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David Todd [00:00:02] Well, good morning.

David Todd [00:00:04] My name is David Todd, and I have the great privilege of being on the line with John Burk.

David Todd [00:00:09] And with his permission, we plan on recording this interview for research and educational work on behalf of a non-profit group, the Conservation and History Association of Texas, and for a book and a website for Texas A&M University Press, and finally for an archive at the Briscoe Center for American History, which is based at the University of Texas at Austin.

David Todd [00:00:32] And, I wanted to emphasize that he would have all rights to use the recording as he sees fit.

David Todd [00:00:38] So that's sort of the outline of what we're setting out to do. I wanted to make sure that that's okay with Mr. Burk.

John Burk [00:00:45] Absolutely.

David Todd [00:00:46] Great. Okay. Well, thank you.

David Todd [00:00:48] Well, let's get started. It is Wednesday, March 20th, 2024. It's about 10:15 in the morning, Central Time.

David Todd [00:00:57] My name is David Todd, as I said, and I am representing the Conservation History Association of Texas, and I am in Austin.

David Todd [00:01:04] And we are conducting a remote interview over Zoom with Mr. Burk, who is based in Steedman, Missouri, about 30 miles east of Jefferson City in Missouri.

David Todd [00:01:16] Mr. Burk received his B.S. from the University of Wisconsin at Stevens Point and his M.S. from Mississippi State University. He worked as a field research coordinator at the Missouri Department of Conservation from 1990 to 1992, and then as the statewide Turkey Program Leader at Texas Parks and Wildlife from 1992 through 2003. And in the years since then, the last two decades, in fact, he's been the senior regional biologist at the National Wild Turkey Federation.

David Todd [00:01:48] So, today we'll talk about Mr. Burk's life and career today, and especially focus on what he can tell us about this interesting creature, the wild turkey. And, maybe we'll get a chance to hear his thoughts about its natural history, its protection and its restoration.

David Todd [00:02:06] So, a little introduction there, to give us a sense of what we're up to today.

David Todd [00:02:13] But I thought we should start with a question about Mr. Burk's childhood and early years and whether there might have been family or friends or experiences that he had in those early years that encouraged his interest in nature and animals, and particularly wild turkeys. So, what can you tell us, Mr. Burk?

John Burk [00:02:35] Well, I guess my, I've got a kind of a unique pathway into the profession. You know, when I was a kid, I had a really strong interest in animals. I mean, I was, I think every kid when they're young kind of had, you know, frogs in pots and turtles and that kind of thing. And that's, I think I took that to another level, because I was kind of a neighborhood, I guess, Dr. Doolittle. You know, if anything was hurt or abandoned or something, it came to the Burk household.

John Burk [00:03:12] And so, actually, you know, in my formative years, I was probably, I would have been considered probably pretty staunchly anti-hunting. You know, I was, I saw my future as a zookeeper when I was a little kid.

John Burk [00:03:29] And, as I started approaching, you know, back in those days, you know, you had to be 12 years old before you could legally hunt in the state of Wisconsin, which is where I grew up. And my mother's brother was, you know, he was a very, a very accomplished hunter. He was, the technical editor of Archer World magazine, personal friends with Fred Bear.

John Burk [00:03:56] You know, he was not the kind of person that I pictured hunters to be, but at that time, prior to me turning 12, we didn't have a real, close relationship. We didn't spend a lot of time. We probably visited for Thanksgiving, and, you know, those kinds of things, every once in a while.

John Burk [00:04:15] But, the summer before my 12th birthday, you know, they had us over and had us shooting bows and arrows in the backyard. And I thought that was pretty cool. And, he invited my dad, who was a Milwaukee city schoolteacher also, you know, not a hunter. We were shooting the bows together, and he, you know, uncle Bob, invited us to try bow hunting.

John Burk [00:04:44] And this was back before bow hunting was the thing it is today. You know, we were using recurves, and it was pretty primitive stuff. And again, you know, I was not real wild about hunting, in what I perceived hunting to be. And The Guns of Autumn aired the weekend before we were supposed to go up and bow hunt with my uncle.

John Burk [00:05:12] And when we got up there to the cabin, which was in Waushara County, Wisconsin, probably right in the middle of the state, in the Sand County area (it's actually not too far from Aldo Leopold's farm), my uncle asked if we'd watched The Guns of Autumn. And we said yes. And the Guns of Autumn was made for prime-time TV. And it was it was an hour-long special. I don't can't remember if it was ABC or CBS or who aired it, but it was pretty much the epitome of what hunting is not. I mean, they they took an hour-long show and they filmed the ugliest of the ugly. And that was kind of what I thought hunting was, and who hunters were.

John Burk [00:05:59] And my uncle Bob, you know, said that hopefully after this weekend, you'll learn that that's not what hunting really is and who hunters really are.

John Burk [00:06:09] He was right. He put me in a a little ground blind that we dug, you know, dug a hole in the sand, and that's where you put your feet. And we sat on a boat cushion and we surrounded ourselves with pine limbs. And, you know, he pointed to a deer trail and said, "You know, watch, you know, pay attention to what's going on around you. But be sure to pay particular attention, you know, between 8:30 and 9 at that trail."

John Burk [00:06:35] And, you know, I was out there, he put me out there prior to, you know, first light in the morning. And, you know, I watched the morning wake up. And, you know, I'd never really experienced that. You know, the red squirrels. I had a rough grouse walk up to me. And then I thought, you know, it was like probably quarter to nine, I said, "Oh, yeah, I'm supposed to watch that trail."

John Burk [00:06:56] And I looked up and a six-point buck came down that trail and walked within 12 yards of me, and I drew back and threw an arrow at him and missed and experienced that adrenaline rush of that, you know, that encounter that I had never experienced before. And at that point, a hunter was born.

David Todd [00:07:20] That is so interesting when you know you have these preconceived notions about some experience you've never had; you have that experience, and your mind changes. So, that's amazing. And that it's so defined, you know, that it was one weekend, a certain age, a certain place, you know, that particular deer, that particular uncle. Really interesting. Well, well, good.

John Burk [00:07:46] The way I describe it, it's kind of like I think that there's the seed of a hunter in everyone's heart. It just needs the right conditions to germinate. And Uncle Bob created those conditions.

David Todd [00:07:58] Very nice.

David Todd [00:08:00] So, it sounds like your dad was there. Your uncle was a big influence. Were there other people, maybe peers, you know, folks your own age, who were also influential?

John Burk [00:08:14] That's what kind of set the stage. And again it just, once that interest was created then, I became, you know, kind of hungry for information. At that time, you know, you had, there wasn't as much available as there is today. So, a lot of it was self-taught.

John Burk [00:08:32] And yes, I mean, I had high school friends that became college friends. And, you know, my best friend in high school ended up being my roommate all the way through Stevens Point, and then actually set me up, because he graduated six months ahead of me, and he actually set me up on a graduate research project that was a sister project to one he was working on, and it happened to be with Eastern wild turkeys. So, very definitely I was pulled into the, at least that path, by my best friend.

David Todd [00:09:09] Very nice.

David Todd [00:09:11] Well, you mentioned, you know, this Eastern wild turkey project. Were there any teachers either, you know, in higher education, or before that, when you were

in grade school, who might have, you know, encouraged this budding interest in nature and hunting and wildlife?

John Burk [00:09:35] I really wouldn't, I wouldn't, I guess I wouldn't, I can't point to a teacher or a professor that helped, you know, that created the interest or pulled me in a certain direction. I mean, they were, you know, that system was put in place to help me get to where I already wanted to go.

John Burk [00:10:00] And again, I think it was more family and friends that helped nurture that interest. And then I just, you know, took it upon myself to figure out how to get where I wanted to go.

David Todd [00:10:15] So, I think you mentioned Dr. Doolittle earlier, and I was wondering if there are other kind of parts of the mass media - books, magazines, journals, TV shows, movies - that might have been, you know, part of this world that was encouraging your interest in the outdoors and wildlife hunting.

John Burk [00:10:39] Well, again, I think I had, because of all of that that my uncle helped make happen in creating that interest that was a borderline obsession. Again, my dad was a Milwaukee city school teacher, and I was always a very slow reader. And I don't know if there's an "ism" for it. But, you know, I kind of read one word at a time. My retention is very good. But, you know, any kind of a time test where you're involved reading, I wouldn't do very well on those because I was a slow reader.

John Burk [00:11:18] And obviously, if you don't perceive yourself to be very good at something, that's something you don't really want to spend a lot of time doing. And my dad, as a teacher, obviously knew the importance of reading, and that's how he got me. And I'm still not a speed reader by any means, but I got over, you know, what was pretty much of a significant hurdle.

John Burk [00:11:42] And, you know, the only way he could get me to read was to get me subscriptions to things that I would take the time to read. So, you know, Outdoor Life, Archery World magazine, some of those other, you know, the American Bow Hunter, and these publications that, I wouldn't sit down and read a book, but I would sit down and read those articles.

David Todd [00:12:09] That's really interesting. So that was the window. That was the doorway into, both, you know, getting comfortable with reading, but also learning about this whole life of hunting and being in nature. Really interesting. Your dad was a clever guy.

John Burk [00:12:29] He's a good dad.

David Todd [00:12:30] Yeah. Very nice, very nice.

David Todd [00:12:33] So, you know, this has been a life-long career of yours, working with wildlife and wild turkeys as well. Tell us about your first job in the natural resource field. Where did you get that first lucky break?

John Burk [00:12:51] Well, upon graduating from Mississippi State, there was a lot of research going on with wild turkeys at that time. And, the Wisconsin Department of Natural Resources was doing a telemetry research project in the Driftless Area of Wisconsin. And they

were looking for somebody to kind of head up the field portion of that to actually catch the turkeys, put the transmitters on them, collect the data.

John Burk [00:13:25] And it was a short-time position; it was basically a six-month position. And because, you know, basically I had been doing that for two and a half years, I was the kind of person they were looking for. So, I applied for that job, got it. And then once that ran its course, they liked me enough to say, "Well, you know, we've got another six-month position with the DNR, on the Theresa Goose Marsh."

John Burk [00:13:52] So, you know, it was actually pretty cool because it gave me a different experience, kind of hands-on experience. You know, my experience up to that point in time because, you know, I grew up, you know, in a metropolitan area. I didn't grow up on a farm, so I didn't have any experience running tractors or equipment or anything like that. And that's something that I had an interest in. I wanted to be a manager, not a research biologist. So, that six-month position that they got me with, also within the Department of Natural Resources, you know, gave me that hands-on experience on how to run farm equipment.

David Todd [00:14:39] Good tools to be familiar with, I guess, if you're in the outdoors.

David Todd [00:14:44] So, you know, I wanted to learn more about your special interest and experience with wild turkeys. And I thought maybe the best place to start would be the first time you saw one in the outdoors.

John Burk [00:15:00] Well, where I grew up in Wisconsin, obviously .... I left Wisconsin about the time that turkeys were starting to, you know, pretty much, throughout the eastern turkey's range, particularly in the Upper Midwest, that was the time when they were, when the state agencies were restoring those turkey populations. So, numbers were still fairly scattered and fairly low numbers. So, you know, obviously the turkeys, the first time I was seeing turkeys was pretty much when I was when I was catching them to study them, you know, at Mississippi State.

John Burk [00:15:43] You know, when I left Wisconsin, I had never seen a turkey.

John Burk [00:15:47] Went to Mississippi State to study them. And that's when I first started seeing them. And I was, you know, actually throwing nets over them.

John Burk [00:15:56] And then when I came back to Wisconsin again, I was part of the capture and research. And then also did a little bit of moving turkeys for restoration when I was on that six-month position.

John Burk [00:16:11] I guess the first, one of the first, I guess, that stuck in my mind, was the first turkey that I harvested as a graduate student. The study area that we had was in Kemper County, Mississippi. You know, that part of the state was owned by, well, big portions of it, by Weyerhaeuser Paper Company. And the place that we stayed was actually a hunting lease, and it had some pine, hardwood, you know, original stands of pine and hardwood that hadn't been harvested and converted yet. And that's where the turkeys were.

John Burk [00:16:59] And that 5000-acre lease that we stayed on, there was only one turkey hunter in that lease. And so they allowed us to turkey hunt. And yeah, the first one I called up, it looked like a Volkswagen coming at me with both doors open. And it was, it was pretty exciting.

John Burk [00:17:21] I love that that image of a, you know, a turkey that seems so big it looks like a car. It must have been very striking. Can you kind of replay that in your mind? So, you're calling it and then he comes out of the woods?

John Burk [00:17:38] Yeah, he popped up. I was in a, again, a stand of mature pine / hardwood timber. So, turkeys tend to like those open stands. They don't like thick. So, I heard one, you know, sound off, I set up on it. And this was later in the morning. You know, when you're first learning to turkey hunt, you do a lot of swinging and missing, but this was a pretty target-rich environment.

John Burk [00:18:04] So, you know, I made a lot of mistakes, but I learned from them. And then, like I said, I got set up, and this was middle of the morning. And the bird gobbled a few times at my calling, and then he shut up. And then that was the first time I'd ever heard one drum. And I, you know, I heard that drumming and I knew what it was, but I'd never heard it before. And then that sound gets louder and louder and louder, and I see the, you know, the tips of the fan come up over the hill. And then here he comes.

John Burk [00:18:36] It's pretty, it is a thrilling thing.

David Todd [00:18:41] Great. Well, you know a lot about wild turkey. Could you introduce those of us that are kind of unfamiliar with the bird to their basic life history and the ecological niche that they fill?

John Burk [00:18:57] Well, a lot of folks consider the turkey to be somewhat of a generalist. And it kind of is. It simultaneously lives at opposite ends of the successional scale. It likes early successional habitats - grass / forb type habitats for reproductive purposes. I mean, that's where the brood-rearing and nesting habitat is.

John Burk [00:19:21] And obviously they need mature open stands: they roost in them. And the number one food in a turkey's diet, from Maine to Mexico, during the fall, is acorns. So, those mature mast-producing trees is also important during the fall and winter for those high-carb food sources that are important to body conditioning and priming the pump for the reproductive season in that following spring.

John Burk [00:19:52] They're, you know, that's a ground-nesting bird. They're fairly short-lived. I mean, not as short-lived, you know, basically a quail is also a gallinaceous bird, and it's pretty much, its life cycle is, for the most part, a year and done. Turkeys are probably more like three years and done, particularly on the hen side. You know, gobblers will live a little bit longer. But even the gobblers, I mean primary mortality on gobblers is human harvest. So, usually they're doing pretty good to get past year three, to get past three hunting seasons.

John Burk [00:20:35] You know, in an unhunted population, they might live 5 or 6 years. But, you know, they are a prey species. So, they're a reasonably short-lived critter.

John Burk [00:20:48] And that's what a lot of folks don't ... you know, right now we're experiencing, at least in the eastern turkey's range, a population decline. And there's a whole laundry list of reasons why that is. Dr. Chamberlain's based out of Georgia, you know, and then Collier out of Louisiana, they're kind of the two primary research biologists, current day. And Chamberlain is saying that basically eastern turkey populations have declined by 18%

from, the high watermark in in the early 2000 and such. That seems to be when things kind of kind of turned over.

John Burk [00:21:30] And there's a lot of concern. You know, a lot of folks love to hunt this bird. And when they see, you know, in places across the landscape, the average for the subspecies is an 18% decline. But again, it's an average. So, places like up in the Northeast and some even in the upper Midwest, turkey populations are probably stable, to, in some cases, still increasing. But, there's other places, like the Southeast, and we've experienced a 60% decline in north Missouri from that high watermark in the early 2000.

John Burk [00:22:15] So, turkey hunters that live in those areas where they've seen a 60% decline, they're very, very concerned.

John Burk [00:22:23] And, you know, they're wanting regulation changes. They're wanting something done there.

John Burk [00:22:30] Now obviously the fur market has cratered. So, they're wanting, you know, even something as crazy as bounties to try to reduce small mammal populations because that's what they, you know, the turkeys are declining because we got too many raccoons and all kinds of stuff like that.

John Burk [00:22:49] And when you look at a turkey's live history, you can kind of, you know, that's what we respond back and say, "Well, you know, in Missouri, for instance, we've got a three-week season, two-bird bag. And we allow, we've got a fall season that allows hen harvest." And they're, you know, the folks that are wanting change to help the turkeys, you know, they're wanting those fall seasons taken away. They're wanting to go back to a two-week season or wanting to go back to one-bird bag limit.

John Burk [00:23:24] And when you look at when you look at the biology of the animal and you look at the data that we've got, this is a production-related problem, and you can't solve a production-related problem with a harvest-related solution.

John Burk [00:23:39] So all of the things that the general hunting public are wanting us to do would not help a thing. And, you know, the mission of the Wild Turkey Federation is the conservation of the wild turkey and the preservation of hunting heritage, so any regulatory change that would reduce hunting opportunity would be kind of against, you know, it would go against our grain. It would be counter to our mission. We're not going to reduce hunting. We're all about responsibly using that resource.

John Burk [00:24:14] But if we got the data to show that, you know, if we take these things away that you want to take away, it's not going to move the needle. It's not going to wiggle the needle on turning that decline around. And so, why would we do it?

David Todd [00:24:29] Okay.

John Burk [00:24:32] As you understand more about the animal, and that's part of my job is to educate folks on, you know, this is what we need to do to help the situation. This is not what we need to do to help the situation.

David Todd [00:24:44] I'd like to hear more about that. You know, maybe you can help us set the groundwork for the natural history of the turkey, and then we can, you know, explore some of these sort of policy things in a few moments.

David Todd [00:25:01] So, you were telling me a little bit about the life history of the bird. Can you run us through kind of the cycle for a year for a typical wild turkey?

John Burk [00:25:14] Yeah. Okay. The place we're at right now, you know, we're kind of nearing the end of March, throughout the bird's range, what triggers the reproductive season is photo period or day length. Turkeys are not capable of reproducing year-round, basically. The egg development process and the gonadal development in males and females is triggered by a hormonal release that's triggered by daylight, photo period.

John Burk [00:25:48] And, you know, some folks are talking about, "Well, it's going to be early spring, they're, you know, birds are going to be way early this year." Photo period is the primary trigger for reproduction, and that does not really change much from year to year, regardless of how warm or cold it is.

John Burk [00:26:08] Up here, you know, in Missouri, if you get a really cold spring, the secondary trigger is that, you know, an egg is almost pure protein. So, the hen has to ingest a lot of high-protein forages - insects, snails, that kind of thing. And if you get a lot of real, you know, if you have a, if winter doesn't let go of its grip, then you can actually have a later spring by a week or two. But it can't really ever be earlier than that.

John Burk [00:26:51] The 1st of April is usually when that, you know, hens are going to start probably initiating egg-laying. And they lay an egg probably every other day for the first half of the clutch. And the clutch is usually about 11 eggs. And then, as they get closer to the end of that clutch, they'll lay them every day. And then, as they get like the last maybe one or two eggs, they'll start spending more time at the nest site.

John Burk [00:27:24] On the front end of the laying process, you know, the hen finds a spot. Lays an egg. Covers that egg back up with leaves or whatever's around. And then she goes back off to her normal routine.

John Burk [00:27:40] As she gets closer to the, you know, the incubation period, which, again, is going to be, here in Missouri, it's (from ten years of telemetry data), it's right around the 21st April. That's when basically more than half of your hens are going to be sitting on nests and initiating a 28-day incubation period.

John Burk [00:28:05] So, again, it takes a lot of high carbohydrates. She's building up kidney fat to be able to sit on that, because she's going to be sitting on that nest for a month, and the only time she's really going to get off of that nest is to defecate, maybe get a little drink. And she's doing that - she leaves the nest so that she's not leaving that scent at the nest site, because that's, they nest on the ground and that's, you know, this wet period that we've been kind of stuck in, with the exception of last year.

John Burk [00:28:42] Last year, we had a pretty good hatch, and we had a pretty good hatch was because we had a drought.

John Burk [00:28:47] So, with Rio Grandes you pray for rain: instant turkey, just add water. With Easterns, you're actually praying for the opposite, because we are in much, where the

eastern turkey does well, it's a much more humid area have much. You know, the annual rainfall is much higher.

John Burk [00:29:05] You know, Rio Grandes tend to nest in riparian areas because that's the only place the vegetation is suitable, usually because they are a bird that lives in more arid landscapes.

John Burk [00:29:18] Eastern turkeys tend to nest in upland sites because kind of, genetic selection over time, if you nest in a riparian area in eastern turkey range, you're going to lose your nest to flooding most years. So, they just don't pass, they know they don't .... the hens that do that are not going to pass out their genes.

John Burk [00:29:41] So, that process is happening. Usually, a lot of your, most of that first hatch is going to be coming off end of May. And that's kind of, you hang your hat on that first hatch. That's where you're going to gauge pretty much whether you've had a good hatch or a bad hatch.

John Burk [00:30:03] You know, your hens will renest if they lose their first attempt, but those second attempts, and in some cases, third attempts, usually are smaller clutch sizes. So that's just kind of gravy. We're counting on, from a population standpoint, we're counting on what happens in that first hatch.

John Burk [00:30:23] So, those poults - they're precocial young. They come out of the eggs, they basically literally hit the ground running. In order for them, what we're finding in in current research, and the main reason why we're experiencing these declines is because poult survival is not as good now as it was back when we were setting harvest records every year in the early 2000s.

John Burk [00:30:54] And again, there's a whole slew of reasons why, but that is the reason the decline is happening, is because of poults. Every other parameter that we look at - you know, adult survival, nesting rates, hatching rates, all of those statistics are well within the realm of normal. But poult survival is lower, significantly lower, than it used to be.

John Burk [00:31:18] And one of the things that will drive poult survival is time to first flight. And, you know, if they're getting access to enough insects to, you know, basically grow at maximum rate, they're flying in nine days. And the quicker they can get off the ground at night, the more likely they are, basically, your survival rates are going to be pretty close to what the adults are. Quicker they fly, the fewer that die.

John Burk [00:31:50] If they're not getting access to the proper amount of protein, they grow slower, and it might be two weeks before they get to fly, or later. And again, that's when they're the most vulnerable to predation, when they're stuck on the ground.

John Burk [00:32:08] And then, once you get to the fall, you know, like I said, their diets, the first two weeks to a month, they're almost entirely insect-based. And then as they get older, they're more, you know, they're going to start eating grass seed, you know, fruits, berries, nuts, various plant seeds. And that'll take them through the fall.

John Burk [00:32:34] And again, acorns are their number one preferred food during the fall. And the gobblers build up a breast sponge by eating those high-carb foods, and that's kind of their energy reserve during the breeding season when they're not doing a lot of active feeding.

And then that kidney fat that's built up for the hen, that's basically her energy reserve for when she's incubating a nest. So, those fall foods are pretty important.

John Burk [00:33:05] And then we come back to the spring again.

David Todd [00:33:10] This is helpful.

David Todd [00:33:12] And then what is the niche? What's sort of their larger ecological role?

John Burk [00:33:19] Well, like I said, they're a prey species. So, they're animals that other animals like to eat, and that's why they lay a dozen eggs and multiple times. And, you know, basically if you can have a ratio of two poults or better, that's kind of where you're experiencing a population increase. And, you know, obviously if every hen raised all 11, you'd be up to your eyeballs in turkeys.

John Burk [00:33:54] But they don't. They raise about two or less, and the rest are feeding that ecosystem.

John Burk [00:34:03] And they're insectivores. I mean, during the summer, they're insectivores. They are eating a lot of bugs.

David Todd [00:34:11] Okay.

David Todd [00:34:13] So, now I understand that there's one species of the wild turkey, but that they're these subspecies. And in Texas, I was wondering if you could help us understand the nature of the Merriam, the Rio Grande and the Eastern, what makes them distinctive?

John Burk [00:34:34] Yeah. What typically separates a subspecies is some kind of a landscape feature that prevents them from getting past it, like a mountain. So, a lot of the Merriam's subspecies is pretty much considered a mountain bird. And the Rio Grande is also an arid land bird, and Texas is probably, has always been one of the primary, you know probably where that subspecies has done the best And then the Eastern likes, you know, again, those more humid environments - you know, probably 35 inches of rainfall plus. So, kind of east Texas east is the eastern Turkey.

John Burk [00:35:28] And then the Florida bird is in the southern part of Florida. And we've done genetic research on that. And really, genetically, there's no difference between an eastern turkey and the Florida turkey. That's basically kind of a dark color phase. It's a usually a little bit smaller. The primary flight feathers look like black feathers with white stripes, rather than the other way around, like most of the other subspecies.

John Burk [00:36:06] It's a smaller bird. It's in a pretty, you know, warm environment. So, animals in warm places tend to have smaller body sizes than animals in, you know, long-term cold places. Like, you know, a 25-pound bird is not uncommon in in north Missouri and Iowa; a 25-pound bird in Florida will be very, very uncommon.

David Todd [00:36:35] All right, well, and I understand that these turkeys, you know, including, of course, all these different subspecies you mentioned, had a pretty large population and a wide range in the days before heavy settlement by humans. Can you sort of give us an idea of that kind of ground-zero count and range for the bird?

John Burk [00:37:00] Well, historical records talked about, you know, turkeys that were, you know, they were almost beyond count - some of the explorer records. And then, you know, kind of that European mentality of, you know, the land was so vast, that everything was so abundant that the attitude was that the landscape and the creatures and that everything needed to be conquered, and the supplies of everything were seen as almost inexhaustible.

John Burk [00:37:37] And we found out, you know, in the early part of the 19th century, that clearly wasn't true.

John Burk [00:37:48] You know, we basically slicked off, you know, all of the timber. We plowed the ground. We basically harvested, indiscriminately, you know, through market hunting. So, between the devastation of these habitats that were depended upon and the animals themselves, I mean, it was kind of a double whammy. So, we went from plenty to almost nothing, and put the brakes on, thankfully early enough to turn it back around.

David Todd [00:38:34] And so, these turkeys were found, I guess, from the Eastern seaboard to the Rockies. Is that a fair estimate?

John Burk [00:38:46] For the most part that would be correct. And kind of the last strongholds of the turkeys were in pretty remote areas like, here in Missouri, you know, the heart of the Ozarks because it's really, the terrain is pretty rough and there are not a lot of roads and some pretty isolated areas. So, the misconception was, is that's what turkeys needed, to do well.

John Burk [00:39:17] And basically, the reality was, is that the turkeys held on in those areas because they just weren't as easy to exploit in those really very remote areas. But, in reality, some of those areas really weren't very ideal habitat compared to, you know, once we controlled some of the unregulated harvest, some of the areas that were considered unsuitable were actually superior.

David Todd [00:39:51] That's really interesting.

David Todd [00:39:52] So, the key sort of limiting factor was probably more the hunting, rather than the particular kind of habitat.

John Burk [00:40:00] It was a combination of both. But because of the history - where those birds hung on, that was kind of well, this was the only, this was the last stronghold, so this has to be the best stuff. And it really, really wasn't the case.

John Burk [00:40:17] For Eastern turkeys, the ideal is 60% open to 40% wooded, in kind of a mosaic. And the belief was that they needed these expansive forested landscapes like the Ozarks. And you know, turkey densities in the Ozarks ... as you fall away on either extreme, like I said, 60% open, to 40% wooded is the ideal. And if you go in either direction, the densities are going to fall off.

David Todd [00:40:53] Right. Well, so I think you touched on this earlier, but maybe we can just get into a little bit more detail. I understand the wild turkey declined pretty substantially, across the U.S., during the 19th century and then into the early 20th. And the numbers I've seen, saw counts dropping to less than 50,000 in Texas by 1920, and less than, maybe less than 100 in the Piney Woods by the '40s. Do you think that's an accurate estimate of the kind of decline that was seen?

John Burk [00:41:30] I would say that that that is the case. And, again, a lot of reasons for it. And then when we tried, you know, when the department tried to restore, particularly the eastern turkey, there were challenges in that landscape.

John Burk [00:41:51] You know, it's basically 30 million acres. And that landscape with traditional land use practices - cow/calf beef production, the timber industry. The way folks typically managed their land throughout East Texas was not really user-friendly for turkeys. You know, in some other places, like where I'm at now in Missouri, a lot of land use is just by default, just happens to create and maintain some pretty good turkey habitat.

John Burk [00:42:31] Whereas, you know, in East Texas, if you weren't specifically managing for turkeys, what you were doing for managing those other things probably wasn't going to be very friendly for turkeys.

John Burk [00:42:42] So, when we were coming back and restoring turkeys, one of the challenges was finding large enough blocks of habitat of suitable habitat that would sustain at least a low-level turkey population, you know, low-density turkey population, because comparing East Texas to Missouri, which is, you know, what is my experience, the entire state of Missouri is at least suitable turkey habitat. Some places are better than others, but in the whole state, a turkey could make a living in the vast majority of it.

John Burk [00:43:23] Whereas East Texas, you've kind of got these bubbles of decent, surrounded by stuff that isn't. And the connectivity is important.

David Todd [00:43:38] Well, maybe this would be a good moment to just understand why these turkeys declined in the first place. I think you touched on this earlier, but, it certainly would be good to get, you know, a full understanding of the harvest pressures, habitat destruction. Can you just sort of run through that one more time, if you don't mind, about what might have happened in Texas that saw, maybe caused, these big falls in the turkey numbers?

John Burk [00:44:11] Yeah. And it isn't unique to Texas. I mean, it happened pretty much everywhere.

John Burk [00:44:20] Again, earlier, I said that turkeys kind of exist simultaneously at opposite ends of the successional scale. So, they need mature timber. They need that, you know, ground-level grass / forb. That's where the nesting and the breeding habitat is.

John Burk [00:44:36] What they don't like is kind of that stuff on the front end of the middle, that thickety stuff. And so, if you come in and you harvest a bunch of mature timber, which was again, that's part of their requirement and it's replaced by, you know, on the front end, when it's coming back, in grasses and forbs and briars and, you know, that's pretty good nesting and brood-rearing habitat.

John Burk [00:45:06] But it only stays that way, unless you manage it, for two or three years. And then, as it starts advancing in succession, then you get that, you know, brush and saplings, and then that turns into, you know, sapling and pole-sized timber.

John Burk [00:45:24] Turkeys do not like thick. Their number one sense of defense against predation is their eyesight. And if they can't see 50 to 100 feet, they don't want to be there.

John Burk [00:45:35] So basically, that whole landscape turned into a thicket. And that's been, basically, across the board, when some of the folks, older folks that used to quail hunt, talk about the good old days when there was quail, well, that's what happened, is a they slicked off the landscape and they made it really good for quail for a while. And then it started advancing in succession and it started turning into more, it was better for turkeys then.

John Burk [00:46:07] And that led to kind of the wives' tale about turkeys eating quail. And basically the land turned into something that was more favorable for turkeys than it was for quail. Yeah, I mean, I saw your expression: a lot of quail hunters, as they saw the quail go away and the turkey starting to explode across the landscape, they were basically accusing turkeys of eating baby quail. Kind of odd.

David Todd [00:46:42] But that was really part of, if I'm understanding you, like part of the ecological succession after timbering was done and then these, you know, young saplings and thicket species started growing up and blocking eyesight?

John Burk [00:46:56] Yes. On the front end of that time period, it was really, really good for quail. And that's why quail hunting, you know, everybody did it. There was lots of quail. And then as that landscape started to turn, it turned into stuff that quail don't like. So, the quail kind of disappeared and it started turning into more what turkeys like. So, the turkey started doing better.

David Todd [00:47:24] So, I guess that gives us a picture of the habitat changes that may have damaged the turkey count. What about this hunting pressure? I think you, you know, as I said, talked about this a little bit before, but if you could talk about subsistence and market hunting, that would be great to understand.

John Burk [00:47:48] Particularly in traditional roosting areas, you know, when folks are looking at harvesting turkeys indiscriminately year-round. I mean, it can't really sustain that kind of harvest pressure. So, you know, whether it's subsistence hunting or poaching, you know, the population can't really absorb that.

John Burk [00:48:16] And that's, I would say that that was on the very front end of the original turkey decline. We had those two things come, you know, coming together at the same time. We were destroying the turkey habitat and indiscriminately killing turkeys.

John Burk [00:48:32] But, you know, once we restored the habitat, you know, and the Lacey Act was in place, and, you know, market hunting was not allowed, and it really didn't occur. I'm not saying the poaching still isn't something that you need to be concerned about. But particularly in this day and age, current day, we have done a very good job of making wildlife, you know., worth something, you know, in dollars and cents, whether it's leased ground.

John Burk [00:49:08] You know, particularly in Texas: if you're paying a pretty good chunk of change, you have ownership in caring for that resource. And you're not going to tolerate, nobody's going to tolerate, you know, the landowners are not going to tolerate it. The folks that are leasing it aren't going to tolerate it. So, people don't get away with it like they used to. If they're doing it, they're going to eventually get caught, and the fines and the penalties create a pretty good disincentive for doing that. So, it still happens. But I don't think it's, you know, back when turkeys initially made their big decline and almost went away for good, people

didn't consider it wrong. They had a mentality that that resource was inexhaustible. So, they exhausted it.

David Todd [00:50:21] Well, do you think that some of this hunting pressure, and the difficulty of squashing it and limiting it, was due to this sort of free-range idea in East Texas and other parts of Texas.

John Burk [00:50:40] I guess I don't know exactly where you're going with that one.

David Todd [00:50:44] Well, my understanding is that parts of Texas, particularly in the eastern part of the state, were slow to enforce limits on private property boundaries, and there was a presumption that you could you could use your neighbors' land. And I was curious if that's part of the issue with folks having this custom of being able to hunt, wherever they might like, despite what the other lessees and landowners might prefer.

John Burk [00:51:23] Like I said, historically, that may have been a challenge. But, you know, particularly in this current day and age, that would absolutely not be tolerated, and Texas would probably be one of the places on Earth that would be the least tolerated.

David Todd [00:51:39] Okay. So, something else I love your views on: I gather, you know, following some of those terrible Midwestern forest fires, you know, 120 years ago, 130 years ago, we got into the tradition of suppressing fire. And I'm wondering if that kind of lack of wildfire or prescribed burns would have been tough for turkey habitat.

John Burk [00:52:12] Absolutely. I mean, that would be probably one of the primary things in the current day and age, turkey range-wide, regardless of what subspecies you're talking about, to me, that's one of the more significant limiting factors. Because, if you're keeping fire off the landscape, you are basically preventing high-quality brood-rearing habitat from being created and maintained.

John Burk [00:52:39] High-quality early brood range is the secret sauce. And that is year-round disturbance. So where that early bird range is, for instance, like right now, we're getting right at the outside end of the window of good, you know, dormant-season burning. So, from like December until now, is when we want to get that fire on the landscape and the poults that are going to be hatched off this year, that's where the brood range is.

John Burk [00:53:14] And the stuff that is adjacent to that stand, that might have been burned the year prior, or two years prior to that, that's where mom's nesting. So, you want those two things as close together as possible because, based on more research from Chamberlain, is that they've discovered that if a hen ... the hen knows where the good stuff is, and she may or may not have nested close to it. But, if her journey to that brood-rearing habitat is 800 yards or more, her poults are not going to survive that journey.

John Burk [00:53:56] So, you want the brood-rearing habitat to be as close to the nesting habit as possible. And that's why it's a really good idea from a land management perspective, to manage your property in a mosaic of burns, where you're burning patches of it at different times of the year, every year.

John Burk [00:54:18] So, absolutely. I mean lack of burning is going to allow those stands to thicken up. And again turkeys don't like thick.

John Burk [00:54:28] Another challenge that we have on the landscape that, in many cases, prescribed burn helps us with, is invasive species. We've got a lot of plants out there that don't belong out there. And in some cases, fire doesn't set it back. But, in many cases it does.

John Burk [00:54:46] So it's just, you know, fire is just a really an affordable, effective tool to help manage turkeys. And I would make the bold statement that if you are not using prescribed fire, you are not managing turkeys effectively.

David Todd [00:55:06] Good to know. Thank you.

David Todd [00:55:09] So, it sounds like there was this decline in many parts of the country and including Texas in turkey numbers. But, then there were these remnant flocks, sort of strongholds of them, in various locations. I think you mentioned the case of the Ozarks as being one instance. And I guess there were places in South Texas as well. What do you think those areas had in common? I think you mentioned part of it - just difficult access. Is that right?

John Burk [00:55:46] Yeah. Well, in many cases, most cases, those were just very large, inaccessible places where that overharvest aspect wasn't occurring. You know, because I said, if the general mindset of that community is that these things are inexhaustible and I'm not doing any harm. And, you know, basically, turkeys are getting shot at any time they're spotted. You know, like I said, they can't sustain that kind of harvest pressure. And that's kind of what was going on back at that time.

John Burk [00:56:22] So, these large lands, these large areas on the landscape that didn't have a lot of human hunting pressure, that's where they were able to hang on.

David Todd [00:56:34] And what do you think would be some of the sort of refuge areas that turkeys had in Texas, for instance?

John Burk [00:56:48] Obviously, places like the King Ranch that are, you know, over 800,000 acres and, you know, access is pretty limited. There again, you know, you can fall through the cracks if you're on 800,000 acres, and there's only a handful of folks trying to chase you.

David Todd [00:57:14] Okay.

David Todd [00:57:16] So, it sounds like, you know, one of the big tools for restoring turkeys was to try to balance the population of turkeys with the kind of hunting pressure that they were getting. And, I think I read that some of the first steps to protecting turkeys began in 1903, I think, is what I read, with limits on trapping. And then bag limits followed in about 1919. Are you familiar with some of those early steps to try to manage seasons and hunting pressures?

John Burk [00:57:56] I'm not. I don't have it, you know, chapter and verse. But obviously, there was baby steps into, you know, changing that mentality from "it's an inexhaustible supply", "take as many as you want", to having any kind of restriction whatsoever. And obviously, at the time, there really wasn't any science to back up, you know, where the line should be drawn to even be effective.

John Burk [00:58:25] So, I think it was more along the lines of trying to start the process somewhere, because enough folks were realizing that there was a problem and that these things weren't inexhaustible.

David Todd [00:58:41] And why do you think the first step was trying to limit trapping? Why do you think that would have been the case?

John Burk [00:58:50] Well, obviously, whether it's trapping turkeys or using punt guns with ducks, I mean, you're removing bunches of them with one event. Whereas, when you're harvesting them with shotguns or whatnot, it's one bird at a time. So, you know, that would be, pretty obvious step. If you think you're overharvesting, then it's probably a bad thing to take 200 out at a time.

David Todd [00:59:22] I see, and so these traps could capture many turkeys in one fell swoop.

John Burk [00:59:30] Well, they were definitely taking more than you could with an individual shooting with a gun.

David Todd [00:59:38] Okay.

David Todd [00:59:40] So, I think at one point in the 40s, you know, the state of Texas closed, as I understand it, the hunting season entirely for wild turkey. Was that because the experimenting in the previous four decades was just not successful, and so they figured, "Well, we're just going to shut it down entirely"?

John Burk [01:00:06] Again. I'm not super versed on, those histories. And again, it's been 20 years since I've been in Texas, so I would say that that's probably, like I said, once you set the thing in motion. And it was probably, you know, having the right players in place to even pull something like that off, as far as politically.

David Todd [01:00:36] Well, you know, that was something I wanted to segue into was, this sort of political dynamic and the willingness of counties, and state and county judges, and local sheriffs and marshals, their willingness or ability to enforce these laws that were coming down from the state. Are you familiar with sort of the political angle on trying to make these rules stick?

John Burk [01:01:13] To a degree. And again, we still deal with some of that to this day where, you know, if you if you've got a prosecuting attorney in a certain area, and a judge in a certain area, you know, they are kind of like little kingdoms. And if they decide that that's not something that that's important or, you know, their buddies are in the middle of half of it and, you know, that's just kind of how the cookie crumbles, unfortunately.

David Todd [01:01:46] Okay.

David Todd [01:01:47] So, you know, it sounds like the hunting regulation piece was part of the strategy for protecting and restoring turkeys. But I understand that translocating birds was another effort to build back these turkey populations. And I think, if I'm not mistaken, this started in Texas around 1924. Can you sort of wind back the clock and teach us about how translocation began in Texas?

John Burk [01:02:25] Yeah. Initially, I mean, and just about everything has been tried almost everywhere. The first attempt at trying to restore turkey populations was with pen-reared stock. And there was actually turkey pens, you know, up at the Tyler office, you know, for decades where they were trying to grow turkeys, you know, domesticated turkeys. And it was, you know, it was done across the board just because the logistics were easier. It's easier to raise turkeys in a pen and turn them loose than it is to try to go out there and catch them and move them around.

John Burk [01:03:06] And that, you know, at the time, that wasn't really even considered because the gear wasn't invented yet to make that possible.

John Burk [01:03:16] So, the reason that the domesticated, pen-reared stuff doesn't work is because, genetically, that bird is not a wild turkey, for one. And two, even if you take a wild turkey, if you took a wild turkey's egg from a nest, incubated it, and then reared it up to flight, that's no longer a wild turkey because it's about probably 50% genetics and 50% learned behavior. In other words, a wild hen has to teach her poults, how to respond to danger and everything. And that's something that you can't artificially reproduce.

John Burk [01:04:05] So, even wild turkeys raised in captivity, genetically wild turkeys raised in captivity, would probably live about two weeks in the wild if they were released, because they, you know, they've got the goods, they just don't know what to do with it.

John Burk [01:04:20] And from domesticated programs, they went to capturing wild turkeys and moving them around. And that was perfected or improved dramatically. They were using like walk-in box type traps, which would catch just not very many turkeys at a time. So that wasn't very effective.

John Burk [01:04:55] And then they basically modified rocket-netting equipment that was used in waterfowl-banding projects. And that's when turkey restoration kind of took off. They went from cannon nets to rocket nets, and they were catching.

John Burk [01:05:12] And Rio Grandes and Merriams will walk under a drop net and you can catch, you know, in some cases, hundreds at a time. Eastern turkeys are wound a little bit tighter than that. They will not walk under. You know, the drop net does not work on Easterns, because they're too paranoid. They won't go under the net.

John Burk [01:05:36] And that's why, you know, when we started doing restoration, through Target 2000 with the Turkey Federation, you know, basically that was a replacement rate cost. And that is one of the reasons why Eastern turkeys cost $500, and Rio Grande and Merriams cost, you know, 150, because the cost in catching them was less.

John Burk [01:06:01] And then, you know, in Texas, once that capturing technique was perfected because we had a lot of Rio Grandes, we were catching Rio Grandes and moving them into East Texas. And the reason that that didn't really work is because, again, the behavior of a Rio Grande turkey is that hen is going to try to find the best available nesting habitat at the nesting season, and that, throughout their range, is typically going to be in riparian areas because everything else is still dry and hasn't greened up yet and isn't providing the right cover. 99 out of 100 times, she'll get away with that, where Rio Grande range is.

John Burk [01:06:56] When she exhibits that behavior in East Texas, 75 out of 100 times, she's going to lose her nest to flooding. And that's typically why, the primary reason why, Rio Grande stock doesn't work in those areas that get more than 35 inches of annual rainfall is because they're getting, the nests are getting, directly affected by flooding. And Eastern turkeys tend to nest in upland sites where that usually doesn't happen.

David Todd [01:07:30] That's a great insight. That makes a lot of sense, now that you explain it.

David Todd [01:07:35] So, I just wanted to go back to maybe the starting point of this translocation idea. And I think you said that originally they were using pen-reared birds, domestic birds, and that there was a drawback in that, you know, half of the suitability for a wild turkey was genetic, but half was really learned behavior. And I was hoping that you could say to us, what is it that a hen teaches her poults that is so critical to their survival, that isn't hard-wired for them?

John Burk [01:08:13] Well, there's, you know, she's giving them little cues in what danger, you know, if there's a hawk flies over and she gives an alarm putt or something, you know, whatever, they're just taught what danger is and how to respond to it. And, you know, if you're not getting those cues, you don't know danger's there until it's too late.

David Todd [01:08:41] And do you know how she might be communicating these lessons to a young poult?

John Burk [01:08:50] Well, she's primarily, you know, communicating with them, you know? Well, like I said, if she if she gives an alarm putt, you know, they're just kind of hard-wired to scoot and hide. And then she'll, you know, give it another audible cue when the coast is clear and they'll all reassemble.

John Burk [01:09:16] And then, you know, in the process of it, if she's identified the danger, the poults scurry and hide, then she tries to take whatever that danger is away from where they're at.

David Todd [01:09:29] So, is it also the case that the hen that's not domesticated, but that's a wild bird, will have this sort of diversionary tactic, you know, where she'll lay a wing down or something to distract?

John Burk [01:09:48] Oh yeah. They'll do the broken wing, like most birds will, to try to lead that predator away from where her brood is scattered and hidden. Because, you know, in the case of something like a fox or a coyote or something that's hunting with its nose, if she can't get them away from that site pretty quickly, they're going to find them all, because they they're not hunting with their eyes or their ears, they're hunting with their nose.

David Todd [01:10:22] Well, so it sounds like part of the problem for these young poults is, you know, the predator impact. And, I think you mentioned earlier that some frustrated turkey fans had proposed that bounties be produced for raccoons and maybe other fur-bearing animals. And, I guess that's an effort to try to tamp down the predatory impact on these birds. Is that right?

John Burk [01:11:00] Yeah. I mean, at a glance, it makes sense. But if you really dig into it, it makes no sense. Obviously predators eat prey. They always have. They always will.

John Burk [01:11:17] Whether it's a bounty program or however else you want to incentivize it, it's really, you know, to balance, quote unquote, balance predator species at a landscape scale, which is the only way you can effectively impact prey species, it just isn't practical.

John Burk [01:11:43] You know, there's actually legislation right now in Iowa proposing that the state create a $5 bounty on raccoon tails. And when the fur market was rocking and rolling, and it's been a while since that's been, we saw a spike in furbearer harvest when the average pelt price was $15 or better. So, obviously a $5 bounty is a ways off from $15.

John Burk [01:12:19] So, if you're paying a $5 bounty on a raccoon tail, basically you're paying probably, in most cases, for a raccoon that was already dead. In other words, somebody is going to cut the tail off of roadkill, or you're going to be basically providing, rather than incentivizing more trappers to trap, you're going to be giving a bonus payment for the ones that didn't need the bounty in the first place to get them to trap.

John Burk [01:12:48] And, you know, for a bounty to effectively control or balance predator populations in the current day, it would have to essentially replace the fur market. And there isn't a state agency in the country that could afford it, because it would cost millions.

John Burk [01:13:12] The best way to effectively manage prey species is to create habitat that gives them more places to stay undetected. So, with turkeys you want to focus on nesting and brood-rearing habitat. You're going to get a lot more bang for your buck managing for it than, you know, putting out a bunch of dog-proof traps to try to catch raccoons.

David Todd [01:13:38] I think that when you're talking about the dilemma about turkey numbers, you were saying it's kind of a production problem, and that it seemed like poult survival was not good. And I wonder if that nine-day window between when they're first hatched and when they need to fly is influenced by how many insects are out there. And, you know, I've read about insect crashes in certain parts of the world, and do you think that that's related to the problem for turkey?

John Burk [01:14:14] I absolutely think it it is. And I think there's more and more information coming to light to indicate that that is probably a significant problem. I mean, when was the last time you had to pull off the side of the road at a gas station and wipe your windshield off because it was, you know, full of bug juice? I can't remember the last time. But I do remember doing that back in the day when we were setting harvest records every year.

John Burk [01:14:41] Insects are the fuel, and, you know, turkeys are the bird in decline that turkey hunters are very concerned about, for obvious reasons. But, turkeys are not the only birds in decline. And all baby birds eat insects. And there's a lot of adult birds that eat insects. And those birds are also in decline - you know, nighthawks, whip-poor-wills - these are birds that eat bugs as adults. And their numbers are down.

John Burk [01:15:15] And some of the things that could be driving that. One, I think the 800-pound gorilla in the room is neonicotinoid, broad-spectrum pesticides that are, basically it's a seed coating that, you know, it came in use in the United States in the 1990s.

John Burk [01:15:38] And now virtually almost every seed that goes into the ground for commercial crop planting is treated with it. And even a lot of the plants that you would get,

you know, potted plants that you'd get to put in your vegetable garden, you know, unless you look at whether it's ... most of those plants have been treated because it's effective.

John Burk [01:16:02] Basically, any insect that feeds on a plant that's treated with that, or nectars on it, is going to be negatively affected.

John Burk [01:16:12] And, you know, a lot of beekeepers are concerned about that, because it's a neurotoxin, that the bees can't figure out how to get back to the hive.

David Todd [01:16:29] They have a hard time navigating their way?

John Burk [01:16:32] Yeah. There's a lot of, you know, the one that comes to top of mind that everybody seems very concerned about, in the last several years, is the monarch butterfly. Well, you know, monarch butterflies migrate all the way across the continent.

David Todd [01:16:56] Yeah. So, I guess with those kind of distances, you really have to have your head screwed on right to make the route successfully.

John Burk [01:17:05] And multiple generations, you know, on top of that to get, you know, from summer to fall, you're talking about multiple generations that are in a migratory pattern, you know, to get there.

John Burk [01:17:23] So, you know, is that part of the problem? I think it probably is.

John Burk [01:17:29] But definitely insect densities are part of the issue. And again, that's one of the ways you can improve it is, is to manage for that early brood-rearing habitat. You know, that first successional stage is going to have, particularly if it's native vegetation, it's going to have a higher number and a higher variety of insects.

David Todd [01:17:54] So, we talked a little bit about, the poults. Let's talk a little bit about the hens and the gobblers. It sounds like, in recent years, there's become this interesting trading system among the states where, you know, if there're birds that are common or there are surplus birds in one place, they can be captured and then moved to another state. And, I was wondering how that whole sort of barter system developed over the years. It seems like it's been a key thing for the translocation effort.

John Burk [01:18:33] Right. I mean, the initial concern when, you know, out-of-state turkey transfers were considered was violating the Lacey Act because it was, you know, you were basically, you know, you couldn't buy wildlife from another state. So, you know, if one state had a species that they were trying to restore and another state had also, and they had, you know, like Missouri had turkeys, but didn't have grouse. So, they were trading Wisconsin rough grouse for turkeys.

John Burk [01:19:14] There was three-way trades, I think, with, if I remember right, Virginia, Louisiana and Texas with otters. So, the first step in basically interstate trap / transfer operations was for one state to trade another state for a, you know, basically swapping species that each state needed for their restoration efforts.

John Burk [01:19:43] But the challenge in East Texas was that we didn't have anything that an Eastern turkey state needed in trade. And, you know, we weren't the only state in that

situation, but we were the state that had the biggest void of suitable turkey habitat with no turkeys.

John Burk [01:20:05] So, the solution that was arrived at, that the National Turkey Federation helped broker, was this Target 2000 program where we weren't buying turkeys for $500 apiece, we were basically, the state agency leaderships got together and crunched some numbers and said, "Okay, it costs, on average, $500 a bird to transfer an Eastern turkey. It costs about $150 a bird in agency costs to catch and move a Rio Grande or a Merriam's turkey.

John Burk [01:20:50] So, those agreements were penned for that program and then that's what initiated that program.

John Burk [01:20:59] And a lot of the initial broodstock for East Texas came out of Iowa. Iowa had a lot of surplus turkeys. And then you know what Iowa was wanting: it probably has some of the fewest public land acres in the country. So, what they were doing was they were taking those turkey trade dollars and putting them in an account that they NWTF held, and then they were using those dollars, to help buy public land. And, over the years, I think that they've bought over 20,000 acres of public land in Iowa, available for the public to use.

David Todd [01:21:49] And so, if I'm following this right, the first step was identifying how much it cost to capture a turkey and translocate it. And, that money, per bird, was put into some kind of escrow account that the Wild Turkey Federation held, and then another state would be able to draw on that fund, in order to...

John Burk [01:22:15] The state that. ... Yeah, the state that provided the turkeys would have a subaccount that they could draw off of. So, if Iowa sent Texas, you know, a thousand birds, that money would go into an account earmarked for Iowa, and then Iowa would draw off of that account. And like I said, the primary way Iowa used it was to purchase public land.

David Todd [01:22:38] I see, and because, money wasn't being transferred directly from one state to another, you didn't have a Lacey Act violation of essentially buying birds to go across state lines.

John Burk [01:22:49] Well, you weren't purchasing turkeys. You were basically paying a reimbursement cost. You know, basically consider it, you know, you were contracting with the Iowa DNR to catch our turkeys for us. So, really you weren't buying the turkey, you were paying that contractor the cost of catching that turkey and getting it to you.

David Todd [01:23:14] I see. Okay, so nobody's making any money on this. It was essentially paying for the capture costs and reimbursing.

John Burk [01:23:23] That's how they sold it across the board. It was more or less, now, I'm not saying that, you know, in some cases, if you have a, you know, if you have a really significant weather event and you've already got a really dense turkey population, you know, that year it probably didn't cost you $500. But like I said, they looked at a span of years. And that's what the average came up to. It's like, on average, it cost us this much to catch turkeys. So, some years you might be above that average. Some years you might be below that average. But that was the arrangement.

David Todd [01:24:03] Okay.

David Todd [01:24:04] Well, and I gather these translocation efforts were limited by being able to find big enough parcels of suitable habitat in the release areas. And, I gather in East Texas, some of the biggest landowners were these timber operators - you know, Temple Inland, Champion International, Kirby Forest Products, Louisiana Pacific and so on. Do you have any experience of working with these woodlot owners and trying to make, you know, good turkey habitat?

John Burk [01:24:47] The answer is yes. We worked with all of the, basically anybody, whether it was a timber company or, you know, just a large landowner. My job when I first came to the East Texas for TPW was to kind of do an assessment, and actually look at, you know, where the suitable stuff was because, you know, at the time we were we were using a block-stocking technique to where we would put five gobblers to 15 hens, in essentially a 5000-acre area that was considered suitable. So, I would go out and evaluate blocks of these 5000-acre chunks of land.

John Burk [01:25:40] And again, and there wasn't any place probably on the landscape that I would consider excellent turkey habitat. But so, my job was kind of to figure out, you know, where is the suitable stuff. And that's, you know, we were drawing circles on a map. And, you know, you know, the bullseye here is a release site. And usually that release site was going to be some larger landowner that would ...

John Burk [01:26:07] You know, obviously the seasons were closed. But, in addition to that, you know, we had somebody, you know, a fairly large landowner that was going to, you know. There wasn't going to be a whole lot of illegal harvest happening either. You know, the landowner was going to be protective of the birds.

John Burk [01:26:28] So, that's kind of how, you know, across the board, some counties had, you know, you could probably almost put circle touching circle throughout the majority of county, and some counties just had, you know, couple or three spots. You know, the theory behind block-stocking is that over a five-year period, you know, these circles are going to, you're going to get movement across the landscape in the spring every year as these populations. You know, it's pretty typical for juvenile birds to make big moves to find their own new home ranges.

John Burk [01:27:05] And, you know, in over a five-year period, the theory was that, you know, the majority of the county, or at least the portion of the county where these release sites were happening, would kind of coalesce and fill the landscape completely in that area.

John Burk [01:27:22] Whether that happened ... and there was obviously a lot of change over time. You know, I actually went back probably halfway through my tenure to reevaluate some of the original release sites because, you know, success was obviously variable. And in a lot of the places that I went back to and reevaluated, were no longer suitable.

John Burk [01:27:48] So, that was part of the problem. We kind of morphed from this block-stocking technique to now they're doing what's called a super-stocking, or you know, they're throwing 80, 100 birds at it, you know, a couple years in a row. And essentially that's, you know, the state is stocking those birds to carrying capacity and counting on them to hold on from there because, you know, five and 15 is is probably good enough if you're putting them in real good stuff.

John Burk [01:28:21] But, if you need two or three years before you hit a decent year, you might be out of turkeys by then.

David Todd [01:28:30] I see. So, you've got to sort of anticipate that the habitat is going to change, and it may limit the ability of these turkeys to survive for that five-year period.

John Burk [01:28:44] I think that the state has come to the realization, probably more so, that, you know, we don't have 30 million acres of Eastern turkey habitat in East Texas. We've got, you know, we're trying to find blocks of 20 to 30 to 50,000-acre chunks where we think we can sustain a population. And that's, you know, it's not East Texas wide. It's going to be large enough pieces where, we've at least got a collection of landowners that are willing or able to do the work.

John Burk [01:29:24] Because, again, I think the Cottingham area, you know, just south of Nacogdoches - that area, I think the soil types are a little different there. It's red sand. And I think that. I think the soil types there, they just don't brush up like it does elsewhere because there's been, you know, even back, you know, since I was there, there's been a kind of a hold on population there and a fairly decent number of birds, you know, in that area of East Texas that just has always done pretty well.

John Burk [01:30:10] And it's, you know, it is a timber company. I think it used to be a Champion International owned property. And there is some management going on there. But again, I think the soil types there, the management effort doesn't have to be as aggressive to keep it in that suitable nesting brood-rearing stage. And I think that's why the birds just, they're just doing, have always done fairly well there.

John Burk [01:30:40] Whereas in other parts of East Texas, you have to have a pretty aggressive ongoing effort to create and maintain what they need.

John Burk [01:30:51] I see. So, here's another question about translocation that I'm curious about; it'd be good to get your advice on. It sounds like where these birds are being released, there are some overlap areas where there's hybridization happening, between Rio Grandes and Eastern and maybe between Merriam's and Rio Grandes. Do you see that as a big issue or not really a point of concern?

John Burk [01:31:22] I guess I would probably fall into the latter camp. I mean, there's a lot of debate going on, on whether you get hybrid vigor or, you know, it's kind of a boom and bust thing. I think by and large, a turkey's a turkey's a turkey. And, you know, particularly in Texas and Kansas and Nebraska and a lot of other places where, you know, Eastern and Rio Grandes have historically been thrown on the landscape, I don't, I would, I think if we did genetic testing on Kansas and Nebraska birds, we would find that there are all Heinz-57s.

John Burk [01:32:02] And, those populations are, I think turkeys are going to do well where you've got good turkey habitat. But whether it's an Eastern or a Rio or something in between, I don't think most hunters probably care.

John Burk [01:32:21] And my advice to most hunters is that, you know, if you've harvested the bird in an area that you would expect to be a Rio, and it looks like a Rio, call it a Rio. But I've personally harvested birds in Kansas multiple times, you know, where Kansas used to have a two-bird limit. And on the same farm, I've harvested turkeys. In one case, they were standing next to each other. One was a dead ringer for an Eastern. One was a dead ringer for a

Rio Grande. You know, it's just phenotypically, this one looks like an Eastern. So, that's what I'm going to call it.

David Todd [01:33:04] So, I guess some of this is just an appearance issue.

John Burk [01:33:08] Yeah. I mean, if feather coloration is what typically distinguishes one from the other, you know, the Rio Grandes and the Merriams will also kind of have a thinner beard. But, you know, most folks are looking at the tail coverts to distinguish one from another. And there's so much variation.

John Burk [01:33:30] Actually when I was in Texas working for TPW, we had an appreciation hunt on the King Ranch for a lot of the other states that helped supply turkeys to the restoration program in East Texas. And I harvested a turkey with a bow and arrow that, you know, the guy from South Carolina said, "Well, that's an Eastern, because it was a dead ringer. I mean, it looked and this was in the heart of the King Ranch in South Texas. There's never been an Eastern turkey anywhere near that place, but that individual bird looked like an Eastern turkey.

David Todd [01:34:16] Okay.

David Todd [01:34:18] So, here's another, maybe the last question about these translocation efforts. It sounds like the state of Texas and other states have been active in trying to transfer animals from one area to another to try to restock. And, you know, there are examples like whitetail deer going back decades, and then more recent efforts with bighorned sheep and with pronghorn antelopes. Do you think that the experience with wild turkeys and translocating them has much to do with these other efforts with other species, or are they very distinct?

John Burk [01:34:59] I think that probably the logistics and administrative parts of the equation, that are important parts of the equation, the experiences with turkeys probably helped the process with some of those others. As far as the mechanics of actually doing the restoration, you know, you're using different, different tactics because these are different animals. But I think, you know, like I said that in many cases, the administrative logistics are just as much of a gymnastics routine that can create obstacles as the physical capturing of the animal itself.

David Todd [01:35:47] And I guess what you're talking about there is just the negotiation with other states for, you know, release sites and capture sites and...

John Burk [01:35:56] Transporting them. And, I mean, that was kind of one of the bigger challenges was when you're trying to move a turkey from South Dakota to East Texas. I mean, that's not a small task.

David Todd [01:36:13] GIve us an example of how one of these long range transports might happen for a wild turkey.

John Burk [01:36:20] It varied, I mean, depending upon which state we were working with. I mean, the Missouri Department of Conservation had their own pilots and planes, and they were basically modifying transport boxes to get them to all fit in the space they had available on the plane. But that was obviously the most logistically favorable because it took the least amount of time.

John Burk [01:36:47] But then there were others probably. In Iowa, they were being transported by truck, truck and trailer. So, there would be, it was a highly coordinated event with multiple people. I mean, Iowa, on their end, had to get all of the turkeys, because they basically were capturing turkeys at multiple locations across the state. And then, at the end of each day, there was a coordinator that all of the trappers would get with, and so that all the turkeys had to be moved to a certain place at a certain time. And then they would have somebody else that would load the trailer and get them heading in a direction. And then they would be coordinating with me, and then I would be, you know, setting up when and where we were going to meet them at some truck stop somewhere so that, you know, they weren't driving all the way down and we weren't going all the way up there to get them.

John Burk [01:37:49] But, you know, like I said, there was lots of moving parts.

David Todd [01:37:54] I bet. And with a funny kind of passengers.

David Todd [01:38:02] So, let's talk about just some of the challenges with doing restoration. I think that one place to start might be at maybe the outset of your career. And, I know that you did some of your master's research with some of these streamside zones, the riparian corridors, that would be necessary to protect a turkey population, you know, if there was a lot of kind of contrary land use, around that stream. Can you talk about how that fits into that, what part of the puzzle that might be?

John Burk [01:38:41] Yeah. I mean, from a research perspective, I mean, the timber company, Weyerhauser Timber Company was interested in that information for, you know, they own land primarily to feed mills. You know, they're growing pine trees for paper and telephone poles and various other forest products.

John Burk [01:39:06] But, at the same time, they're, particularly in the South, they're leasing most of that ground to hunting groups. So, they want to be as wildlife-friendly as they can be. It makes them look good as a company when they can say that some of their management practices are wildlife-friendly.

John Burk [01:39:30] But, you know, from a dollar perspective, obviously, if some of their management practices have eliminated turkeys, they can't charge for a turkey lease if they've got no turkeys.

John Burk [01:39:49] So, they were interested in knowing, okay, when we come in and we do some of these conversions, how much do we have to leave along the creek? Because they recognized that those streamside management zones, you know, those hardwood stringers along creeks, were probably pretty important to turkeys. And they obviously were. They were providing roost sites. They were providing limited sources of mast, and travel corridors, you know, through the landscape.

John Burk [01:40:21] So, they said, "Well, how much can we harvest?" Because, you know, the limited hardwood timber that they had on some of those properties, they were also, they had a value, a market value - bleach particleboard for, you know, six-pack holders and that kind of thing. That was the product that they're producing at the time. So, they wanted to know how much of this stuff can we take out of here and still be of any use to turkeys.

John Burk [01:40:57] And that was kind of the, it was the purpose of my master's research was to look at different measurements, to see, you know, how wide do they have to be to still be good for turkeys?

David Todd [01:41:11] That's interesting - the sort of trade-off between hardwoods and turkeys or, you know, six-pack holder and gallinaceous birds. That's apples and oranges: a difficult trade-off to make.

David Todd [01:41:28] Well, interesting.

John Burk [01:41:30] So, something else that I think would be interesting to hear your attitude about, and it kind of relates to the same sort of streamside issue. And that's, there have been a number of dams that have been constructed across East Texas, and I'm wondering if inundating some of those same bottom lands would have had an impact on wild turkeys and the ability to restore them to East Texas?

John Burk [01:42:00] Well, absolutely. I mean, and that's, you know, we're dealing with that here in Missouri as well. I mean, a lot of the reservoirs that are, either they're water supply reservoirs or primarily recreational, you know, when you inundate several hundred or several thousand acres that used to be hardwood timber, I mean, that's obviously no longer usable space for a turkey. So, the more of them you have, the less of that kind of habitat you have, and that that can be negative.

John Burk [01:42:33] Now, on the flip side of that, we've got examples of where, you know, you've got CORPS land that will be along the perimeter, you know, at the high -pool zone, that ends up being public hunting land and in some cases it's managed. So, you know, in some cases, there might actually be a net positive because, you know, if you had a certain amount of acres that was unmanaged prior to that reservoir going in, and now at least a percentage of that, the public land that might be associated with that reservoir, is managed. You know, it might actually be better than it was.

David Todd [01:43:24] That's helpful. That's good to know.

David Todd [01:43:26] So, I think that you've talked several times about how important habitat management is for wild turkey, and I'm wondering if you could sort of give us some insight about grazing practices, the kind of pasture grasses that are typical nowadays, and, you know, what sort of effect that can have on wild turkey suitability.

John Burk [01:43:53] Yeah. Any kind of management decisions you make, including no management at all, is going to positively impact something and negatively impact something else. And East Texas, unfortunately, and we're dealing with the same thing here in the state I live in, in Missouri, you know, down in Texas, it's coastal Bermuda and Bahia. Up where I'm at, it's tall fescue. These are cool-season, sod-forming grasses that can take a lot of grazing pressure. And that's why they're planted.

John Burk [01:44:30] But whether you're talking about East Texas or Missouri, you can pretty much put a big X on a graph: as the acreage of that goes up, you know, a lot of those, a lot of the critters that liked, you know, native grasses, they're going down.

John Burk [01:44:48] So, yes, typically. You know, when you get into the Rio Grande country, you know, with some exceptions, you're pretty much managing native grasses because, you

know, the rainfall levels and the soil types, you really don't, there really isn't a non-native replacement.

John Burk [01:45:14] So, you know, and that's why a lot of those south and central Texas ranches are so large because, you know, to effectively graze cattle, you know, you're talking probably about an animal unit per six acres, whereas, you know, when you're using cool-season grasses, you can pretty much run them at a cow to the acre. And that's why people do it.

John Burk [01:45:37] But, those sod-forming grasses, you know, when a turkey poult's stepping straight out of the egg, it's not good at thermal regulating. And it's kind of clumsy that first few days. So, if you're talking about a thick stand of coastal Bermuda, they can't get through it. And even if they tried, particularly early in the morning when it's all dewy, you know, they can die of exposure when it's 70 degrees outside if they're wet in the morning.

John Burk [01:46:13] You know, native stands of grasses tend to be clump-type grasses. And the patches between the clumps are bare ground and usually have some forbs. So, you know, that's just creates a better environment for turkey poults, particularly, like I said, those first two weeks.

John Burk [01:46:37] And from a quail perspective, a quail needs that 365 days out of the year. Basically, a bobwhite quail is a turkey poult that never grows up. So, a poult needs it for two weeks. A quail needs it for 365 days.

David Todd [01:46:56] Okay.

David Todd [01:46:59] So, something else I think would be interesting to hear. I think you talk about the difficulties with Rio Grande wild turkey's in high-rainfall zones, and they get flooded out and they lose their poults. Do you see, a similar problem in areas that typically don't get much rain and as climate change proceeds, you get these more intense droughts and hotter temperatures that, you know, turkeys in the western part of Texas, or the southern part of Texas, are having a harder time getting established.

John Burk [01:47:41] Well, again, it's not the poults. You're actually, when you have Rio Grandes trying to nest in East Texas, it's basically the hen is sitting on a nest in a riparian corridor where you're getting flash flooding. And, you know, she's actually, the nest is getting wiped out.

John Burk [01:48:01] Whereas that typically doesn't happen because it's so dry in, you know, Rio Grande country.

John Burk [01:48:10] But I guess to answer the back part of your question. Yes. I mean, as we get these dramatic, periods, I mean, with Rio Grande turkeys, you usually can count on at least one good year in five where you're going to get, you know, and that's the joke with, you know, basically Rio Grandes is "Instant turkey, just add water". So, when we get real, you know, a lot of hurricanes and, you know, we get a lot of rain, and we got a lot of good nesting and brood-rearing habitat, you know, turkeys just explode.

John Burk [01:48:45] But then, you know, if you have two, three, four, five years in a row where it's really droughty, they're in survival mode. And, in many cases, those turkeys aren't

even trying to reproduce, because the conditions aren't good enough to even allow the reproductive process to occur.

David Todd [01:49:08] Okay. That helps me understand. So it just puts a real crimp on their ability to reproduce when you get these really dry spells.

David Todd [01:49:16] Yeah. I mean, if you're talking about, you know, turkeys, whether, you know, turkeys in general, regardless of subspecies, your population turns over every three years. In other words, you know, the mortality rate on hens is about 40% annually. And that's just normal.

John Burk [01:49:36] So, if you're losing a little less than half of your hens every year, by year three, if you don't have a decent hatch, you're out of turkeys. And that's why, you know, the production is so critical. If you've got a couple of good years in a row, it seems like there's a turkey under every tree. If you have two or three bad years in a row, it seems like they disappeared, because they did.

John Burk [01:50:04] So, I was hoping that you could help us understand another upland bird, which, seems to, have some of the same gallinaceous traits as the wild turkey. And that's the quail, which I guess has been suffering its own challenges. And I'm wondering if the problems with the quail are very different from the wild turkey, or do you see some overlap for the two species.

John Burk [01:50:32] There's definitely a lot of overlap, but there's also some things that separate them. Quail typically like more of a grassland system - you know, probably 50% brush to 50% grasses is what the quail, bobwhite quail, thrive in. And they don't need any trees. So, you know, if you're managing, you know, savanna-type habitat, you know, where you have very few trees per acre or even grasslands better yet, that's what a quail wants.

John Burk [01:51:01] You know, a turkey really prefers a more forested landscape. So, they can do well, they will use grasslands, large grassland areas and savannas. But the turkeys are typically going to be where that transitions into whatever the adjacent habitat type is. You're not going to have a turkey way out in the middle of a grassland, but you will have quail out there. And you're not going to have a turkey way out in the middle of a savanna, but you will have quail there.

John Burk [01:51:32] The other thing that kind of separates them is that the home range of a turkey is 5000 acres. That's eight square miles. I mean, that's a lot of ground. So turkey is a lot more mobile than a quail is. You know, you can manage quail on 100 acres. You know, it's just a much, you know, they're kind of homebodies. And that's, you know, that's why you can kind of make or break yourself on how you manage individual properties for quail, probably moreso than, you know, turkeys.

John Burk [01:52:03] If you're got 100 acres and you could manage that 100 acres as good as it could be managed for turkeys, but if the 5000 acres around that 100 acres is not very good for turkeys, you're not going to get very good results.

John Burk [01:52:18] And the flip side of that is true as well. If you've got 5000 acres of pretty decent turkey habitat, and you intensively managed 100 acres, that's going to be a core use area because, you know, the 5000 acres is pretty good turkey habitat. And if you make that 100 acres the best of that 5000, you're going to have probably, your property is probably

going to be carrying capacity saturated, because of that, because you're part of a turkey-friendly landscape.

David Todd [01:52:55] I see. Okay. So, I guess there's a scale and habitat type difference between the two birds.

John Burk [01:53:01] Yeah.

David Todd [01:53:04] So, you, have been a pretty enthusiastic wild turkey hunter since you were 12, if I remember. And I was wondering, when you're hunting wild turkey, I understand there's quite an art to calling, and I was wondering if you can describe some of your strategies.

John Burk [01:53:29] Yeah, I mean, I haven't been turkey hunting since I was 12. I actually started turkey hunting in graduate school, so I was in my 20s. But I've been turkey hunting enthusiastically ever since, and that was a pretty long time ago.

John Burk [01:53:45] Yeah. I mean, a lot of people think that you need to be a world-class turkey calling champion to call turkeys in. And turkey calling is probably about 10% of the sport. Where you call from is 90% of the sport.

John Burk [01:54:03] So, particularly I do a lot of my turkey hunting on public land. It's what I have available. And I like the increased challenge. So, on public land, I mean, turkeys get pretty, they tune in pretty quick to "not everything that sounds like a turkey is a turkey". And probably by day three of the season, if you do a whole lot of calling, the turkey can probably name, do make and manufacturer of whatever call you happen to be using.

John Burk [01:54:43] So I'm always "less is more", you know. I usually cluck and purr a little bit on a slate call, and if I get a response, I'm done. And another trick that I've found very successful on public land is scratching in the leaves. You're not even blowing on a turkey call or scratching on a turkey caller or squawking on a box. You're just reaching down and making that sound that that gobbler hears every day, probably off and on all day: you know, a hen scratching in the leaves, looking for food.

John Burk [01:55:17] And if he hears that, he says, "Huh, that's probably not a hunter, that's probably turkey." Oops.

David Todd [01:55:24] Can you give us an example of what clucking sounds like?

John Burk [01:55:30] It's just, PUCK, PUCK, PUCK. And that's, you know, the CLUCK and the PURR is something that the turkeys are, you know, it's a sound that they're doing fairly frequently and it's pretty soft. And, you know, the call that most turkey hunters use is either a CUT, or a YELP. And a lot of turkey hunters, they do a lot more of that than they probably should. And that's, you know, real hens don't usually talk that much. And like I said, the turkey's, a gobbler's job is basically to survive and reproduce, and he survives by realizing that she's talking a little bit too much. So, that's probably not any place I need to be.

David Todd [01:56:29] So, I gather that, traditionally, people call turkeys, you know, with slates and boxes and these mouth devices. But, I understand that electronic calls have become, sort of a la mode these days. And, what is your attitude about those?

John Burk [01:56:57] Again, I think that turkey calling is a small enough part of the equation that, you know, I'm not for it or against it. You know, most, most folks that are serious turkey hunters, they really don't need to resort to an electronic call. I mean, they can reproduce anything an electronic call could do, even though the electronic calls are actually real turkeys. Like I said, most serious turkey hunters can reproduce that call almost exactly with whatever, you know, whatever make or manufacture of a diaphragm, a slate or a box, or a trumpet call, your wing bone calls. I mean, they don't really need any, you know, electronic assistance.

John Burk [01:57:51] And I don't think because, most, most guys are so proficient on calls, I really don't think that an electronic call gives you any kind of an advantage. So whether or not it needs to be made illegal, in some cases, in some states, it is, like I said, I think the calling part of it is such a small part of it that I don't think it's necessary to restrict it.

David Todd [01:58:18] I see.

John Burk [01:58:19] If you call from a bad spot, the turkey's not coming. If you call from a good spot, it doesn't really matter what you're using. That turkey wants to be there anyway.

David Todd [01:58:29] Good to know. All right.

David Todd [01:58:32] Well, let's talk a little bit about your role at the National Wild Turkey Federation. You're a senior regional biologist there, and I was curious if you can tell us about the niche that you fill there at the Federation, and then just more broadly, what the Federation's position is in trying to manage and promote wild turkeys, not just in Texas, but nationwide.

John Burk [01:59:02] Yeah. The district biologist position is something that, you know, I was kind of on the front end of it. There were several before me, but it was an opportunity for the organization to have, you know, kind of a turkey person, if you would, in place. Back probably when the restoration programs were initiated, most state agencies had turkey guys or gals that that's all they did.

[01:59:40] And, I think the district biologist position kind of evolved or sprung up as a result of that kind of changing at the state agency level, you know where, back in the day, you had a turkey biologist back when we were setting harvest records every year, it was kind of like, "Well, we don't really need a turkey guy; the turkeys are doing great. We don't really need to devote 100% of somebody's time to turkeys."

John Burk [02:00:13] So, those things started getting spread pretty thin where they were, you know, they were doing for furbearers and all upland birds and, you know, turkeys were just a little piece of it. So, I think that's kind of what was it was the genesis of these positions.

John Burk [02:00:30] And the positions are kind of ... I love the job. I mean, it's very diverse. I'm doing something different almost every day. And it basically gives you, a touch at almost everything that the profession has to offer - I mean, policy, management, research. The big part of the job, or a big responsibility of the job, is for the district biologist to work with state and federal agencies, other NGOs, to take, ideally, every dollar that we raise at the banquet system and turn it into five more.

John Burk [02:01:12] So, we basically increase the match rate so that our presence on the landscape is more significant, we make a bigger footprint, and we pull a whole bunch of other

partners together. And that's definitely the future of the Turkey Federation is more kind of landscape initiative driven, where, you know, rather than focusing on this little piece of this public land, you know, we're looking at, you know, multi-state regions and impacting management and policy at that scale.

David Todd [02:01:48] Okay. So it sounds like you've worked for the states and, Texas for sure, and also elsewhere, but how do you think that the state gig compares with working for a non-profit like the Federation? Are there things that you feel like you can do in one place, more difficult in others? You know, what sort of impact does it have to be in a different organization?

John Burk [02:02:23] Oh, absolutely. And I mean, that was one of the things that kind of, I guess, one of the things that encouraged the shift, you know. Because I started my career at the state agency level. You know, I started with Wisconsin Department of Natural Resources, and then Missouri Parks and Conservation, and then Texas Parks and Wildlife Department. And, obviously, on the plus side, from an individual standpoint, you know, state and federal agencies, there's lots of job security. You know, the benefits packages and all that are usually, you know, pretty, you're going to have a hard time finding something that's going to be better.

John Burk [02:03:09] I think the frustrating part of working for a state or federal agency is, you know, kind of the process and the politics, to where you sometimes feel like you're standing on the gas and the brake at the same time.

John Burk [02:03:28] So, things, probably, in the private sector, you know, it's kind of what have you done for me lately? And it encourages, you know, kind of Type-A personalities to really hit the ground running. And, you know, personally, that's kind of what I experienced.

John Burk [02:03:45] You know, state and federal agencies hire really good people. But it's almost like as if they don't trust them enough to let them do their thing.

John Burk [02:03:53] Whereas, you know, the private sector knows they hired an expert and you're an expert in everything and they expect you to be. So, it's a little bit different that way.

John Burk [02:04:04] You know, obviously, state and federal agencies are pretty restricted on what they can say, from a policy standpoint. And, you're not really restricted that way in the private sector. I mean, you got to consider what your positions might do to your membership base as far as alienating them. But it's not like an absolute, "thou shalt not".

John Burk [02:04:27] So, and the private sector rewards good behavior when the economy is good. So, you know, the state and federal agencies as far as from, again, a personal, you know, compensation package. You know, again, the benefits are really good. And you're kind of on a step-wise pay scale, but, you know, you pretty much know what's in front of you. And then, you know, in the private sector, I mean, you can do really well pretty quick. But again, you know, it's not as secure. So, it's dependent upon a pretty strong economy to be able to, to make hay when the sun's shining.

John Burk [02:05:15] And so, like I said, everything's got pluses and minuses. But I'm happy in the private sector.

David Todd [02:05:20] Okay. So, you've, through both your role, your jobs at particular states and then through this sort of more regional approach at the Federation, you've probably seen

how things operate in different states, and been able to compare and contrast. And I was wondering how Texas stacks up against what you've seen in Iowa or Missouri or Illinois, some of these other places you've been.

John Burk [02:05:51] Well. I would say, and again, kind of going back to how state agencies function in the systems that they are part of, you know, Texas was pretty political, and I'm guessing it probably still is, with a nine-member Commission, and how the state agency is beholden to that political body. I would say it's very, very similar to Illinois, but very, very dissimilar to Missouri. And it's one of the reasons why I left the public sector.

John Burk [02:06:32] And one of the reasons why I moved to Missouri is they've got a, you know, their system is not as politically driven. You know, they've put things in place that kind of keep those separate. And we've got a 8% sales tax in Missouri that pays basically 60% of the state's agency's budget, comes from sales tax revenues. And the legislature really does not like that they cannot touch a penny of it.

John Burk [02:07:01] But like I said, the systems ... I saw Texas as being much more political as far as, you know, resource management decisions. And Missouri's kind of more science-based, and the legislature really can't muck it up.

David Todd [02:07:22] Okay. That's interesting. You know, this whole federal system is such a laboratory to check out what is more effective and what's more problematic.

David Todd [02:07:32] Well, let's talk about you personally. You've been a wildlife biologist since the '90s. That's a good stretch of time. What is your attitude towards that line of work and that profession? What could you say about, you know, what you've learned?

John Burk [02:07:53] Like I said, I got into it because of the passion that I had as a youth, and, you know, particularly hunting. And that's kind of another reason why I landed with the Turkey Federation is, you know, that's probably as important to the organization as the conservation. The conservation of wild turkey side is one piece and preservation of the hunting heritage is the other piece, and they're pretty much equally valuable, and that's pretty unique to them. And that's again, why I really have enjoyed my tenure with the Turkey Federation and it's basically a perfect fit.

John Burk [02:08:37] Yeah. You're not going to get rich doing it, but, you know, I'm comfortable and I've got freedom of schedule. You know, when you're working for ... you know, Covid pretty much forced everybody into a world I was already part of. I mean, what I mean by that is, you know, the district biologists serve multiple states, and we work out of our homes. We've always been home-based. So, you know, we're on the road a good bit, but like I said, we don't go to a brick-and-mortar office building. We work out of our homes. And that's, like I said, I've got freedom of schedule.

John Burk [02:09:17] They definitely get their money's worth out of me. I work more hours than they pay me for, but I work them when I want to work them. And I come and go as I please. And that's pretty unique as well. And I, like I said, I love what I do, and I love how I do it.

David Todd [02:09:35] It's nice to have that - both the passion for the work and then the freedom to, you know, do your work in a way that works best for you.

David Todd [02:09:45] So, the wild turkey, it seems like it's been a part of your life for a number of years. How do you value it? You know, is there a certain ecological value put to it or do you assess it, you know, in terms of the ethics? You know, you talked about the hunting heritage. You know, do you look at how it functions ecologically and the role it plays out there? What sort of value do you see in the bird?

John Burk [02:10:15] Like I said, I love turkey hunting. It's probably one of my favorite things to do. And it's a harbinger of spring. So, I guess my life and my family's life, our year is seasonal. It's turkey season. It's crappie season. It's salmon season, and so on and so forth. So, the turkeys are kind of what kick things off, you know, on the front end of the year.

John Burk [02:10:44] And, you know, the time of the year you're doing it, you know, it gives you a different perspective on outdoor activity because, you know, everything is waking up and not going, you know, not going to sleep.

John Burk [02:10:59] Yeah, I just, I love to turkey hunt. I love to eat them. So, I respect the bird and I enjoy. And they're also a pretty good, I said they're a harbinger of spring, but they're also, a real good, I guess, model to help do management on the landscape, that is really beneficial to a whole lot of other things. You know, I'm doing it for the turkeys, but I'm benefiting a whole bunch of other things.

David Todd [02:11:37] Gotcha.

John Burk [02:11:37] And my measurement of success is obviously, you know, have I impacted the local turkey numbers. And you know, I know I've succeeded. But, then again, you get a whole lot of other critters that come along for the ride.

David Todd [02:11:54] That's nice - side benefits there.

David Todd [02:11:57] All right, well, I think that you've been very patient and tolerant with me and all these questions. I just have one more. And that's this one about whether there're items that we should return to, things that we somehow overlooked and missed, that you wanted to address before we sign off.

John Burk [02:12:22] I think we did a pretty thorough job of covering everything. I hope you do too.

David Todd [02:12:26] Oh, yeah? Yeah. No, this has been interesting. Thank you so much for being such a good teacher about all things wild turkey and, for, you know, sharing some of your time today to talk about some of this.

John Burk [02:12:41] I enjoyed it very much. You have my email, my phone number. So, just if you have any more questions, just let me know.

David Todd [02:12:48] All right. Thank you so much. I'll, turn off the recording now, and we'll call it a day.

John Burk [02:12:55] All right. Well have a great rest of your week.

David Todd [02:12:57] All right. Thank you so much.

John Burk [02:12:58] Thank you.

David Todd [02:12:59] Bye now.