy one too.

**David Todd** [01:20:09] Okay. Well, thanks for walking us through this. So this sort of gives us the background on the decline of the bird, and I guess it'd be worth talking a little bit about how that was recognized and sort of formally endorsed in the listing under the Endangered Species Act. Can you tell us a little bit about that process? You know, whether I don't know how far back you could go, you know, Pulich's study back in '76, or the Category 2 species listing in 1982. What can you tell us about the listing of the warbler? I.

**Lisa O'Donnell** [01:20:53] T's been a while since I've read Pulich. I mean, you know, back in the '80s, that was like the Bible, right? That was like definitive, at the time - you know, great little book. It's been a while since I've read it. I don't know about why the warbler got on the original list. There were a ton of species that, you know, went on the list originally. Maybe it went on that way. I don't know.

**Lisa O'Donnell** [01:21:14] But but, but, yeah, it was a Category 2 for a long time. And in my understanding, and this again is going to be peripherally, is that EarthFirst!, Tim Jones, in particular, put together a petition to the Fish and Wildlife Service, and was just noting, like the permanent habitat loss now. You know, agriculture is one thing. You know, you have to wait a long time for things to come back. But development, it's like, that's it. We're done. You know, there's no more habitat, right?

**Lisa O'Donnell** [01:21:50] And so, so, Tim, I, I never actually saw his petition, but he submitted it for the Fish and Wildlife Service in early 1990, I believe, and it's just documented. I remember talking to the biologists who worked on it and she said he was just showing, you know, all of these different places that we were going to lose. And, you know, losing habitat in western Travis County in particular, I think was kind of the focus of it.

**Lisa O'Donnell** [01:22:20] And so Fish and Wildlife got that. And because the development was happening, you know, was proposed like right away, they went ahead and emergency listed it. So, so the way the petition works is Fish and Wildlife get the petition. They will evaluate it if, if they determine that the risk is so imminent that the species itself is at risk, they can opt to do this emergency listing. And then that's followed by, I don't know how many times that that's happened, but then that's followed by, they'll they'll do a 90-day finding, they'll do a 12-month finding, and then they'll do a final rule.

**Lisa O'Donnell** [01:23:01] And all of that happened, I think, within the span of a year. I think the final rule even came out, I need to go back and look, but it was either the end of 1990 or early 1991, which is also really unusual that things can happen that quickly.

**Lisa O'Donnell** [01:23:19] [Maybe... No, distracting.]

**Lisa O'Donnell** [01:23:26] So that's really what I what I know about that process was that, yes, it was a petition and that it was compelling enough that the species was losing habitat so quickly and so imminently that the decision was made to do the emergency listing.

**David Todd** [01:23:46] Well, I think one thing that you mentioned which sort of caught my attention was that, if I heard you right, was that the changes in land use were unlike those with agriculture where, you know, one decade you might be clearing brush, but then the next year you might, the next decade you might have some of the juniper and oaks growing, but that the habitat changes with development were permanent.

**Lisa O'Donnell** [01:24:19] Right. It may be slow following agriculture, but eventually it will happen. And again, if they have old trees, if it's close to an area that's occupied habitat, you know, there are a lot of things that can play into that where the habitat can come back, um, you know, eventually. It might take a little while, but, but it, you know, eventually it can come back.

**Lisa O'Donnell** [01:24:44] And, yeah, with development, it's gone. Yeah.

**David Todd** [01:24:52] Okay. Well, so maybe we can move forward so that, as folks recognized the bird is under threat and it was listed, then I understand that one of the responses was to try to set up some preserve land, and one of those, of course, was the Balcones Canyonlands Preserve, where you ...

**Lisa O'Donnell** [01:25:40] Nope, I can't hear you David.

**David Todd** [01:25:41] Yeah. I'm here. I can hear you.

**Lisa O'Donnell** [01:25:42] I mean, yeah, I just had a really long gap where I could not hear you.

**David Todd** [01:25:48] Okay, well, let me just sort of repeat what I think you might have missed, not that it's any great valuable poetry, but, I was just going to say that you've sort of set up the segue that the species is listed and then as a response, there were efforts to set habitat aside for it, to protect it. And one of those tracts that was set aside is the Balcones Canyonlands Preserve, where you have served as a biologist since 2007. And I was hoping that you could talk about the origins of the Preserve and you know what you've seen out there in the 15 years you've been there?

**Lisa O'Donnell** [01:26:41] Yeah. So that's, that's where, you know, and actually the origins started back in the late '80s where they had, you know, biologists and politicians, it's actually amazing that it happened in Texas. But, um, but yeah, they were the ones that kind of got it all started and worked with the Fish and Wildlife Service, you know, issues this, Fish and Wildlife issues this regional habitat conservation plan, this regional permit, to cover incidental take of not only the warbler but the vireo and cave invertebrates, and, you know, there were a couple of plants in there as well. And then that permit was issued in 1996, and it was predicated upon having this preserve system that was at least, you know, 30,000 acres or more.

[01:27:33] Originally, when the scientific advisory committee said that, you know, they were taking a look at how much area they needed to protect all of these species, they recommended 125,000 acres. And I remember being in the meeting when they presented that to the politicians, and it didn't go over particularly well.

**Lisa O'Donnell** [01:27:54] And so what they ended up doing was that's where the Balcones Canyonlands National Wildlife Refuge, came in with, okay, the City of Austin and Travis County would do this 30,000-acre preserve and the refuge would do their acquisition

(boundaries are around 40,000, I think). Even so, those two things together, so, you know, about half of what the scientific advisory committee had actually recommended.

**Lisa O'Donnell** [01:28:28] Part of the reason that they recommended something as big as that was to allow a buffer between the preserve and the development. And so since I've been with the Fish and Wildlife Service, I mean Fish and Wildlife, since I've been with the Balcones Canyonlands Preserve, we've just had this tremendous growth and development, you know, into western Travis County. And we've actually got aerial photos that kind of document that, and show it from 1996, 2006, 2016. And so I kind of watched the transition from, you know, preserve that's fairly, you know, intact with the surrounding forest, to essentially an urban preserve, you know, where we're getting surrounded more and more.

**Lisa O'Donnell** [01:29:19] And so with that, you know, you see more trespass. You get, you know, people that are worried about fire that are cutting trees down along the boundaries. And that was the reason why the scientific advisory committee wanted this buffer, because they knew things like that would happen, you know, along that wildland / urban interface. And so we don't have that that buffer, essentially.

**Lisa O'Donnell** [01:29:46] But, I mean, the good part about the preserve system was that, you know, we protected the best habitat within Travis County. We're also losing, you know, it allows the loss of over 70% of the habitat in Travis County. But in exchange for protecting, you know, the best.

**Lisa O'Donnell** [01:30:07] And so it's quite a privilege and an honor to try to, to try to do that, and to try to make our preserve system the best it can be, given all the things happening around it.

**David Todd** [01:30:20] Well, so I understand that you have been involved with efforts to manage the preserve in a way that maybe addresses the risk of invasive species by taking some of those out and then also doing some native planning, working together with the Conservation Corps, and TreeFolks, and I assume others. Can you talk a little bit about some of those habitat management efforts that you've been involved with?

**Lisa O'Donnell** [01:30:52] Yeah. Yeah. So one of the things I, you know, when I first started working for the, I'll just BCP for short, I was just kind of struck with, it just seems like in central Texas, the land management focuses on three things, and it's all destructive. It's either cutting stuff down, it's burning it, or it's herbiciding it, or a combination of the three. And what I was asking our biologists to look at is like, what about regenerative? Why can't we build up? Let's grow things like, you know, let's, let's expand.

**Lisa O'Donnell** [01:31:28] And, um, so we've done a little bit of that. I mean, I guess, everything kind of starts slow. But, but yeah, it's like clearing juniper is like a panacea. And we get volunteers to come out, you know, and they'll ask us, "When are you going to start thinning out your junipers?" And so, "Well, they play a really important role." So and as you plant trees, you know, you'll understand the value of having something that actually creates soil and where you have something that you know that you can actually plant in.

**Lisa O'Donnell** [01:31:58] And so, yeah, we've been experimenting with that. We're going to start writing a report and that's actually next week, I'm hoping that we start working on that, where we talk about regenerative restoration. Like creating healthy soil. We've got a contract with a Ph.D. graduate from Northern Arizona University who was a land manager and fire



ecologist, and went to get her Ph.D. on mycorrhizal fungi. And I don't know if you know about the role of mycorrhizal fungi, but they're in the soil and they essentially extend the root system of plants, and they get into the parts of the soil in the rocks that the plant roots can't get to. And then they pull nutrients out, they pull water out, and they transfer it. You know, basically, they provide it to not just one individual plant, but to a community of plants.

**Lisa O'Donnell** [01:32:55] And so these mycorrhizal fungi are just playing a huge role in ecosystem health and well-being, and we know so little about it. So she's starting to help us with that. We're going to be looking at soil biology and the role of mycorrhizal fungi in our communities and then applying that for restoration and land management. But yeah, so that's, that's basically it.

**Lisa O'Donnell** [01:33:23] We, we, we've also focused on what we call hyperlocal seed collecting where we collect seeds from parts of our preserve that maybe have more diversity. And we take those seed, we have a vendor that helps us treat them if needed. Some trees some things need to be either scarified or stratified. And so, you know, our vendor either grows out a subset, or gives us the seeds where we plant them directly in the field. So we're trying this a lot of different things that increase, you know, plant diversity and just increase the health of our forests.

**Lisa O'Donnell** [01:34:01] And also focusing on places that you've had so much just degradation in the past, either from cutting, burning, whatever, you've got erosion, you know, steep slopes, you've lost the soil. How do you bring those areas back? So we've been experimenting in those places, too. So hopefully writing, you know, what we've learned so far anyway into a little report.

**David Todd** [01:34:29] Well, that's really wonderful. It sounds like you are planning for the future and trying to learn from the past.

**Lisa O'Donnell** [01:34:37] Oh, yeah.

**David Todd** [01:34:38] So what I've been sort of struck by is that while we've been talking about the golden-cheeked warbler, this preserve system that you work at is also home to a number of other species that are very rare and special - the bracted twistflower, the bone cave harvestman, the Jollyville Plateau salamander, the Barton's Springs salamander, the Austin blind salamander, and of course, the black-capped vireo. And I was wondering how the challenges that the warbler faces are shared with these other creatures, or if there are very distinct problems facing them.

**Lisa O'Donnell** [01:35:30] Right. Well, it depends on who you ask. Um, based on my experience, like you mentioned bracted twistflower, which has been proposed for listing as endangered. Um, one of the threats that's mentioned to the bracted twistflower is Ashe juniper, um, which is counter to everything that we see. And some of the largest populations of this plant that remain are on the Balcones Canyonlands Preserve. And we've looked at historical areas, aerial photographs and found that where we have bracted twistflowers, where we have these populations, is in areas where it's had the least amount of disturbance, at least from what you can see from an aerial photo. You know, it's been continuous forest - juniper/oak forest - since 1940, which is the oldest aerials we have.

**Lisa O'Donnell** [01:36:22] And so that indicates to me that juniper is not a threat. I don't, I don't quite understand how that how they derive that. But regardless, that's what's in the

proposed rule. It may come out into the final rule as well. And so I don't see a conflict there. I see it as being, yeah, I think that the warbler and the twistflower actually have the same threat, which is, you know, development.

**Lisa O'Donnell** [01:36:50] And, you know, in the case of the bracted twistflower, it's also recreation. You know, people like trampling it from, you know, hiking or biking or whatever. And deer herbivory as well.

**Lisa O'Donnell** [01:37:08] For the cave invertebrates, it is the same thing. You need a healthy forest canopy cover. That helps provide food resources for cave crickets, which forage on the surface outside of the cave, and then they go and they bring nutrients back into the cave. They're a real keystone species for cave ecosystem's health. And then also keep the environment of the cave cooler and more moist. And so you've got more cave drips of water and whatever. You know, you've got stable environmental conditions with the forest cover. And I think that's been shown pretty well.

**Lisa O'Donnell** [01:37:50] And salamanders, Jollyville Plateau salamanders: the part of the species' range where we've got the most abundances of Jollyville Plateau salamanders also coincides with where you have most of your golden-cheeked warbler habitat.

**Lisa O'Donnell** [01:38:07] So those are like, yeah, so, you know, protecting golden-cheeked warbler habitat also protects, you know, salamander habitat and water quality and quantity. And, one other thing - yeah, there's some really rare plants that only occur in the forest as well.

**Lisa O'Donnell** [01:38:27] The only species that's different is the black-capped vireo and the vireo, really, the heart of its range is farther west. It ranges down into Mexico, goes up through central Texas, up into Oklahoma. It's much more scrubby. And where you do have black-capped, you know, on the eastern edge of the plateau is where you have some sort of disturbance - whether it's mechanical, you know, burning or climate change, I think is probably affecting it as well. Where you've got tree mortality, you know, you've got shrubs and things that are growing back up underneath that. And so we may actually be seeing an increase in black-capped from that.

**Lisa O'Donnell** [01:39:05] So, you know, that's really the only... but we've had black-capped and golden-cheeked occupying the same space as well. So I haven't seen that as being like a huge threat. Most of the preserve system is managed for forests. And then there's a smaller area that's managed for black-capped vireo.

**David Todd** [01:39:30] Well, speaking of the vireo, I think that was one of the first rare species you worked with. And I think you once said that you started monitoring them 35 years ago, about the time it was listed as endangered. Can you tell us a little bit about your first encounters with the bird?

**Lisa O'Donnell** [01:39:54] Yeah. So I was working for David Steed and, oh yeah, my first encounter with it: because I was new to birding and I had a couple of colleagues who were working for David as well, and they sent me off down to me to Comanche Trail, not too far from the Oasis restaurant, um, like between... and that was back when we could, you know, we'd walk quickly across 620, but you could at least walk across it. And we had vireo territories on both sides of 620, like spanning 620.

**Lisa O'Donnell** [01:40:27] But anyway, my job was to walk down Comanche Trail and see if I could find any black-capped vireos. Well, it was typical warbler habitat - closed-canopy forest for the most part. And I came back and I said, "Guys, I found so many black-capped, I can't, I can't count them, would you want to come out with me and, you know, just help me kind of sort out how many we have?" And they just looked at me and said, "Oh, yeah, she's new, she doesn't know what she's talking about."

[01:40:53] And so it turned out, I mean, you know, we had about seven, I think. But it wasn't typical habitat. But they had, you know, a surveyor had gone through there and made some survey cuts. And so even though it was closed canopy, it was mostly warbler habitat, you had along these survey cuts, you had habitat coming back. And so that was kind of my first introduction was that area.

**Lisa O'Donnell** [01:41:17] And then I worked on what we call today, "The Vireo Preserve", which is next to Wild Basin. And that's where I met my husband, Jim O'Donnell. I noticed you had something about the wedding rings on there. And so, yeah, so that, that was the other place that I went out and helped Jim band. He was banding, at this point been banding black-capped since, I think like '84.

**Lisa O'Donnell** [01:41:44] And then we actually watched them disappear. The Vireo Preserve Wild Basin patch had development basically encroaching all around it. Plus, again, it was kind of on the eastern edge of the range and the habitat at that point was kind of growing up out of vireo habitat, kind of going back toward more of golden-cheeked warbler habitat. Um, and so we ended up, you know, basically watching that species disappear from 30, 35 territories down to nothing. So within a very short time. It happened very, very quickly too. They were gone basically by the end of the '80s.

**David Todd** [01:42:26] Well. And what was it that was hurting the vireos. But I guess it was this development that you're witnessing or were there other problems that you could pin down?

**Lisa O'Donnell** [01:42:43] Yeah, it was, you know, for, you know, it just kind of depends on where you're at. But for that one area, the vireos of Wild Basin, it was probably multiple factors, but I would say development being a big factor. And then again, the habitat kind of growing up out of suitability.

**Lisa O'Donnell** [01:43:02] But there's other places where I've seen typical habitat and we do still have vireos there. Um, so, you know, it's, it's hard to know for sure, but um, you know, when they widened 620, you know, we used to have black-capped vireos all up and down 620. We had them up and down City Park Road. And yeah, as, as development encroached we kind of lost those.

**Lisa O'Donnell** [01:43:29] But, but other areas, you know, they, it's a small population again. We're the eastern edge of the range. So, um, you know, when the Fish and Wildlife de-listed the bird, they didn't even consider our, our area. They were looking at Fort Hood. And so, like, so we have maybe 20 birds compared to Fort Hood and I forget how many, but they've got hundreds, you know, of birds. It's not ... I'm trying to remember how many they have, but yeah. They are a lot more abundant out farther west.

**David Todd** [01:44:02] Well, so I think you mentioned earlier that there was a great deal of fanfare, of course, about the golden-cheeked warbler listings, but for some reason the vireo brought less attention. Is that true? What was that about?

**Lisa O'Donnell** [01:44:26] I don't know. That's a really good question because, you know, when I was working for David, the cave invertebrates that were listed in '88, and I'm trying to remember the date. And the vireo was posted in '87, I think. And when when I was working for David in the '80s, I would have people occasionally say, "What do you do? What are you working for?" And we'd tell them we're looking for a black-capped vireo. And I remember one wise guy saying that, "is that a round-headed guy or a pointy-headed guy?"

**Lisa O'Donnell** [01:45:00] But they just thought it was funny. And ooh, yeah, when the warbler got listed, yeah, it was, it was, there was definitely a lot of concern. I don't know, I, you know, I'm not a politician, so I don't really know what was going on behind that. And then, of course, with the salamander listings it got even more political. So. Um. Yeah, that's a good question.

**Lisa O'Donnell** [01:45:28] Well. So it seems like politics has come back to the golden-cheeked warbler. What is it, about seven years ago? In 2015, the Texas Public Policy Foundation filed an Endangered Species Act petition to delist the warbler, and the General Land Office joined suit in 2017. And you know it's come back and forth between the Service and the courts. But I was curious if you could comment on why the bird would seek to be delisted, given the problems with the habitat change and its range.

**Lisa O'Donnell** [01:46:15] Yeah. So, I, you know, I actually try to stay out of politics. Um, I try to stay focused on science and not mix the two. That was actually, one of my supervisors at Fish and Wildlife was telling us that he would deal with the politics, and he wanted us to only focus on the science. And I, I've kind of always stuck with that. And so I don't know the politics behind it.

**Lisa O'Donnell** [01:46:40] I do have a tiny one, when I mentioned the paper that we wrote where we were comparing, we looked at three different density models that were predicting warbler abundance, including two of ours, and then the A&M model. And when we wrote that paper, which was the first paper I had ever authored myself, where I was the lead author on it, when it got accepted for publication, it was in June of 2015 and it was like ten days later that petition was submitted.

**Lisa O'Donnell** [01:47:16] And I remember calling the editor of the Journal of Field Ornithology, and I said, "So just so you know, it could get kind of interesting," because that just, for me, came out of left field. I really felt like at the time when we did that paper that things had calmed down enough. Um. You know, that this was, this was actually a good time to actually have a discussion about science, and, you know what, you know, using these kind of rapid methods, these point count methods, to try to predict abundance. I thought, it's a good time to have a conversation because things seemed to be pretty calm.

**Lisa O'Donnell** [01:47:54] So I had no idea that that was coming. So I don't know the why of it. But the Fish and Wildlife Service has just finished the status review like the year before, the summer before. So it came right after that and presented the same information that Fish and Wildlife had already reviewed. So in their subsequent 90-day finding on the petition, they said, if I understand correctly, the Fish and Wildlife basically said, "We've already look at this information. You didn't provide anything else." And if I understand the plaintiff's argument,

they're saying, "That's not the standard. The standard is substantive information. And there's a bunch of information that we submitted. I don't care if you've already looked at it. You need to look at it again and do a positive 90-day finding and automatically go into the 12-month finding."

**Lisa O'Donnell** [01:48:49] So I understand kind of what they're going for. But, um, yeah, I, and I think Fish and Wildlife did a negative 9-day finding in 2016 and another one last year, I think in July of last year, when the appellate court said, you've got to look at it again.

**Lisa O'Donnell** [01:49:13] And I think they're appealing it. I think they appealed it again, right, this year? And I don't know the status.

**David Todd** [01:49:20] Yeah. It seems to be a hot issue. This poor little bird is being bounced around the courts.

**David Todd** [01:49:31] Well.

**Lisa O'Donnell** [01:49:32] Well, and not only that, but like the Bone Cave harvestman is another one. Um, you know, and they're trying to argue on interstate commerce that you can't list the species that doesn't cross state lines. And it's something along those lines. Anyway, yeah.

**David Todd** [01:49:57] When you look back on this, you know, what do you think about your your efforts on behalf of golden-cheeked warbler and the black-capped vireo? What really stands out?

**Lisa O'Donnell** [01:50:19] On my efforts?

**David Todd** [01:50:21] Yeah. And what you've seen, I mean, how things have changed or, stayed the same. Is there anything you want to add?

**Lisa O'Donnell** [01:50:32] Yeah, I, I think in terms of like my contribution, the only thing that I know how to provide is as close to the truth as we can get. Um, and so, although when we first started looking at abundance of, of warblers on our preserve, it really was just to comply with our permit and, you know, just to be able to inform management. I had no idea, no idea, that it would ever become controversial or become what it, what it has become. But I am glad that we have really good, solid data to be able to look at these other estimates, or predictions, and say how realistic are those? You know, how do they compare with what we have? Oh, you're predicting 30 times more than what we've got. There seems to be a problem.

**Lisa O'Donnell** [01:51:29] Um. So that. I think that's all stuff that I would never have been able to foresee. But I'm glad that we have it. I'm disappointed that we have to have it, and have to be able to defend like that. But, yeah, I, I would say that that's one of the major, it's definitely been a surprise anyway.

**Lisa O'Donnell** [01:51:57] And the rest of it seems like, yeah, just watching things change from a really rural, you know, where you've got cattle and you're walking across roads where now, you know, you would not be safe, where everything's developed. So, you know, so, so definitely watching the transformation of western Travis County.

**David Todd** [01:52:22] Well, it is intriguing to hear you talk about this because it seems like you have been a real witness to this dramatic change, not just for the bird, but for the whole area that it, and you, call home, and so I think it's really wonderful for you to have shared that with us, something we can all relate to.

**David Todd** [01:52:52] And unless you have something else you'd like to mention, I'm inclined to let you go. You've been very patient with this whole process.

**Lisa O'Donnell** [01:53:02] I hope that the recording all works out okay, that it doesn't, you know, that you don't have these silent gaps in there.

**David Todd** [01:53:14] I think we'll be good. And thank you very much for bearing with some of the technical glitches there. They sort of go with the territory.

**Lisa O'Donnell** [01:53:24] Oh, I know. Totally.

**David Todd** [01:53:27] So thank you again for your patience and interest in this. And I hope that our paths cross in the future. It's been fun getting to know you.

**Lisa O'Donnell** [01:53:35] Yeah. Thank you, David. I appreciate it. So fun.

**David Todd** [01:53:41] Take care of yourself. Hope your voice feels better and stronger soon.

**Lisa O'Donnell** [01:53:45] And I hope your daughter does, you know, heals soon, too.

**David Todd** [01:53:51] Thank you. I appreciate it.

**David Todd** [01:53:51] All right. You stay safe, be well. Bye now.

**Lisa O'Donnell** [01:53:51] Bye.