

TRANSCRIPT

INTERVIEWEE: Royce Jurries

INTERVIEWER: David Todd

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Google Voice [00:00:01] This call is now being recorded.

David Todd [00:00:05] Royce! This is David Todd.

Royce Jurries [00:00:05] Hi, David.

David Todd [00:00:05] You are so kind to do this. Thank you for calling.

Royce Jurries [00:00:16] Glad to tell you what I can remember, you know.

David Todd [00:00:20] Oh, yeah. No, this is a wonderful present that you're giving us. We are really intrigued by what you've been doing, and thanks for, for sharing it with us. Thank you.

Royce Jurries [00:00:34] No problem.

David Todd [00:00:37] Well, I think as a place to start, I wanted to just, both for your own use and then also for the record, I'd like to explain what, what we're about today and make sure that this fits well with you. I could give a little introduction if that would be helpful. And so here it goes.

David Todd [00:01:00] The plan that we've got is to record this telephone interview for research and education work on behalf of a nonprofit group, the Conservation History Association of Texas, for a book and a website for Texas A&M University Press and for an archive at the Briscoe Center for American History at the University of Texas at Austin. And of course, you would have all rights to use the recording as well. That's what our plan was. And I want to make sure that that was, was good with you.

Royce Jurries [00:01:39] Sure. I have no problems with that.

David Todd [00:01:43] OK, well, great. Well, let me, if you would, just sort of frame where we are and when it is and what we're trying to do.

David Todd [00:01:54] It is January 21st, 2021. My name is David Todd. I'm in Austin, Texas. I'm representing the Conservation History Association of Texas today. And we are fortunate to be conducting an interview with Royce Jurries, a wildlife biologist who worked at Texas Parks and Wildlife from 1969 to 2008. And during that time, he did a variety of things, you know, from studying and surveying, relocating and writing about the Attwaters prairie chicken. He also worked as a regulatory biologist doing waterfowl banding and census work, deer trapping and restocking, quail and deer research, and promoting new antler regulations for whitetail deer and organizing wildlife co-ops. Really a diverse career at the agency.

David Todd [00:02:54] And I believe he's based in Columbus, Texas. And this interview is being done by telephone.

David Todd [00:03:02] While he's done many things, today, our hope is to talk mostly about the Attwater prairie chicken and its natural history and its decline and then the efforts to bring it back.

David Todd [00:03:14] I thought as a place to start, we might just ask you a little bit about your childhood, and if there might have been any people or places that were a big influence on, you know, ginning up your interest in working with animals and birds in particular.

Royce Jurries [00:03:33] OK, well, I was born and raised in Washington County, out in the country, about, a place about 10 miles west of Brenham. And my family did farming and ranching. And growing up out in the country, you know, you are a lot closer to nature and back in those days, you know, we didn't have iPhones and computers. In fact, I think I was about 13 before we got a TV. So country boy spent a lot of time, when we weren't working and I spent a lot of time out in the countryside.

Royce Jurries [00:04:13] And in those days, a lot different than now, the neighbors and the landowners, they were very good about letting you go on their property, hunting or fishing. It was during my childhood time in the 50s. It was more still mainly what I call native landowners, you know, who had been there a long time. It was before we really start getting a lot of absentee landowners buying up the land. So we pretty much had run of the land. And so that had a big influence on me.

Royce Jurries [00:04:47] But I always liked hunting and fishing and part of it, I guess, was my dad. He was a good cowboy and but he liked the outdoors and he really liked hunting. He always had dogs, hounds. First he had coonhound and then after coyotes started coming in to Washington County, got coyote dogs. And also I had an uncle who, they didn't have any kids. And he kind of adopted me as far as hunting and fishing. And he was a big quail hunter and he would take me along quail hunting at times. And that's why I really, that's really why I really loved to do was hunt quail. And all my life, after starting at college, I've had bird dogs still just real recently. And for 34 years I guided quail hunters on my days off on a ranch in South Texas. So I was always interested in birds, all animals. But that quail really fascinated me. So I guess it was kind of a connection there to working with the chicken, because to me they're just like a giant quail. So those are some of the influences that probably directed me to where I ended up.

David Todd [00:06:07] I see. Well, and I understand that you attended Texas A&M University and got a B.S. and an M.S. In Wildlife and Fisheries Science. And I thought maybe you could tell us a little bit about your experience at the university and any colleagues or, you know, fellow students or professors that might have been a, you know, had a big role in your life.

Royce Jurries [00:06:35] Yeah, I got both of my degrees there in wildlife and fisheries sciences. I knew, I remember distinctly when I was like a sophomore in high school, they had the college books there, you know, different majors and all, in there. And thumbing through the end and catalog, I saw this Wildlife and Fisheries Sciences and I said, oh, my gosh, that's what I want to do. And from that day on and I knew, I wanted to be a biologist.

Royce Jurries [00:07:09] So went to A&M, you know, there were a couple of professors had a quite a bit of influence on me. One was Dr. Jim Teer, and he was the head of the department and just a really nice guy and I was always just admired him for all. He was involved in so many things and really, real knowledgeable. And then Dr. Jack English was the chairman of my committee when I was in graduate school, and Dr. Teer was on my committee also. And but Dr. English, he helped me a lot in the learning how to do research. So those two, I guess just those two professors probably had more influence on me than anybody else over there.

David Todd [00:07:58] Oh, OK. And I understand that that Dr. Teer might have been helpful and finding you work at Texas Parks and Wildlife. How did that come about?

Royce Jurries [00:08:14] Yeah, him and I got along real well. And as I was getting close to graduating with a master's, they actually tried to talk me into staying on for a Ph.D., which I had no desire to do. I didn't want to educate myself out of a job and besides that I was sick of school. But Dr. Teer asked me one day, if I was interested in going to work for Parks and Wildlife Department and, and that was my long term goal. I had spent two summers with the Parks and Wildlife Department at Fairfield as a summer student. And I mean, that was great when he said that. You know, he said that I can, I can get you a job there, if you want me to. And I said, yeah, definitely. So, you know, everybody at that time in the department was, had gone to school at A&M. And so Dr. Teer knew everybody and he carried some weight there. So he talked to Pierce Uzzell and said, OK, I didn't have to go for a job interview. And he said, go there and talk to Pierce, you know, you've got a job. So I was fortunate from that standpoint. I never had to have a job interview and that was the only job I ever had, I never did have a job interview.

David Todd [00:09:36] Well, they were fortunate to have you. And I understand that this almost right out of the box, you started working on Attwater's prairie chickens, as early as 1969. Can you tell us about some of those early studies and counts and surveys that you were doing there?

Royce Jurries [00:10:00] Yes, the department had, the prairie chicken was declining in numbers and they were just starting a new federal aid project. It was W-100R. And that's the project I was assigned to, I think, partially because I had the master's degree and had some experience in research. And that was part of the plan, which this new prairie chicken project to get information on the life history of the chicken by doing radio telemetry studies, and prior to this time there was really not much information known about, about the chickens. Val Lehmann had done some work back in the late '30s, I think, and maybe early '40s, and then he did do some survey work a couple of times. But in addition to the radiotelemetry work, it was getting, that project was set up that we would start doing an annual census by counting all booming grounds, or the roosters on the booming grounds to come up with population trends. And then also in the summertime, do brood counts to see what kind of reproduction we were seeing. Both of those were done with the use of helicopters - the census on the booming grounds as well as as well as the brood counts.

Royce Jurries [00:11:27] And then we, we started doing the radio telemetry work there in Victoria. I went there in October of '69 and Bill Brownlee was the project leader and we were both stationed in Victoria at that time. As it turned out, as we progressed along, we both worked on that telemetry study in Victoria. But Bill was kind of in charge of the lower coast, Aransas, around Victoria, Goliad and Refugio county. And I was covering the upper coast, Wharton, Colorado, Austin, Harris and Galveston and all the counties on the Upper Coast that

still had birds. So that kind of became my part of the district. And Bill Brownlee was kind of covered the southern part of the Chicken Ranch.

David Todd [00:12:30] I see you and you mentioned that you did these booming ground counts, I guess were focused on the roosters and the brood surveys to see what the hens were doing and that you were using radio telemetry, which I guess was a new tool at the time.

Royce Jurries [00:12:51] Yeah, it was relatively new. One thing, let me get back to the census. We didn't know where a lot of the booming grounds were, so we spent a lot of time on the ground in the springtime listening to locate booming ground and then from the air also. But it took us a while. You know, we didn't discover all the booming grounds the first year in our work.

Royce Jurries [00:13:20] But, yes, the radio telemetry work that was, you know, that was going on. But it was kind in the early days and it was, it's been refined a lot. I know that the transmitters we used were probably, oh, twice as heavy, or a little bit heavier than what they're using currently on birds, on chicken-sized birds. And we put our transmitters on the back of the bird and then the harness underneath the wings and now they're putting it around the neck and the radio hangs around the crop area. But we had a, and it was a learning experience for everybody. We had a guy then named James Taylor, he was the guy who built our radios and we kept trying to refine them and we had problems with the antennas breaking off and we had to learn how to put them on the birds properly. But we got that down pretty well.

Royce Jurries [00:14:24] Their range was somewhat limited on the radios. But what we would do if we, if we couldn't locate birds, we had, we had an aircraft stationed in our district that we could use and we would get him. And of course, on the air, you have much, much greater range of the radio signal than from the ground.

Royce Jurries [00:14:45] So that's how we would locate the birds back that were we couldn't find from the ground, although sometimes something could happen that a bird could disappear. You just, radio may have quit working or whatever. So it wasn't a perfect deal, but it was enough. We got a lot of information that we could never have got other than having radios on the birds and locating them whenever you wanted to.

David Todd [00:15:14] And I think you said that when you first started out, a lot of the booming grounds really hadn't been located and you had to listen for them. Is that right?

Royce Jurries [00:15:24] Yes.

David Todd [00:15:26] How did that work?

Royce Jurries [00:15:28] Well, you know, those prairie chickens when they boom, they make a very unusual noise. It's, it's weird because it's about the same volume, if you're right at the booming ground, if you're a mile away, on a good still morning. That's when you have to go out and listen, you know, if the wind was up, you couldn't hear much. Also, the birds aren't near as active on windy, foggy mornings as they are on clear still mornings. But you could listen and hear those birds quite a ways off. And then also we located some from the air because the booming grounds are always going to be a shortgrass area, and particularly in the big ranch country where you had a lot of native grasses, those areas were kind of limited, you know, to the hard pan flats, or maybe like if you had a pipeline running through what they

maintained by shredding, that was really a prime booming ground many times. So you could locate it from the air. In the upper coast, we did more from the ground probably.

Royce Jurries [00:16:33] But then also we also would talk to a lot of landowners, you know, and just visit with people in the area. And a lot of times they would know about where the birds were at too. So we used a combination of things to find the booming ground. But I think by, you know, after a couple of years, I think we had we had pretty much everything down on location of the booming grounds.

David Todd [00:16:58] And I think I understood that you worked in Victoria County for a while and then later in the Eagle Lake area. Did you find differences in the populations between the two kinds of terrain and country?

Royce Jurries [00:17:16] Yeah, I started out, you know, I was stationed in Victoria, we did the radio telemetry study there in the ranch country, and then they sent me to Eagle Lake to do a similar study in the rice fields around Eagle Lake. And, yeah, there were some differences. We found one thing on the movement of the birds. It seemed like during the non-breeding season that the birds moved more in the ranch country than they did in the rice belt area. But another thing I noticed, too, that the booming grounds in the rice fields, those birds were not as secure on the booming grounds as those in the ranch country.

Royce Jurries [00:18:09] And I think part of that was. In the big ranch country where you had limited area for booming grounds, but vast areas of grasslands, escape cover is nearby. It wasn't the same case in the rice fields as much. And I think maybe that was part of it. Not sure, but a telemetry study I did at Eagle Lake, I think it lasted about two and a half years and, we, you know, a lot of, a lot of things were similar between the southern range and the northern range, but there were some subtle differences between the two populations.

David Todd [00:18:52] OK, well, you know, maybe for the lay people among us, you could explain just, you know, sort of in general terms, the life history of an Attwater prairie chicken, and maybe tell us a little about these courtship displays that you've kind of been mentioning in passing.

Royce Jurries [00:19:14] Right. Yeah. You know, the Attwater prairie chicken, that is actually a subspecies of the greater prairie chicken, and out of all the prairie grouse range, they were the the southern-most part of the prairie grouse range.

Royce Jurries [00:19:33] And, to me, they look like a giant quail. If somebody asked me what the chicken look like, if they hadn't seen it, you know what a quail looks like they look similar, just like a giant quail. I think the name kind of hurt the bird. I think that, you know, a "chicken" that doesn't excite very many people, but I think they should have called it the Attwater's prairie grouse. They got more respect, maybe, but yeah, they are, and they, as the name implies, prairie chicken. They live exclusively in prairies, and, and they need, the need big areas, too. And but of course that's to be discussed later, probably. But that's become a real problem, the disappearance of the prairies.

Royce Jurries [00:20:25] But they are part of the prairie grouse family and all of the all of the grouse family have these booming grounds, or leks, they're called sometimes. But what that is, that's where the roosters come together and display. They do, when you have a good chicken population like we did at one time, a relatively good and very stable booming ground, they actually will gather around there in the fall time and do a little grooming, not much like

October or November, but the real booming season kicks off about, they start gathering around January and February. They're starting to really get more serious everywhere in March.

Royce Jurries [00:21:17] And they make a, they make a weird sound. And it's kind of somebody described it as you're blowing across a Coke bottle with your head down in a jar. And it's hard to describe, but it's a weird sound. As I said earlier, the volume doesn't change much when you're close or far away, it sounds about the same. But they also do a real well, basically what they do, those roosters on the booming ground eats it up a little territory and they do a lot of dancing and booming and strutting. They have the air sacs on the side of the neck. And they are enlarged, real orange in the breeding season and boy they'll be just stomping their feet as fast as they can, and trying to attract the females. And there's a lot of fighting goes on on the booming ground, I guess where one gets into another's territory. They don't like it. And it's, it's really a sight to see. It's hard to describe.

Royce Jurries [00:22:23] But then, when the hens and the hens that's they come to mate and whenever a hen would show up on the booming ground, you wouldn't have to be at the booming ground, you could tell by the change in the call, the noise on the booming ground, and what they, they make this booming noise, but then when hens show up a lot of times, there's all that [whooping call].

Royce Jurries [00:22:48] And an interesting thing is, the, some of the subdominant roosters may not come to the booming ground every morning, particularly later in the season, but they would be close by. And when they heard that noise, they knew there was a hen there and they would come flying back to the booming ground. However, they normally were not successful in the breeding because there would usually be one or the two dominant roosters on the booming ground that did the majority of the breeding and how do hens choose those roosters. I do not know. But they might walk past three or four other roosters to get to the dominant roosters on the booming ground and of course, there's a lot of excitement on the ground when a hen shows up.

Royce Jurries [00:23:39] And it's something that you until you see it, it's really hard to describe to a person what goes on, on these booming areas.

David Todd [00:23:50] Will you give us a good picture, though, it sounds like quite a dance and a quite a fight as well.

David Todd [00:23:58] So, yes, they are going after the meeting happens, you know, what's what's the next step for the hens and their brood?

Royce Jurries [00:24:08] OK, then the hens, well, first of all, the males will stay on the landing grounds probably till, oh, maybe May and, first part of May. But as the season goes along, the booming intensity slows down and then they're going to eventually not show up. Towards the end of the booming season actually a lot of times just the more dominant roosters which show up and do a little booming. But after the hens mate, they're going to go off and nest. And their nest is usually within about, oh, you know, certain within a half a mile of the booming ground. And that's where they, you know, they sit on the eggs for about 26 days or so.

Royce Jurries [00:25:00] And then, you know, if you're successful, they bring off a brood, hopefully. If the nest is destroyed they will usually re-nest, but if they have a brood that's successful and they lose that brood, then they're not going to re-nest again usually.

Royce Jurries [00:25:23] And the prairie chicken is a very specialized bird from the standpoint that their breeding season is relatively short and compared to quail. You know quail and re-nesting and re-nesting, I seen baby quail as late as October. The prairie chicken, once the spring goes by, the roosters leave the booming grounds in early May, that's the end of their breeding season for that year. So they're kind of a specialized bird from that standpoint.

David Todd [00:26:02] I see. And then so when these chicks hatch, what's the next stage in the whole process?

Royce Jurries [00:26:12] Well, they keep, you know, they're in, about two weeks or so, they are able to fly it, fly a little short distances. But, you know, they're real, pretty, like all small creatures, they are pretty vulnerable to things. And you can have quite a bit of mortality at that point, you know, predators, skunks and raccoons and whatever.

Royce Jurries [00:26:39] But the big, one of the big factors, too, is if you have a lot of rainfall at the wrong time, you can lose a lot of those little guys. The hen can cover them for a period of time, you know, if it's raining. But if you have an extended rain period and she can't keep them covered, they can get wet and get chilled and die. And I always remember right after I went to work, Val Lehmann, who had worked on the chickens in the '30s, and he said that if you have a wet May, you're going to have poor reproduction, a dry May you're going to have good reproduction. And that that was very true. Drier weather was much better for getting the broods to find that they could survive. Those wet, those wet May - a lot of rain - not good. The other thing, too, not even for the chicks, but for the nest, most all of the prairie chicken range is very flat area. So drainage is somewhat poor and a lot of times in big rainstorms, you know, the nest could flood, and of course, ruin the eggs. So, you know, bottom line was wet spring, bad, dry spring, good for chicken reproduction.

David Todd [00:28:07] Fascinating. So, let's see, if they're having their chicks in, what is this, is this early summer then, is that right?

Royce Jurries [00:28:16] Yeah, they're going to start hatching out and start in late April, mid April, I guess, and then into May. That's the peak of the time. You know, you obviously have some that do re-nest that might hatch out later. But in general terms, that's the time period. And then those guys, by the time they're about 12 weeks old, they, you can't tell from the adults. They're all about the same size, basically, and they're pretty much grown by that time. You know, once they get to about four or five weeks then they can handle the bigger rains, too. But when they're little, you know, just small guys, they're very susceptible to flooding.

Royce Jurries [00:29:01] So it's just, another thing which I didn't mention was or sometimes a little chicken can get lost too, particularly if you're in heavy cover. So probably some are lost that way because a hen may hatch out with 8 or 10 chicks, but she may only have three or four left. The most I ever saw when we did rig count every year for good many years from the air. The most I ever saw in one grade was 14, but the average brood size would be oh, I can't remember exactly, but I guess probably three or four was probably closer to average. I don't really recall the exact details.

David Todd [00:29:56] Well, tell me something else. So what was the diet of these birds?

Royce Jurries [00:30:03] Well, the little guys. They, they primarily eat insects and high in protein. But the chicken uses a lot of vegetation too, particularly the adults, young tender

vegetation, but they eat insects they eat seeds, kind of a variety of things. But for the little guys, the basically, their diet going to be primarily of insects.

David Todd [00:30:37] I see. Well, you've given us a nice summary of the life cycle from some of these mating displays, to to then the mating itself and then, you know, the development of brood and hatching and, and then getting these birds back out on the field. Maybe you can sort of turn to talk about sort of big trends. I've been interested to read about these prairie chickens and that maybe one hundred and twenty years ago, there were some million of them scattered across six million acres of Texas coastal prairie. But by the late 30s, they were under 10,000 and then by the early 90s under 500. And I was hoping that you might be able to explain why you think there was this rapid decline and then almost a crash in the in the 90s.

Royce Jurries [00:31:41] OK, well, going back, looking way back in the history of the chicken, as you said, you know, it was estimated it was a million birds. And way back when, you know, they did a lot, apparently a fair amount of prairie chicken hunting, too.

Royce Jurries [00:31:58] And the way back when the Legislature, according to the literature, I think it was in 1883, they actually closed the season. Well, they had a five-month closed season was set to protect the birds' breeding season. And then 1903, the Legislature passed a law that set the season from November 1 through January with a daily bag of 25. However, the problem with that was that that was in 1903. The Texas Parks and Wildlife, which back then was called the Texas Game, Fish and Oyster Commission, wasn't created until 1907. So there was really no, they said no, really, real enforcement going on. So it really was not having any impact on illegal hunting. And then another change was made in 1929 when the season was set, well the one in 1903, you had bag limits of 25. Then in 1929, the Legislature set a season from September 1 to September 4 and with a 10-bird bag limit. And then the season was closed in 1937. And then the Attwater's was put on the endangered list when the Endangered Species Act was passed in 1973.

Royce Jurries [00:33:33] But looking at these declines, apparently, you asked, there was a lot of hunting going on back in those days, but the big factor, particularly on the upper coast that started the decline was rice production. Because prior to rice production, this was all native prairie. And the chicken was actually found all the way into Louisiana and records show or the last record of a chicken over there was in 1919, I believe, and the first rice production started in Texas, according to the records we found, was in Beaumont. They had planted some like in 1890, a few acres. But at Eagle Lake, the first rice was planted supposedly in 1898. And then as time went on, you know, more and more rice production. And every time the area was put in the rice, the prairie was taken away.

Royce Jurries [00:34:46] And if you look at the country in the Wharton, and particularly Colorado County, part of Austin County, all of the old fallow rice fields there historically, you know, was native prairie. Well, that's what their habitat requirement are for prairie chicken, is prairie. And just taking out all of that prairie was very, very, I mean, detrimental. As far as any species, you take away the habitat, well, they can't survive without, without habitat. And that played a big role in it.

Royce Jurries [00:35:22] And then Val Lehmann, as I said earlier, Val had worked on the chickens and he had did some surveys, and that was his numbers that there was in 1937, 8700 birds left. And then he did another survey in 1963 and there count showed 1335. And then in 1967, he showed 1070 birds. And I'm not sure, I don't think those were aerial surveys, I'm just not sure how he did that. I'm thinking a lot of that was ground counts.

Royce Jurries [00:36:08] But we, our, Parks and Wildlife, Bill and I, started doing the surveys, you know, surveys annually in 1970. And in 1970, our count showed 1450 birds. What we did, the way you do that, you count the number of roosters on the booming ground and you want to do that during the prime booming times, you know, like in March, late February, March, because that's when all the roosters are normally going to be on the booming grounds. And then you assume a one-to-one sex ratio and you double the number of birds that you saw on the booming grounds. And that's how you come up with a population estimate.

Royce Jurries [00:36:53] In 1975, our survey showed that they had increased up to 2250 birds. And during the 1970s, it seemed like the population had stabilized pretty much at 1500 to 2000 birds.

Royce Jurries [00:37:15] And then, from that, that was kind of the high point. And starting in the 80s, they started declining and there was a big dip by in the '90s. And I suspect, looking back, you know, that was probably brought about by a combination of things. I think one of the big factors, though, and I saw this in the quail numbers declining in the '80s, the fire ants were really taken over. And I just think they played a big role in that, as well as, still, you know, losing habitat. But I think that the fire ants played a big role.

Royce Jurries [00:38:07] Plus, you have other factors involved. If you've got a couple of wet springs in a row and you didn't get any reproduction, you know, they could, your population starts going down, because the chickens don't live that long. And as a result, if you don't get some reproduction, pretty often, you're going to have a decline in numbers. So it was, you know, the numbers were going down and then they're like, 42 was the estimate in 1996, basically no chickens left. And that's when the captive breeding program really got started because it was seeing that, you know, the chicken is doomed without some kind of, some kind of captive breeding help.

David Todd [00:38:59] Were there any other factors that you might think about? I think that I've noticed people talk about, maybe this is related to the decline of the prairie, that woody species started to come in with suppression of fire. Is that something you think is significant or is that a minor factor?

Royce Jurries [00:39:22] Oh, no, definitely. I tend to speak more on the upper coast population. But yes, the absence of fire, historically, go way back when, you know, supposedly the Indians burned the prairies a lot, but you have a lot of natural fires from lightning, and fire is what keeps the, what keeps the prairie a prairie, it keeps out the woody species. So, yes, the encroachment of woody species is a big factor, particularly in some of the southern range. Victoria County, about 10 years ago or so, I drove through part of that country of Victoria County and the prairie was gone, pretty much, you know, running live oak, huisache, mesquite and the prairie has really declined. And I know some of the other areas in those counties down there are going through the same thing. So that is a, that, that was another factor involved that certainly hurt the, the prairie chicken population. So, you know, the chickens had a lot of things going against them.

David Todd [00:40:44] What was it about the prairie that was so distinctive as, you know, the only habitat that the Attwater prairie chicken could really manage with? What is it about the fit there between the bird and the habitat?

Royce Jurries [00:41:00] Yeah, well, the prairie chicken doesn't require any cover, you know, say compared to quail. To have good quail habitat, you have to have good grasslands in there. But you also need escape cover, some kind of woody escape cover. Prairie chickens don't require that. At what we call their daytime roost or their nighttime roost, they're just going to sit out there up against a clump of little bluestem or something. And they have no requirements of any cover. They just need open prairie.

Royce Jurries [00:41:36] The woody invasion creates trees out there where you can have hawks and owls to set in and they certainly can depredate on the birds. And then when you start getting like McCartney rose and other invaded species, you create the hiding places for gosh, skunks and coons and other varmints that can prey on the chickens.

Royce Jurries [00:42:04] So any time you reduce the prairie, the straight grasslands out there, it's detrimental to the chicken populations. And plus, all of this stuff is going on, you know, losing a prairie - fire, and then some years we had some really big rain events. And so, you know, you just didn't get any reproduction. And then a small number of birds out there on the range and you get no reproduction, so you got another year to go through losing birds. You don't have another opportunity to increase to the next spring and you're going to lose birds, as the year goes by. So you get a couple of bad years' rainfall, tied together with all the other things working against the chickens and they're in big trouble.

David Todd [00:42:55] I see, well, you know, as your study that came out in the late '70s, showed that the bird was struggling with a lot of different problems. Can you talk a little bit about the, the efforts to try to care for the bird, I mean, the acquisition of protected lands and and ways to manage that land?

Royce Jurries [00:43:18] Right. Right after I went to work, the World Wildlife Fund had purchased 3500 acres of land from the Duncan family at Eagle Lake. And this was still a native prairie, this wasn't ricefield country. And then, and I don't know exactly the timeframe, but in the early '70s, that land was turned over to the Fish and Wildlife Service. And then Mr. David Winterman, who was a big conservationist there at Eagle Lake and had a lot of property. I believe that he donated that land. And I can't remember how many acres. It was a sizable chunk that was beside the 3500 that the World Wildlife Fund had purchased. And so that was a start. Then once the Fish and Wildlife Service took over, that was to start with the Attwater Prairie Chicken National Refuge. Then after that, the Fish and Wildlife Service purchased, well, it was kind of a, kind of a forced purchase. The, I know they bought the Rens estate. It was, I don't know, five or six hundred acres. And then there was a couple of more places that adjoined, this was adjoining the refuge that we started with that original 3500 acres. And bottom line was they ended up with about 8000 acres in that block and that was the start of the Fish and Wildlife Service effort to try to save the Attwater's prairie chicken.

David Todd [00:45:02] And so once they had this land secured, what did they try to do to manage the land so that it might be good for the bird and maybe help with the recovery?

Royce Jurries [00:45:14] Right. Yeah, they did. They did a lot of, and still are. They burn every year. And Mike Morrow, the biologist here, is doing a really good job of working with the birds, and they burn a sizable chunk every year because that's what keeps the prairie occurring. And the other thing they did, they tried to get rid of all the woody species out there that they could, except, of course, along the San Bernard River and Coughatta creek which runs through the refuge. There's still some timber there. But outside of that, they just basically have native prairie there. And that's what, you know, they've done everything they could to

make it ideal prairie chicken habitat. The problem you still run into is if you catch a wet spring, you can still, you know, not get any reproduction, or to speak of.

David Todd [00:46:16] And I guess that's been an issue with like, the Tax Day flood not too many years ago, and the Memorial Day flood.

Royce Jurries [00:46:26] Right. And it doesn't even take floods that big. You know, if you get a good, you know, 4 or 5 inch rain and that, that country is so flat, drainage is really poor. And you can really lose a lot of nests and, and young birds, if rain comes at the wrong time. So it's just, it's been a struggle.

Royce Jurries [00:46:51] And the other drawback, the other problem there is that, yes, they've got the really prime habitat on the refuge. But if you get off of the refuge, which is really not much prairie chicken habitat around. A lot of the places is not old rice fields, it's ranches that are badly overstocked with cattle. And overgrazing can be very, you know, very detrimental, not only to chickens, but also to quail and particularly on the upper coast. The landowners up here tend to overstock. In general, I would say that's a general rule. There's a few exceptions, but for the most part they tend to overstock.

Royce Jurries [00:47:39] Down on the lower part of the range, in the big ranch country, sometimes it's actually could be the opposite. If it is understocked, if it gets too thick, the chickens are just like quail. They avoid those areas because they can't get around. When you have it properly stocked, the cattle, you know, they're not going to eat your pasture out, but they create trails through that native grassland. So that those birds use those trails a lot. I remember one example of when we were doing a study in Victoria County on the ranch next to the one we were kind of our headquarters where our booming ground was, but we were catching chickens for putting radios on. But those chickens never move, never went in. It was a 500-acre pasture in that particular ranch. And I don't remember the details, but it wasn't being grazed. So it was really thick and rank. And we never had a bird with a radio on that ever went into that thick pasture because they just avoided those areas. So they, under grazing can be a problem. Also, but in general, probably overgrazing is a much bigger problem than undergrazing.

David Todd [00:49:04] I see. Well, I guess one of the other things that was going on, on the refuge was these releases of captive-bred birds. Can you talk a little bit about the origins of that effort?

Royce Jurries [00:49:23] Right. What we saw, and I can't remember exactly the time frame, but the chickens were going down in number. And what really had happened, historically, if you look at the chicken range, it was pretty much all tied together. But as time went by and you had a lot of, well, improved grasses, you had cultivation taking over, rice particularly. And then in Harris and Galveston County, you had just urbanization taking over. What happened was these chicken populations were getting isolated. They weren't tied together anymore. So they were becoming a unit to themselves.

Royce Jurries [00:50:14] And then we could see that very clearly. And we saw then that. You know, basically, they weren't going to make it, because I know one who, I forget who called them "zombie populations", because they were just isolated, they couldn't be, you know, in the old days, if you had the range, tied together and let's say you got a big rain event or maybe a hailstorm, maybe wiped out your birds in one area, but you had corridors where those ranges were connected so they could be restocked from other areas.

Royce Jurries [00:50:52] That wasn't the case anymore. So then the decision was made that the chickens, these birds are doomed. We're getting such low numbers in these counties. There was just a few left. So the Prairie Chicken Recovery Team decided that we would go in and try to trap out the birds that we could, the few that were left. Trap them on the booming ground, to save that, to keep that gene pool as diverse as possible.

Royce Jurries [00:51:24] So that was the start of the, the captive breeding program. And over time, some of those facilities have got really good at producing birds. I know Fossil Rim, Houston Zoo do a really good job of raising Attwater's in captivity. And without the captive breeding program going on, and, of course, those birds that are produced in the captive breeding program have been released back onto the Prairie Chicken Refuge. And then there's a release site down in Goliad County. And at one time they were actually releasing birds, there was a small area near Texas City that had a chicken population on it and they were releasing some of the captive-raised birds over there. But that, that population was kind of definitely doomed too: it was relatively small. So they just kind of died out over there. But today, they're still releasing a lot of birds there on the refuge, and down at Goliad County. So without, without the captive breeding program, there would, you know, I guess there might be a few chickens in a zoo somewhere, but there would be no hope of keeping them, you know, out in the wild.

David Todd [00:52:47] OK. Maybe we could back up just a little bit. I think that you mentioned to get this captive rearing process started, there was an effort to capture birds in the wild. Is that something you were involved with, and might be able to tell us about?

Royce Jurries [00:53:05] Yeah. And what we, what we did there, and that was primarily going to be a rooster or two or three that was left on the booming ground and using rocket nets in the springtime when they were on the booming grounds, they were relatively easy to trap. And that's how we, we caught a lot of our birds for our telemetry study. We would catch them in the springtime using our rocket nets. And yes I was involved in that some. And I don't remember exactly where all, I know we trapped in Austin County, Colorado County, down in Victoria County, and I think maybe a couple of other counties that we trapped in trying to catch the last few birds and put them into captivity.

David Todd [00:53:52] I see. And, and I think I read that you had been involved with sort of salvage efforts at Ellington Airforce Base, and at a housing development down in Harris County...

Royce Jurries [00:54:04] Right.

David Todd [00:54:04] To get these chickens out of harm's way.

Royce Jurries [00:54:09] Yes, the one on Ellington Air Force Base, actually, if I remember correctly, I think we had two sessions there. We were taking birds off of there. The concern was that the the jets were going to suck one up in an engine or hit one and cause an airplane crash. And the way we took those birds off, was Dennis Brown, who was the regulatory biologist at Victoria when I went to work in Victoria, he had done a little chicken work also just kind of on the side with his regulatory district, but he had devised a net with an aluminum frame. So it was lightweight. And it would fit on the skids of a helicopter. And that's how all of those birds were caught. And then sometimes when we needed birds, particularly hens, for our telemetry study, we'd use a helicopter. And you'd flush the bird, chase him, and after a

while, they would normally land and then we would take off again. They might have to pursue them again. And then the helicopter would land right behind the bird and got this net, I can't remember how long it was, maybe 10 or 12 foot, more or less, and had weights on the bottom, of course. So that helicopter lands right behind the bird, and then you could jump out and pick him up, take him out from under the net. So that's how all of those birds were caught at Ellington.

Royce Jurries [00:55:48] And like I said, I think we did that twice. And then a few years later, it was in, and I'm not sure if it was Harris or Galveston County. It was right close to farm to market road 518, I believe, there was a small airport there and there were birds booming on that, in that area. Well, then there was a big housing developer that was going to go in and the company that was going to do the housing development, they paid for all helicopter cost and our expenses. And we caught, I can't remember how many, I think off Ellington altogether, I think we took like, I'm just guessing now, like in those two efforts, like 70 birds. And now the housing development, I don't remember if we caught 30 or 40 birds off of there, maybe more. I don't know.

Royce Jurries [00:56:46] And part of those birds, or on the, on the efforts there at the housing development, all of those birds, not all of them, most of them were taken to an area in the southern part of Victoria County. We didn't put radios on them, but we did leg-band them.

Royce Jurries [00:57:05] And the other thing that happened with some of those birds was that, just the first effort really to rear them in captivity was taking some of those birds to A&M. And Dr. Krieger, who was in the poultry science department, was interested in the birds and he had some facilities there. But I think it was all wrong. They had them on wire off the ground and make a long story short, that, that program failed as a captive breeding program, although he did take some of those birds that we caught, and in addition to that, we also got him eggs out of the wild. And here again, this was in the early '70s and we just, what we would do is there, we would go to a good booming ground. I had one near Austin county that usually had about 25 males on it. So, you know, you have a lot of females in the area. And then we would just walk, kind of three or four guys in a row and, you know, within a half a mile or less of the booming ground, that's where the nests were going to be. And we would just walk, just walk, walk, walk. And you would see these hens setting on a nest. A lot of times they were very reluctant to fly. And then we sent, not a lot, but maybe two or three nest for a couple of years, but he got the eggs and they were hatching those eggs out. But like I said before, that, that program did not did not take off.

David Todd [00:58:44] I see. I guess there was some trial and error, some experimentation, about how to breed these birds.

Royce Jurries [00:58:51] It is, it was and even now and the efforts that when it got serious there in the '90s, you know, they went through a lot of, pretty steep learning curve because they had problems that were coming up. But, you know, they worked through those and diets were a problem and they ran into other problems. But they, they worked through that.

Royce Jurries [00:59:13] And, of course, of people like at Fossil Rim and at the Zoo, they'd had experience with raising other types of birds, so that helped a lot. But it wasn't, it's normally not known that there was a very early effort to raise the bird in captivity. But that was pretty much a dismal failure when Dr. Krieger tried it. I don't know, but I think it, a couple of three years, it just looked like it wasn't going anywhere.

David Todd [00:59:44] I see. Well, you know, it might be good to just reel back a little bit. I think that you mentioned that you'd been involved with quail research. And I know that you're a very practiced dog breeder and trainer for hunting quail. Can you talk a little bit about the similarities and the challenges that quail faced and how they overlap with those that prairie chicken faced?

Royce Jurries [01:00:11] Well, I, you know, I think that the common denominator there is, probably, I think, this is just my personal opinion, that the fire ants had a big impact on quail too. I don't know how any ground-nesting bird can sit there for 20 or 25 days on those eggs with a fire ant population. Now, I think that the fire ant numbers aren't as high as they used to be. That's just, just my observation, talking to a couple of friends of mine who are in the hay business and fire ant mounds really choke up your equipment when you're cutting hay. And they both said there's not as many fire ants as it used to be, but they're still a lot of them.

Royce Jurries [01:01:04] There are still a number of ants around. I had a landowner one time tell me that he had found a squirrel nest where they were hatching out and the little guys were, you know, just covered in fire ants. And the same way with the chickens and they're, you know, when those chicks are hatching out, they don't pop out of the shell in thirty minutes. This is a, you know, hours, and maybe who knows, eight, ten, twelve hours before everybody hatches out and if there are any ants around, it's so easy for them to attack those nests.

Royce Jurries [01:01:42] I know a couple of years ago I was dove-hunting in Taylor, Texas. And a dove hit the ground, and we let him lay there for five minutes, gosh, he had fire ants on him. So like I said, I don't know how any ground nesting bird can be successful, but I feel convinced that that is what really hurt the quail population, because in the '70s, in this Colorado county area, Washington County and some in Austin County, lot of, a lot of quail. Big numbers of quail and I, as time went by, you don't, you don't really, till you look back, you don't see the big picture, but the quail numbers really start declining at the same time, I think that the ant number are really increasing.

Royce Jurries [01:02:37] And I do know in quail, too, there's been a loss of habitat in a lot of places. But I know some places that the habitat has not changed and the quail numbers are nothing like they used to be. My old hunting partner, who is now deceased, used to hunt a lot around that Luling / Lockhart area and he said back in the day, just unbelievable numbers. And the last time I went through that country, it was about, I guess, 10 years ago, but just looking at it from the road, it looked like just ideal quail country. And he said it was just, you know, no quail left there. You know, fire ants' overpopulation really heavy.

Royce Jurries [01:03:26] So I just feel, my opinion is, that they played a big role on reducing the quail population and they had to have a big impact on the prairie chicken population. And I think that Mike and them at the refuge are proving that now, because they've been treating big areas for the fire ant, and they are seeing positive results from the quail numbers and their chicken numbers.

Royce Jurries [01:03:53] So I just think two things - one is loss of habitat over the years, and then the big increase in the Red Imported Fire Ant, and those things working together played a key role in not only chickens, but quail also.

David Todd [01:04:15] I see. Well, maybe we can sort of talk more generally, if you don't mind, about prairie chickens as kind of one example of an endangered species. And, you know,

do you have any thoughts about the best ways to protect an endangered species and restoring or do you think that it's just in some cases too costly and risky to attempt, like with the case of the Attwater prairie chicken?

Royce Jurries [01:04:49] Well, yeah, you know. It takes a lot of time and effort to, but particularly if you're trying to restore native prairies, it takes ... that's a hard thing to do. It takes a long time. And it takes a lot of effort. And there's not much incentive, really, for landowners to do that and I, I would say that, you know, most landowners, they may be, they may be interested in quail or chickens, but they are very reluctant to make any sacrifices. Now, you do have quite a few, absentee, what I call absentee landowners, people out of Houston buying up property, who are very interested in wildlife.

Royce Jurries [01:05:50] The problem there is if we're going to restore habitat for quail and particularly chickens, you need a big area, particularly chickens. They cover a lot of area, and to do habitat improvement on 75 acres here and then down the road to do 200 acres, that's not going to get the job done. It's got to be contiguous to get a large enough size, chunk of habitat that you can keep those birds, you know, going year-round. So, that's a big problem and it's not easy. It's not cheap and it's very time consuming.

Royce Jurries [01:06:34] So, truthfully, of course, I guess I consider myself a realist. You know, the future of the chicken is not real bright. Some of the big ranch country there yet, I guess, like in Goliad county. And I've never been on that release area down there. But talking to Mike, that's some good habitat. And I think down there, they are doing some habitat improvement, trying to keep their prairies open. So you know, there's hope, but it's not going to happen overnight and it's just going to take a lot of effort on the part of quite a few people's part to actually get back to really where you had a good prairie chicken population out in the wild.

David Todd [01:07:27] I see. Well you've told us a lot about the prairie chicken's life history and some of the causes of its decline, and the efforts to bring it back. Is there anything you'd like to add about what you've learned, gosh, studying the bird for, since the late '60s.

Royce Jurries [01:07:51] Well, actually, yeah, I studied them very intensely for a few years, you know, for about, and actually after we'd completed the two telemetry studies, that is when they wanted me to write up the results of that. And that's when I wrote up the book on the Attwater's Prairie Chicken after that. And we did continue, I continued to, and Bill did too, we continued to do the surveys every year, until the numbers basically down to, you know, nothing.

Royce Jurries [01:08:26] But the chicken is you know, like I said earlier, it's a very specialized bird. The other thing is we have to remember, the Attwater's is on the outer edge, is on the very bottom edge of the prairie grouse range. And, you know, whenever things start getting bad, the edges start, you know, going first. And that's, I think, part of the Attwater's problem. With all of them, what my understanding is, all of the prairie grouse, like the lesser prairie chicken, and the greater, you know, we have the lesser in the Texas, up in the Panhandle. Their, their same problem - habitat problems. I don't know the details, but, and then in other states, too, all right, I see occasionally where numbers are declining.

Royce Jurries [01:09:18] And basically it's always a loss of habitat. And it's not only, it's not only with the chicken, but other wildlife species too, particularly as our population increases and that's what's really happening. You know, Harris and Galveston County, gosh, they were

growing so rapidly that areas that used to be prairie chicken habitat is now covered up for houses, or commercial buildings and things. So people there just displaced the chickens, you know.

David Todd [01:09:56] That's a good summary. Yeah, more people, fewer chickens.

Royce Jurries [01:10:02] Right. Yes.

David Todd [01:10:03] Well, this has been really interesting. Thank you so much, Royce. I hope that I can call on you again. There are so many things I'd like to talk to you about, but what you told me to tell you about the project is just fascinating, and really useful and helpful. And I wanted to thank you.

Royce Jurries [01:10:22] Sure. No problem. Just give me a call, David. Glad to help you.

David Todd [01:10:28] Yeah. Well, I'll look forward to seeing you again down in Colorado County.

Royce Jurries [01:10:33] OK, very good. All right. Good day.

David Todd [01:10:36] Thank you, Royce. Take care.

Royce Jurries [01:10:39] You bet. Bye.