

**TRANSCRIPT**

**INTERVIEWEE: Charles Stutzenbaker**

**INTERVIEWER: David Todd**

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

**David Todd** [00:00:04] Hello, this is David Todd.

**Charles Stutzenbaker** [00:00:07] Hello, David. How are you doing?

**David Todd** [00:00:09] Oh, well I'm fine. And before we jump into this, I just want to thank you for taking time to educate me about this stuff. It is, as you pointed out, it's complicated and I'm, I'm very new to it. So thanks for your patience and willingness to help me.

**Charles Stutzenbaker** [00:00:30] Well, I appreciate that. Well, let me introduce myself.

**David Todd** [00:00:35] Well, I should ask you, since we're recording this, I should just say a few notes and get your approval of this whole thing Mr. Stutzenbaker, so we're intending to do is to record this interview. And it would be used for research and education work on behalf of this nonprofit, Conservation History Association of Texas, and to prepare a book and a Web site for the Texas A&M University Press, and also for an archive that we have at the Briscoe Center for American History over at the University of Texas here in Austin. And of course, you'll keep all the rights to use the recording, but we just need to get a waiver so we can deposit this with the archives and use it for the research. And I wanted to make sure that's OK with you.

**Charles Stutzenbaker** [00:01:28] It certainly is.

**David Todd** [00:01:30] OK, well, let's let's get started and roll on into it. Thank you very much. You were about to say something before I rudely interrupted.

**Charles Stutzenbaker** [00:01:39] Oh, well, I. My name is Charles Stutzenbaker, but I go by several names. You know, my mother called me "Charles", my friends and associates sometimes unfortunately have stuck the nickname of "Stutz" to me. And that's the way I go. But by far and large, the majority of people that talk to me call me, "Hey you." So, I'm well known, no matter where I go,.

**David Todd** [00:02:15] I understand. Well, fair enough.

**David Todd** [00:02:19] And, and so let's see as we get into this, you are in Port Arthur, and it is April 9th, 2020, and we're conducting this by telephone. And I was hoping that you could help me understand your work with waterfowl, especially mottled duck, and the impacts of lead and nontoxic shot and that whole question that you explored so thoroughly over your

years. And I was hoping you could tell us a little bit about your background and your general training and your career.

**Charles Stutzenbaker** [00:03:01] Well, I guess this will be a long story. I was born on a cotton farm in Fort Bend County. On the small town of Meadville back in 1934. And so I have an agricultural background, to some degree. We farmed cotton. But then my dad left the farm. We sold the tractor and moved down and he went to work for the Sulfur Oil Company. I grew up in a small town on the last house on the edge of town, a little town, well it used to be a little town, it's part of Houston now - Rosenberg. We had a rice field on one side of the house and a pasture in corn, you know, around the rest of the property. So I had the opportunity to get out, and you know, stay outdoors. I did a lot of hunting within a mile of the house, and there was pretty good fishing, mostly bass.

**Charles Stutzenbaker** [00:04:16] I just grew up as avid outdoor person. I played baseball through most of my young life. I was in the Boy Scouts, was an Eagle Scout, and I served two years in the U.S. Army in an infantry unit. I've got a degree from Texas A&M in wildlife management. And I went to work for the Texas Game and Fish Commission, which was the forerunner of the present Texas Parks and Wildlife Department. But they sent me to Port Arthur to design and develop a 8 thousand acre research and demonstration area that was 100 percent marsh. So I moved to Port Arthur and just him and just (pardon me) fell in love with what was going on here either. I had an airboat and a marsh buggy and had a credit card and a pickup truck. And I had statewide responsibility. So I really dove head-first into it, and we developed the preserve here. It was originally called the Big Hill Bayou Wildlife Management Area. The name was later changed to honor of a state game warden killed enforcing the law.

**Charles Stutzenbaker** [00:05:54] But anyway, I met a girl from Mississippi, a school teacher, and got married and she liked it here.

**Charles Stutzenbaker** [00:06:03] And so I just got more deeply ingrained in wildlife work. It generally took about, oh, between five and ten years for an advancement in the system. But when I came to Port Arthur, they dropped a big development project on me and then I had a statewide waterfowl program which allowed me to travel throughout the state. And I was just a young fella; I was able to negotiate with federal government, with the other state agencies over waterfowl regulations, issues affecting waterfowl. It was a big job, but I put my head down and was able to stay with it. I avoided being sent to Austin for an administrative role. Pretty tough thing to do. Well, anyway, I retired 40 years later, sitting at the same desk that I sat at when I came to work. Through the years, I got small pay raises, as they changed job names, things like that.

**Charles Stutzenbaker** [00:07:26] But anyway, I am still living, still living in the same house that we bought when we got married. Becky, my wife and I raised two daughters. They're both A&M graduates. They're both school teachers. I have two granddaughters and they're both going into the medical field. One's at A&M, the others one's at Baylor. Anyway, my wife passed away two years ago. We have 63 years of marriage. While, of course, I'm retired. I'm staying here in the old house, really enjoying life.

**Charles Stutzenbaker** [00:08:04] I don't do much duck hunting anymore. But I'm going to be 86, here in just a little bit. I'm in real good health, but I don't do much duck hunting at all, and I do a little bit of fishing. But the trouble is that all my old fishing companions are already deceased or they have moved off to be near their children or they are just too old to fish. But

anyway, I have one, my younger daughter, and her husband live just across the pasture from me here in Port Arthur and I see them quite often. In fact, the reason I couldn't talk to you this afternoon, is because we are going to take one of the boats out and we're going to see if we can't find one of the locations for that might have some pretty good fishing.

**David Todd** [00:09:03] Good!

**Charles Stutzenbaker** [00:09:03] So going back to my career, I think I mentioned earlier that, I had a statewide waterfowl program.

**David Todd** [00:09:18] Could I interrupt you for just a moment?

**Charles Stutzenbaker** [00:09:19] Am I talking too much?

**David Todd** [00:09:21] No, not at all. But I'm going to ask you. The connection is a little bit broken up and I'm wondering if if you might be outdoors or away from a good. Are you on a cell phone perhaps?

**Charles Stutzenbaker** [00:09:35] I'll tell you what? I'm on a speaker phone. That may be the problem. You want me to call you back on a regular line?

**David Todd** [00:09:47] I think that may be better. I'm losing some of your words and I want to get everything I can, so.

**Charles Stutzenbaker** [00:09:52] OK.

**David Todd** [00:09:53] Can we try this once more, and maybe on the other phone?

**Charles Stutzenbaker** [00:09:57] OK. I'm going to hang this thing up and I'll grab another phone.

**David Todd** [00:10:01] Thank you so much.

**Charles Stutzenbaker** [00:10:02] See you in just another minute. Bye bye.

**David Todd** [00:10:04] Good. Try this.

**Charles Stutzenbaker** [00:10:07] Well, I'm talking on another telephone and I hear a little buzz, but can you hear me?

**David Todd** [00:10:13] Yes. This is much better on my end. You bet. Thank you so much for accommodating us.

**Charles Stutzenbaker** [00:10:19] Well, listen, I'm just a teeny bit hard of hearing. Too many rifle bullets, and shotgun shells, but if you'll just speak up a little bit I think we'll get by just fine. I got my feet up on the desk now, so I'm ready to go I guess.

**David Todd** [00:10:36] All right. Well, so we were, I think, just discussing your, your general training and career and your family and education. And I think we were just about to get into your work with waterfowl. And maybe you could tell me how you first became aware of the problems with with lead shot.

**Charles Stutzenbaker** [00:11:02] Well. Of course, you know, as a young biologist, I had a lot to learn. The majority of my work, in fact the entirety of my work, involved working with waterfowl, dealing with their life cycle. And the other part of my work involved trying to find out how best to manage wetlands, to manage marshes.

**Charles Stutzenbaker** [00:11:39] So I became deeply involved in aquatic plants. And of course, I was involved in all facets of waterfowl work. I looked at when there was a dead bird or a disease outbreak, well you know, I was dispatched. So I dealt with that and did a lot of banding early in my life, you know, to discover a lot of things about waterfowl and of course, I was involved in hunting regulations. I actually offered the final recommendations to the Parks and Wildlife Commission. And then upon their vote, those season lengths and dates and restrictions were, were, were placed into being legal. So I guess in short answer, I just worked with all facets of waterfowl and wetland areas.

**Charles Stutzenbaker** [00:12:44] In relation to lead poisoning, you know, I knew a little bit about the health problems that waterfowl had, but, um, in, I can't remember if it was '61 or '62, I was out in the marsh after duck season closed and I was out wading in water about you know, it was maybe knee-deep or ankle-deep. And I found a couple birds that couldn't fly. They were flapping across the water. So, you know, being in my middle 20s, I caught 'em and looked at 'em. And anyway, I wrung their necks, and I kept finding these birds out there. So I yeah, I guess I must have had half a dozen or more. And I took them back to the office and did a necropsy, which is really an autopsy. And, and they were just wasting away. There was any flesh to speak of on their breast, on their sternum. And so I started looking in their gizzards and started finding lead pellets of different sizes and different amount of wear. So I immediately knew that these birds had probably succumbed to lead poisoning. So I went back and I had a retriever, really, one of the best of many dogs I've had, and took the retriever out there, and we started filling up sacks of weakened birds and the dog was, you'd walk right past the clump of grass and not see a bird. The dog would start smelling, he'd pull a crippled, sick bird out of the grass. So, anyway, I wound up and I estimated that there were probably about twenty five hundred sick birds in that one area, and it had a real history of duck hunting. It was one of the better places to hunt ducks? I guess those duck blinds that were in the area probably dated back, oh, 50 or 60 years from the early 60s.

**Charles Stutzenbaker** [00:15:10] Anyway, I published my findings, and, and I just kept looking and then there were several more lead poisoning episodes and what it really was, this had been going on all along, but very few people went into the marsh after duck season with a dog and looked around. And we started finding lead-poisoned birds all over the country. Of course, I took the issue to the Central Flyway Technical Committee, which is made up of one representative from each of 10 states. It was Texas, New Mexico, right on up through Kansas into the Dakotas, and Montana and Wyoming. And the boys there weren't much interested in lead poisoning because they just hadn't had any experience with it.

**Charles Stutzenbaker** [00:16:05] Anyway, the government was aware of of lead poisoning. And they, some of the forward people were trying to get a nontoxic substitute for, for toxic lead. And there was another big outbreak of lead poisoning. I think, I havenow forgotten which state it was, I think it was Wisconsin, where many hundreds of Canada geese who were dying in an area, I think next to a golf course, you know, there are a lot of people there. And anyway, they, they diagnosed it as lead poisoning. And that episode was put on the TV airwaves and it was seen all across the United States. And anyway, people begin looking and,

gosh, they started lead-poisoned birds, you know, in late winter, just about every location they looked.

**Charles Stutzenbaker** [00:17:18] And anyway, then the central flyway states, the boys there changed their outlook on things and we started working with the federal government, on the nontoxic shot. There were so many ones that after you say again,.

**David Todd** [00:17:39] What what year do you think that might have been when the attitude changed among your colleagues in the flyway, the central flyway.

**Charles Stutzenbaker** [00:17:49] You know, dates are going to be tough for me to bring up. I'm going to say, the attitudes started changing in in the late 70s and early 80s.

**Charles Stutzenbaker** [00:18:01] But anyway, what happened, the key point I wanted to make was what happened was that there were a number of really strong opponents to nontoxic shot. And one of them, there were three major shot shell manufacturers and one of 'em, and I guess I'll tell you, it was Winchester, was really opposed to it. And the other two were kind of quiet about it. But, but Federal very quietly started manufacturing some steel shot.

**Charles Stutzenbaker** [00:18:39] And anyway, I was telling you that there was opposition. There was a lot of opposition among hunting groups. And the late Ted Stevens, the Senator from Alaska, responded to some political pressure and he attached a rider on the Fish and Wildlife Service, on their, the bill that gave them their money. I forgot, I missed the term...

**David Todd** [00:19:11] Their appropriation bill?

**Charles Stutzenbaker** [00:19:18] Appropriation bill was what I was looking for. Anyway. And this is what I've understood. I didn't have any direct contact with, with the appropriation business, but anyway the little rider in there forbid the Fish and Wildlife Service from using the any money dealing with this nontoxic shot and it just killed the program. And you know, I am not beating myself. You know, tapping myself on the back, but I just put my head down and I kept struggling, and kept fighting. And I wrote several articles. I think, didn't I send you a copy of some, copies.

**David Todd** [00:20:00] They were excellent. Yes. Yes. Thank you.

**Charles Stutzenbaker** [00:20:02] OK. Well, anyway, I kept that going, and of course, those magazine articles circulated all across the country. And boy there were a lot of people mad at me over that. And in fact, for a while, I went into hiding. I, I wrote the letters and made the phone calls to specific people. But I didn't go out in the public, I didn't go out in the open, because there was just a lot of pressure.

**Charles Stutzenbaker** [00:20:34] Anyway, I kind of got kind of got my story a little bit backwards. And there occurred the big goose die-off, in Puckaway Lake. And then if you get on your computer and typed in PUCKAWAY if you typed in and took away like you will see what happened there. And then right after that, they found a big die-off in South Dakota and then other people started looking in and the tide changed and the federal was, was providing information and there were some shopting tests where where shotgun shells were provided to hunters, on public shooting areas, you know, where there was some supervision. And they started bringing in the birds.

**Charles Stutzenbaker** [00:21:26] And then the government hired a fellow named Tom Roster who was quite a skeet shooter. And Tom came in and worked throughout the states holding shooting clinics. And he did all the work, did a lot of work here in Texas where he would go out with the guides and he had a range finder. And I went out with him a number of times and we were shooting primarily geese on the rice prairies around Katy, Lissie, Garwood, through there. And every time some birds came in, came in, well Tom would, would not shoot. But he was looking at those birds through the rangefinder. Anyway, he, after that, after the hunt was over, he'd asked those people, you know, how far were those birds you were shooting at? And they said, "Oh about 40 yards". And anyway, the truth was that most of those birds were about 80 yards away and 80 yards no matter what type of shotgun ammunition you have, you just don't bring down very many birds.

**Charles Stutzenbaker** [00:22:43] But anyway, things just kept developing. And then and, and so finally here in Texas, we, we took the Murphree Wildlife Area, which was originally the Big Hill Wildlife Area. We had public huntings. We hunted three days a week, and the first year and somewhere around '81 or '82. We allowed people to come in and hunt, but they had to hunt with steel shot and 12-gauge was the only shot available, only ammunition available.

**Charles Stutzenbaker** [00:23:29] So the guys who were coming in the hunt soon had the 12-gauges and some of them scratched around and they found the 20 gauge and the 28 gauge, where they could continue to shoot lead and we did it for one year. And then then the next year we, we just said that you had, if you wanted to hunt, you had to have a 12-gauge and you had to shoot the nontoxic shot. And we got through that and then we went into a much larger area, roughly from Port Arthur to Houston, and then we went statewide with steel shot. And there was a lot of animosity, a lot of griping and complaining. But anyway, you know, an overview of the non-toxic shot program across the country is it, then the other two shots shell companies saw the value in producing that type ammunition and in between (pardon me) between the three companies, they developed a much more effective steel shot than originally came out.

**Charles Stutzenbaker** [00:24:39] And today, and it's very many, many years later today, you hear no complaints about shooting steel shot except the price, but four shots shell companies, if you look at the advertisers, boy, they're all advertising, "we got the best nontoxic shot in the world."

**Charles Stutzenbaker** [00:24:58] So it was a program that needed to be initiated. And after a lot of hard work, by a number of people it came to fruition and so now we're depositing steel, nontoxic, steel shot, where birds feed.

**Charles Stutzenbaker** [00:25:19] The sad thing is it that that lead deposited there for the last hundred years is not going to decay, it's not going to deteriorate. It's there. And so when this group of people that are doing wildlife work today, the wildlife biologists, when they look at a gizzard they find a lot of steel shot, but they find a few lead pellets in there. And I just don't know what's going to happen. It's the situation, it might possibly get worse, because as the hunting areas decrease, as we have more subdivisions built in rice fields and more drainage, there's, there are actually fewer places for birds to come south and winter. And they're going to have to be feeding in some of the areas that have had historically the highest level of lead deposition.

**Charles Stutzenbaker** [00:26:18] So, you know, you have to flip the coin and see what happens. And of course that's a job for the next generation of young biologists to do.

**David Todd** [00:26:29] It carries on, doesn't it?

**Charles Stutzenbaker** [00:26:32] Say again?

**David Todd** [00:26:33] I said, it does carry on, you know, there's a challenge for every generation.

**Charles Stutzenbaker** [00:26:37] And I haven't you know, I've been retired over 20 years, so I really don't know what's happening. But I think it's better, you know, without a doubt, because we're not putting more lead. You know, I think in that article, I may have sent, there may have been a picture of a hand holding a bunch of pellets that came out of one shotgun. And, right now, I can't remember how many, how many number four pellets there would be in a 12-gauge shotgun shell. But we did a lot of studies at the Murphree area through the years with the public hunters. And we found it through the years consistently, these duck hunters shot six shots per bird retrieved. Now they didn't want to admit it. There were times when they went out there and shot twice and killed two, but lots of times when they shot a whole box of shells, and killed one or two. But anyway, I, there are a lot of lead pellets deposited out there. I mean just tons of it, because people started hunting back there in these marshes, really, in big numbers in the '20s and '30s. And then after the Second World War, when all the boys came home, well there were a lot more hunters infused into the hunting population.

**David Todd** [00:28:14] Well, so tell me something. I'm curious. I've read, and I hope this is accurate, that mottled ducks, for some reason, were found to have some of the highest lead exposure in the continent. So, is that true and why is that?

**Charles Stutzenbaker** [00:28:33] Yes, it is correct. It is correct. And the reason is that when Northern birds flies south to winter, in the early spring, they fly north and they scatter over big areas and a lot of them breed up in northern Canada into the Arctic, where there's no hunting at all. So they're not, they, when they were up and scattered out all over the place in the northern part of the continent, they were relatively free of picking up lead pellets. But the mottled duck lived year-round right here on the coast, right where the heaviest hunting occurred. So they, whenever they went out to feed, they were walking around in scattered lead pellets.

**Charles Stutzenbaker** [00:29:28] So that's really the story there. They're just, they live in a zone where it is really tough. That's compared to birds that go north or go up to Hudson Bay or James Bay up in the Arctic to to breed.

**David Todd** [00:29:45] I see. I guess another question and maybe this is related. I've understood that some of the highest lead levels in ducks were found along the Texas and Louisiana coast. Is, is that, is that a true thing or?

**Charles Stutzenbaker** [00:30:03] Yeah, sure. And the reason for that is, that historically, the, the majority of, the bulk of the hunters in Texas, Louisiana have hunted in these extensive coastal marshes. And if you think back in time, before for all the development, the zone from the mouth of the Mississippi come in west along the Texas coast, down to Mexico, was all marsh. There was just a solid band of marsh between there. And that's where the majority of the hunting took place. And that's where the majority of the pellets were deposited.

**David Todd** [00:30:47] I see. OK. I guess the focus from what I understand is, with this lead problem, has been in the waterfowl. But was there much collateral damage with predators or scavengers that might have been exposed as well? Or did you see much of that?

**Charles Stutzenbaker** [00:31:09] Well, the only, the only, the only critter that I'm aware of were American eagles, the bald eagle, and most people don't, didn't then understand or understand now that there's a lot of those eagles follow the fall migration of waterfowl. And they stay, those eagles stay real close to those waterfowl populations, and when they're really hungry, they'll make an attempt to catch a bird, early in the morning, early in the evening. You know, they can dive down. They might miss a dozen of them, but finally, they'll catch one and kill him and eat him. But we found out that what was happening is as these eagles were following the southern migration, they started picking up birds that were lead-poisoned. And as they eat those birds, you know, they ate the gizzard, along with the rest of the bird, they were picking up lead pellets that way. And then also they were picking up gunshot cripples that were scattered, wherever you had concentrations of migrating or wintering waterfowl, you had crippled birds out there, and eagles were preying on them too. So really, in my experience, the eagles were the only ones that suffered from lead. You know, if or other if other animals did, it just didn't, it just didn't register.

**Charles Stutzenbaker** [00:33:04] I, I looked in the stomachs of a number of alligators, very, you know five- and six-foot gators and I can't remember the number, but a high percentage of those alligators had lead pellets in their stomachs. And again, we envisioned that that was a result of them eating gunshot cripples, that could either have lead in their gizzard or a few pellets in their body. But that's the extent of my knowledge of damage to other species from the lead.

**David Todd** [00:33:47] And I guess this this story about lead ammunition and wildlife, it was really focused on waterfowl and marshes for many years, but I've heard that it's gotten extended and stretched too concern about dove and big game and even fishing sinkers. Have you been following that or is that?

**Charles Stutzenbaker** [00:34:12] No, I haven't, I really haven't. I kept up with the dove business, because the dove specialist originally worked for me, as, you know, as a younger man and we were really good friends, but I know that there had been some discussion about switching over to lead in shooting doves. But trying to tie doves to waterfowl is really hard because you're hunting doves over mostly agricultural areas, over pastures where historically there haven't been many shots fired and not much lead put on the ground and then the doves are, you know, when a duck comes along scooping through the mud with his bill, he's looking for small hard-coated seeds. And we think that that's why they're so susceptible to lead because they think it's something good to eat.

**Charles Stutzenbaker** [00:35:19] And then, and then also birds have gizzards and the gizzard has to have a certain amount of natural grit, little pellets of the various minerals, flint and things like that. They need that to help grind the food in the gizzard so it can be digested. So, so ducks could be actually, when they, when they scoop through the top sediments, that's when they find a lead pellet, they may either think it's something good to eat or something to add to the gizzard. And that's really pretty logical. And then when you're out duck hunting, when you shoot all those pellets in the sky, they fall and when they when they hit the ground, they're laying right on the surface of the ground and easy to pick up. In a dove, on the other



hand, is living in mesquite trees and pecan trees, in pasture with weeds and rice fields and corn fields. And there's just less of an opportunity for them to find pellets.

**Charles Stutzenbaker** [00:36:39] So I don't know. I think it's going to be you know, from my experience, I think it's going to be a tough sell. I think it would be really good if they would switch to nontoxic shot in all the shotgun shells, probably with the exception of buckshot, you know, for hunting deer. But for small pellets, I, you know, if I were still working, I would be on the bandwagon suggesting that it be changed.

**David Todd** [00:37:12] I see. Well, and, and what do you think the impact has been on waterfowl hunting and on toxicity for ducks and geese in this shift from lead to steel over the last generation? Do you think that the exposures have gone down? Or changed?

**Charles Stutzenbaker** [00:37:35] What was the final question? It's the years, some exposure?

**David Todd** [00:37:39] Yeah, I was curious if you've seen a change in lead exposure because, you know, the lead that's being shot now is is, you know, much less than it was 30, 40 years ago.

**Charles Stutzenbaker** [00:37:54] Well, you know, I think I can answer your question. When we, I shot the Federal, the Federal shot shell people, provided some number four steel shot. And I went out with with one of my assistants and we made an experimental duck hunt, and we killed 20 pintails and didn't lose a single cripple. And this is when everybody was saying aw you're just going to lose them crippled from shot. But anyway, we shot these 10 birds and we brought them in and we picked them very carefully and we probed the, the, the pellet entry holes to see how deep the pellets were going. We did a little study like that. And anyway, we, you know, we kept doing that and we kept looking at gizzards. And the, when we went to shooting steel shot by the public in these public hunting opportunities, I think it was, I think it was three days after the first hunt, we, when the hunters would come in, we would take the gizzards from the birds, and then that afternoon we would open up those gizzards and look at the contents. And I think three days after the first steel shot was deposited out there in this particular marsh, we started finding steel pellets in the gizzards. Not many, but we found some. And of course, again, what was happening when those hunters would shoot, those pellets would eventually drift to the ground. And they were laying right there on top of leaves and mixed in with seeds. And so we almost immediately started seeing steel shot mixed in with the lead. And I don't know, but I would be willing to bet that if you looked at duck gizzards today, that were taken from that very same area that you would find both lead and steel. But I think you would find more steel than lead. So, you know, you could speculate into the future, lead will slowly fade away.

**Charles Stutzenbaker** [00:40:31] And you know, some species are pretty resistant to toxic lead and then some aren't. But I can't tell you how many pellets it takes to kill a bird. There were some studies in Illinois, the Illinois Natural History Survey. What they did was they trapped wild mallards and they fed some of them, or actually, you know, poked steel or lead down the, down the throat. And they had a sample of birds like that and they they leg-banded them and turned them loose. And the ones had been given a dose of lead were killed at a much higher rate than those that weren't dosed. So the vision that what was happening was it did just those, the number, I think they were putting four or five lead pellets per gizzard. They envisioned that the birds just weren't as healthy and as alert and they were more susceptible to being killed. It was, you know, a pretty good study. But it's just one of the studies that adds just a little bit more information about why we should have switched from lead to steel.

**David Todd** [00:41:55] Well, do you think that the lead... It sounds like when you first started finding these birds that were affected back in the early 60s, they, they were emaciated and just couldn't put on weight. But do you think that it affected their ability to fly?

**Charles Stutzenbaker** [00:42:15] Oh yes.

**David Todd** [00:42:18] And maneuver?

**Charles Stutzenbaker** [00:42:19] Sure. You know, we had a lot of lead-poisoned birds in captivity and we watched them fade away. But when the lead really started reacting on them, they, they weren't digesting food. They kept trying to eat food and their crops would be full. And you'd find some of them that there'd be food up in the bill that wasn't going through the digestive system to feed the bird, to give the bird energy. And without that energy being put back in the bird, they started living off the stored fat that they had. And then, then that's when they really became poor fliers. And I think the majority of them just quit flying. And of course, you know, it was a pretty nice place to be, real nice marsh, but they just stayed there and they got weaker and weaker. And finally, when they got really weak, they would just get in the grass and hide, and of course that's where they died.

**Charles Stutzenbaker** [00:43:37] But I think also in that magazine article there is a picture of a goose, of a goose breast, showing you that there's just very little flesh on that breast. Probably 90 percent of the edible meat on the breast of those birds was gone, was consumed in the process of providing energy to the bird.

**David Todd** [00:44:06] Yeah, we we talked a good deal about the waterfowl. Can you talk to me a little bit about the hunting community and their reaction? I think you said that, you know, that it was kind of a mix, some of the folks were receptive, others were kind of resistant. What do you think was going through the minds of hunters when when these, you know, changes were proposed.

**Charles Stutzenbaker** [00:44:36] Oh, they were really unhappy. Somehow the story got out, it may have been one person or maybe a hundred, I don't know, but the story got out that this non-toxic steel just wouldn't kill birds, that there'd be so many bird you'd shoot and it wouldn't kill 'em. And that spread throughout the nation. And, it's, you know, it's looking at human nature for a lot of people, it's just really easy to accept it. This is bad. Here I got all these lead shotgun shells in the cabinet there and I intend to shoot them next season. Why should I should throw them out and why should I be forced to shoot something that's no good? And that was that was the premise that we battled all the way through. It just took a long time for a few people to, you know, to take the other vantage point to, to agree with us.

**Charles Stutzenbaker** [00:45:46] We went out, we did a short study and we went out and we, we, we killed a little over a hundred birds of all species and put them in the freezer and marked them. And then we invited some pretty influential people to come out and bring their hip boots to look for sick and dead birds. And early, early that morning, unknown to these people, we sent some airboats out and we started hiding those hundred birds in about, oh about a hundred-acre piece of marsh. Real pretty, typical marsh. And they put some birds deep in the grass and they put some birds on top of grass and they put some birds at the edge of ponds. And we, they threw some birds in the middle of the ponds. And anyway, we, we brought the searchers in and we lined them up. And they were about, about 30, 40 feet apart. And we told them to walk in a straight line. There was some trees there on the horizon kind

of aim on those trees to see if you see if you can find any dead or crippled birds. I can't remember how many it was. Out of a hundred, I think they found three or four, and the three or four that they found were right at the edge of the water or out in the open water. So, anyway, and they were a couple of commercial guides that were pretty vocal against it. And and, you know, when it came to the issue of why don't I see dead birds laying all over the place, you know, they're not being killed by lead, some pretty influential people saw what was happening and then the tide slowly changed. And the guys that were were going to favor nontoxic shot had to be kind of quiet, you know, around their friends. You couldn't go to the barber shop and start talking about steel shot, or you might be, get pushed into the corner.

**David Todd** [00:48:08] Interesting. Wow. Well, do you think it's just human nature that change is hard to accept or what?

**Charles Stutzenbaker** [00:48:18] Well, I'm not a psychologist by any means, but oftentimes it takes a while, you know, a lot of effort to change your philosophy, and just change the way you do things.

**David Todd** [00:48:37] Well, this is fascinating. I really appreciate your help. And, and, and , you know, will re-read the articles you sent me and I think you suggested I should speak to Rob Sawyer.

**Charles Stutzenbaker** [00:48:52] How well do you know Rob?

**David Todd** [00:48:55] Well, not real well, but he's a friendly, open guy, and I'd be glad to talk to him.

**Charles Stutzenbaker** [00:49:02] Okay. Well, he's a, you know, he's a geophysicist. Traveled all over the world. He's a super avid duck hunter. But he has written, he's written two books already on the history of waterfow; hunting. And, boy, they are top-notch books. You guys need to get someone to buy one for you, for you. Mean it's really good.

**Charles Stutzenbaker** [00:49:29] But he's he just sent his third book off to the printer and he's run into some problems with people that were going to subsidize the cost of printing backed out. And he's going to, he's going to take on the whole cost of printing all those books. It's, it's more, it's a pictorial history of hunting. He, you know, he was an amazing researcher. You'd just be astonished if you could see his reference list. He went into the newspapers back in the 1800s. And, you know, a little newspaper like the Galveston paper printed stories about duck hunting. But he's got all that, well, I mean, I think that he's got a menu from one of the top restaurants in New York City where I think it was a hundred dollars a plate back in, in, say, 19, say, 1880. A hundred dollars a plate for a roast canvasback duck, if you can imagine that. But he is, but he just has an amazing field of information and, and also photos. But, I worked with him and he's going to use a number of my photos in the book. And I wrote one of the chapters for him. You might well, of course, the book is you know, the book is yet to be printed, but I would suggest that you call Rob. He's real easy to talk to. And, and he just has a wealth of information that needs to be preserved.

**Charles Stutzenbaker** [00:51:17] And earlier in our conversation, you mentioned that the University of Texas has a repository for.

**David Todd** [00:51:25] Yes sir.

**Charles Stutzenbaker** [00:51:27] I'm I have two daughters and only one of them is a hunter. But hunting is going to fade away from my family, you know, as time goes on. But I have, I have a bookcase just full of publications from all the states dealing with wildlife and dealing with aquatic plants. And I, and I've got photographs of the work that we all did as wildlife biologists, you know, banding birds, and cutting into gizzards, and certain things like that. And I'd been looking for a place to put all my, and I was told that Sam Houston. No, it's, what's the university in, in? Sam Houston State. Is that still the name of it, in Huntsville?

**David Todd** [00:52:20] Yes sir.

**Charles Stutzenbaker** [00:52:25] I was told that they had a repository for things like that. And then I was told that in Liberty County there is a repository. There was, I can't remember the name of the governor - Governor Allen Shivers, who helped set up something like that. So anyway, I, you know, I'd be interested in, in putting a number of my pictures and documents to be preserved for future.

**David Todd** [00:52:57] Yeah.

**Charles Stutzenbaker** [00:52:57] You know, Rob, is the one that you need to talk to, as far as getting his bibliography. It's just amazing.

**David Todd** [00:53:09] OK. Well, I will follow up on this. And thank you so much for your time. I really appreciate it and the articles you sent me were super helpful as well. So I'm obliged to you. Thank you. Very much.

**Charles Stutzenbaker** [00:53:23] Well, if I can help any more, just give me a call.

**David Todd** [00:53:26] OK. Well, it's been a pleasure. I really thank you.

**Charles Stutzenbaker** [00:53:28] Do you have any idea of when your book wmay go to print?

**David Todd** [00:53:35] I think that the deadline is the spring of twenty two. So another couple years. Yeah, it's a slow process.

**Charles Stutzenbaker** [00:53:44] Well, tell me about it, you know, I've published an aquatic plant book. That was actually how I was. Are you aware of the book?

**David Todd** [00:53:57] Yes, sir.

**Charles Stutzenbaker** [00:53:59] OK. You were aware of the plant book. Anyway, you know, I was working on it when I retired and I signed a contract to come back a couple years to, to get it finished and do all these pen and ink drawings. I know what you talk about when it takes time.

**David Todd** [00:54:18] You have to be patient. That's right. It's a long process.

**Charles Stutzenbaker** [00:54:22] I want to wish you the very best of luck in this project. And if I can help in any way, just please call me.

**David Todd** [00:54:29] All right. Well, you're very kind. Thank you so much.

**Charles Stutzenbaker** [00:54:32] I've enjoyed talking to you. All right. Goodbye now.