

TRANSCRIPT

INTERVIEWEE: **Dede Armentrout** (DA)

INTERVIEWERS: David Todd (DT) and David Weisman (DW)

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Note: numbers mark the time codes and reel numbers, respectively, for the VHS tape copy of the interview. "Misc." indicates various off-camera conversation or background noise, unrelated to the interview.

DT: This is David Todd. It's June 22, 1999 and I'm here for the Conversation History Association of Texas and we're at Southwest Texas State University in San Marcos. And we have the pleasure and fun of interviewing Dede Armentrout who was head of the South Regional office of the National Audubon Society and taught biology and other topics and has made many contributions to conservation in Texas.

DA: Pleasure.

DT: I'd like to start by talking about your childhood and maybe any influences that your parents or early friends or early mentors that you had or your interest in conservation and the outdoors.

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DA: Okay. My parents were both first generation off of the farm. My—my grandparents on my father's side had had a—a farm until an injury caused my grandfather to sell the farm and buy a grocery store. And my grandparents on my mother's side ran a small diversified farm and ranch in Central Texas until they retired, sold the ranch and got too old to run a farm and ranch. So with that background, my parents were both interested in the out of doors and much of our family recreation revolved around our doo—outdoor activities that were not particularly equipment oriented or facility oriented, just enjoying the out of doors and hiking and doing nature walks and that sort of thing. So that—that was sort of a natural entrée into—into biology and learning more about what I was seeing in the out of doors and then eventually into environmental activism to—to help stop some of the more damaging things that were happening to the environment.

(misc.)

DT: Could you elaborate a little bit about outings that you took with your parents?

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DA: Okay. Sure. My—my dad always took the—the family on a big vacation every summer. It—it was our big outing and he was an historian by—by affinity. He's an engineer by trade but he loved to take us—drag us around battlefields all over the United States. And I always found myself a little less interested in the—the body counts than in the—the nature. Most—most of the national—national monuments and historic sights have quite a bit of natural habitat in them and I seem to find myself drawn to the—the birds and the lizards and the things in the bushes rather than the—what I thought was rather—were rather tedious explanations of the battles that went on. Also, my—I had an older brother who liked to torture me by throwing animals on me. He would catch snakes or turtles or lizards

and throw them on me and—and one day he caught a little Mississippi mud snake in the—in Buffalo bayou and he used to—and this is a snake that's shiny black on the back and sides. And a deep red on the ventral scales. So when he held it up—it was writhing—and he held it up and exposed those ventral scales, it was just stunningly beautiful. And I said, that's gorgeous. Let me see that. And this surprised him because he was about to throw it on me but now—but now I wanted to see it so he withdrew and said, no you can't see it. And I insisted on seeing it and he didn't want me to see it and I think, from that point forward, instead of being afraid of reptiles and amphibians, I was fascinated by them and just developed a real interest in—in animals. I found a nest of baby birds in our garage that had fallen down and I just saw it—the mother wasn't feeding them so I should go to the end of our block and dig worms and feed these babies birds. And I developed a great respect for mother birds and father birds after trying to keep this little nest of hungry pre-fledglings alive and I did not succeed. One by one, I—I lost them, was not diligent enough as a worm digger but it also interested me to—to think about what effort it took for wildlife to—to constantly find food in an urban environment and gather it and deliver it to the—to the offspring. So those were kind of formative. I—I still remember them. I'm sure they had a—an important aspect of, you know, making up what I became later as a biologist. When I—I went to high school in Pasadena and South Houston High School and a lot of us would go

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down to the coast just—we were just a very short drive to the coast and we'd romp in the sand dunes and—and in the water and sometimes off the jetties. And I enjoyed it. I thought I was a relatively observant person but when I took my first freshman biology class, we were in an honors biology group and we were allowed to go with the senior ecology class down to the same area of the coast in Texas that I'd hung out at the whole time I was in high school. And we saw all kinds of animals that I'd never seen in my life. We found brittle starfish on the jetties and sea cucumbers and sea hares and little cone jellies that glowed in the dark and all kinds of creatures. And I was just fascinated that there could be so much life and such complex system right under my nose and I wasn't even aware of it much less knowledgeable about it. So I think that it was that field trip that sort of set the course in my life to want to learn more about biology and understand more about the world right under my nose especially but, you know, beyond that.

DT: Did you have any teachers or guides that were helpful?  
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DA: I did, we had—I was involved in scouting a lot and there—at—at—in those days, girl scouting had—had a lot to do with outdoor activities and self sufficiency and observation, sort of quiet observation of nature. And there were a lot of scout counselors who were important to me and—and sort of introduced nature and introduced a—a way of living in nature that was softer and gentler, you know, not so much conquest of nature as an understanding and appreciation of natural things. Had an exceptional biology

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teacher when I was in high school and he really believed in—in students reaching beyond the sort of standard expectation for a sophomore high school kid. And he had me doing research. I was doing chromosomal analysis of a—of a particular sunflower that grew native in the Houston area and—and really produced some—some data that was publishable. That was really exciting and great fun and I think that's where a—a passion for biology kind of ignited, even before the field trip, I was interested in biology and a little bit

of research. And my college professor—so—I—I went to Southwest Texas. This was my—my alma mater for my baccalaureate degree. And Southwest Texas, at the time, was strongly oriented toward field biology and more general biology. Each biology student was expected to be very rounded and have physiology classes and chemistry classes and natural history, taxonomy, comparative anatomy and comparative physiology classes. So Southwest Texas was turning out generalists at a time when most universities were beginning to hyper-specialize. When I left Southwest Texas, I was very interested in ecology and the—the state school with the most active published—publishing biologists working in field biology was Texas Tech. So I got on up there and—and had a stronger physiology background from here and connected with Francis Rose, who's now chairman at Southwest Texas but Francis was in a relatively new field called physiological ecology and it was a field that looked at how animals adapt to their environment from a physiological standpoint rather than from a structural standpoint. We think of maybe thick hair and short ears as structural adaptations to cold environments. We look at enzyme systems that are adapted differently or blood supplies that are shunted differently and physiological adaptations. And that was a—a real

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interesting field for me to realize that there are limits to where we find animals. And—and there also millions of years of wisdom involved in animals' adaptation to their environment and that we, as a human species, sometimes change the environment in a rather cavalier way and disrupt these millions of years of wise adaptations and physiological adjustments that are real hard for animals to kind of undo and—and reverse. Ask me something else.

DT: There were some graduate school teachers. I think you mentioned Russell...what sort of influence did he have?

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DA: Okay, who were the people during graduate school that were sort of formative in my continued interest in both biology and beginning—or fledgling interest in environmental activism. One of the reasons that I got interested in environmental activism kind of on my own was due to Ned Fritz who was a—an attorney from Dallas an activist in Texas who sent out alerts and let people know what was happening on the environmental front. And Ned had a subscription to his—to his newsletter but if you wrote a letter to your congressman on some topical interest topic and sent Ned a carbon copy of the letter you wrote, he'd—he'd sign you up as a subscriber for no additional fee for a year. And as a struggling graduate student, that was a good price to pay to be informed about Texas environment. So I got involved in the Texas Committee on Natural Resources as a letter writer and wrote more than my requisite one letter per year.

But I got interested in what was going on and would talk with my professors about some of these trends that we were seeing biologically in Texas. And found, to my disappointment, many professors were—were not interested in using their knowledge and using their—their scientific acumen to—to inform the general public or to speak out against some things that were harmful in Texas. The exceptions to those were Russell Strontman(?). Dr.

Strontman was a—an arachnologist at Texas Tech. He worked on Arctic mites. Had made many trips to—to Antarctica—actually worked on Antarctic mites. And he did a lot of work all over the world on these little mites that—that occupy very improbable places. And he was such a pioneer in Antarctica that they've actually named a mountain for him in Antarctica. But Russell was different. He—he would speak out at public hearings and he—

he was quite a pedagogue. He was well informed in  
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all fields of biology and he would speak in a vernacular but he would draw upon a great deal of science and wisdom to try to put in context what the impacts of—of people's plans were. And—and he also I think was a great role model and—and having both the scientific discipline to gather one's facts and then the courage and commitment to go ahead and step beyond the role of a scientist and onto the role of an advocate to push for policies that were important. Our decision makers, in Texas and in general, are abysmally ill educated in biology. And a lot of the decisions that we make, there are a biological basis and biological impacts. So it was—it was great and it was inspiring to see Russell Strontman as a role model from Texas Tech. Francis Rose, who I worked with was—was active in a similar way and then Clark Hubbs with the University of Texas and Frank Blair with the University of Texas were also two heroes who spoke up for the environment. Fred Galbeau from Baylor was another and Dick Baldoff from Texas A&M University. Seemed like each university had maybe one or two scientists and their—and their—who spoke for the environment and the rest of the scientists were fairly timorous and somewhat introverted and—and maintained a lofty air of scientific purity. Didn't want their work politicized but, in fact, didn't allow their work to be used to drive decisions that needed the benefit of their knowledge and their perspectives.

DT: Can you tell us about those outside the scientific community and what their roles were?  
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DA: Yeah, Yeah I actually came to Texas when I was nine months old. So—but when I—when I went to work—when I left teaching and went to work for the National Audubon Society as a—as an environmental organizer and activist, there were—in addition to those academicians whom I already knew and had contacts with—I met—I think Don Kennard just right way. Don was a state senator. He had been the author of this—the bill that dedicated sales tax to—to create parks. And he had been the author of the Texas Natural Laboratory system which was a system of—of finding some of the finest areas of Texas from a—from a biological and archeological standpoint, locating these really important lands. Many of them, if not most of them, in private ownership and identifying the resources that they held in case these lands might ever come up for sale. And Don's vision was, if these land are ever for sale, the agencies in Texas that buy land ought to know and ought to be first in line to make some of these areas public parks or wildlife refuges or, you know, special monuments and—and—and areas. So Don called me thinking Audubon could help in this venture and I immediately could see the wisdom of it and was quite enthusiastic about what he was trying to do. And he immediately saw I needed a lot of help that, you know, I might—I might be an enthusiastic young scientist but politically, I was really wet behind the ears. And so Don started getting me invited to—to events and functions and he introduced me to many of his political contacts. And just kind of help me get started in the Texas political scene and, I think, gave me a little bit of validity that I wouldn't have had on my own. Helped to open some doors and gain entrée into some offices that would have taken probably decades or never to—to have gotten into.

DT: Could you run down that a little bit and say something about your political education to...

(misc.)

DT: ...to understand how the legislative process work and agency procedures and the

personalities involved.

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DA: The—the political education was in—I guess, I was inoculated somewhat by Ned Fritz and his—and his newsletter because he would inform people of what the process was, where a particular—where a particular issue was moving and where the pressure points were. So I knew, in theory, which agencies were working on which areas and—and somewhat how to get things done but I didn't have the personal entrée into a lot of these offices and I didn't quite know—I knew that Audubon had a lot of potential power in the state but I didn't know how to use the power and what was the most productive way to use Audubon's potential and Audubon's a membership organization with a strong national organization. It's science based and it has a lot of resources but I didn't quite know the best way to use it. And—and between Ned Fritz and Don Kennard and then Charley Callison(?) who was an Executive Vice President of Audubon, I got a quick education in politics and—and especially with respect to political activism and grass roots groups. I'd—I knew the science reasonably well but I learned quickly that—that

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there were sort of two expressions of power in Texas that caused heads to jerk up and one of those was a whole lot of money and the other was a whole lot of votes. The ability to—control a whole lot of votes or the perception that you had the ability to control a whole lot of votes. So I learned to cre—to create a system but also to have a system where it wasn't just one person going in and talking to a representative but it was a person from their area who was in connection with some community leaders in those leaders and each of those community leaders might be an officer in several different civic groups and we began to—to exploit the multiplier effect that we had within the Audubon Society, the kind of community leadership that we had. And—and what I would do is get backup from my leaders in a given community. They would write letters maybe ahead of time saying, Dede Armentrout is going to be in town and she'd like to meet with you. And I hope you'll meet with her on my behalf and then I would have the meeting and then I would report back to the grass roots what happened. And then they would write a follow-up letter saying, we thank you for meeting with her and we were real disappointed that you didn't vote our way. But that way, we were pleasantly surprised that you did. But that way people in offices began to develop a perception that it wasn't just me, that it was an organization and that people back home were going to learn what they did and—and would hold them accountable, to some extent, for the decisions that they made. And it—and it worked really well. And Don just—Don helped immeasurably just by telling me the who's who. Who—that there are personality quirks as—as anybody who's worked in Texas legislature knows, the personality quirks are probably more important than—than the—the dry biographical sheets about these people. And Don knew who—who cared about what and there might be somebody who was a terrible person on the environment except that they were an avid hunter. So he would say, well, if you use this angle, you can get to this guy because he loves hunting. If you can relate your issue to hunting you'll—you'll get him. So, you know, Don helped a lot in strategy and helped a lot with just personalizing the—the legislators.

DT: Were there other legislators or agency people that you went up against either as partners or people that were more of an obstacle.

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DA: Well, before I answer that as far as other—other people involved, I—I would be remiss

if I didn't mention Bob Armstrong, who at the time that I started my environmental work, was the commissioner—commissioner of the General Land Office of Texas. And Bob had been an environmental pioneer in Texas. And Bob's style was to just do the right thing and then figure out later how to justify it from the standpoint of his legislative mandates and the like. But Bob did a lot of good. He managed his agency with a balanced mandate between exploiting state resources to generate money for the school revenue fund but also protecting those natural resources. Bob had a real—had and has a real love for the land and a real love for natural resources, real personal connection to it. And I think he had—he felt a personal mandate that these resources that he treasured so much be around for generation after generation after generation. And Bob got a lot of things done. In his time, he got things done quietly, kind of behind the scenes and what I would call very soft environmentalism. And I really respected what he had

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managed to accomplish and how—how he did it, how he set up that agency to become even harder to change as he left. It was hard for his—for his successors to change the balance that he achieved without—without creating a lot of attention and—and no small amount of gnashing of teeth if—if certain programs were taken apart. I thought that was really good. You asked a question, I guess, about foes within the system. Well, Texas when—when I started working in the environmental community was under—I would say under sort of a three pronged control. The petro chemical industry was probably the most powerful lobby in Texas and after that, agriculture and real estate. And it—and it was a toss up on any given day as to which of those three was holding the most power and pulling the most reins at the legislature or at the state agencies. But there was an awful lot of money in those three areas and a lot of power exerted politically. And often it was very difficult to get anything done at the legislature because the—if you looked at the three areas that—that posted the greatest environmental threat to Texas, you could also say it's the petro chemical industry, corporate agriculture or large scale agriculture moreso than—than small mom and pop agriculture and—and real estate development just because of the population increase in the State of Texas and the amount of land and resources that were being consumed by unfettered growth. So it was very difficult and—and I don't claim many successes at all at the state legislature. It was a very difficult system to work in. Victories were few and far between and more good was done I think working at agency levels than at the leg, with—with some notable exceptions. But, for the most part, the legislature was—was not the happiest place to work and not the place where one got positive reinforcement for being an environmental activist.

DT: What sort of response did they give to you when you would make an environmental argument?

(misc.)

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DA: The—the kind of reaction we would get from the legislature in making an environmental argument against a given bill or in a favor of a given bill was often very guarded and—and dubious. Sometimes it was downright hostile and sarcastic. In some cases, we didn't even get meetings. We couldn't get on a—a witness list to save our lives, at first. And—and in some cases, we just got a cordial reception. No questions were asked, no ideas were—were developed and we were just thanked for our input and then the vote came down the—the way that it would have come down without any—any testimony at all.

There were—there were some stars. There were—Fred Agnitz(?) was a wonderful legislator from Dallas who—who did some terrific things. And, as I mentioned, Don Kennard did a lot and there were some bright moments in the state legislator. But—but for the most part, it was under the control of petro chemical and—and agriculture and—and later real estate. A lot of the key chairmanships were held by people from agricultural areas. And—and agricultural areas seemed, I think, unnecessarily paranoid about environmental issues and environmental concerns. There—I always regretted the fact that—that I felt agriculture and environmental groups had a lot more in common than they had in conflict but there was just this great concern that

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regulation would over-regulate their operations and threaten their very livelihood. There were also some real emotional issues in agriculture, particularly pesticide regulation and predator control. And agriculturists felt really threatened by those two agendas within the environmental community.

DT: Can you tell about those two efforts?

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DA: Yeah, predator control was a—was a big issue. It was an emotional issue and it was really a clash of symbols. When I first got involved in—in Audubon, with—within I think at—the very first year that I was in—involved as a staffer in Audubon, the Texas governor, Dolph Briscoe, petitioned the Department of Interior for blanket kill permits that would allow anybody in 39 West Texas counties to kill Golden Eagles or Bald Eagles at any time, for any reason, with absolutely no limits. And I probably hadn't been on the job six months when that one came down the road. And my immediate response was to get our mailing list from those 39 West Texas counties and write a letter to each—each member that we had saying, when was the last time you saw a Golden Eagle and what do you think would be the impact if anybody in your county could shoot one at any time, for any reason? And if you don't like this petition, I'd suggest you write Matt Reed who's nec—head of Fish & Wildlife Service in Department of Interior which is the entity that had to improve this blanket kill permit. And we got that stopped. But the—there was a real misperception about eagles and their impacts on livestock losses. And it—it was

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pointed out to me as—as this dialogue started, this battle between save the eagle and kill the eagle that ranchers were very ill informed about what was causing their mortality in sheep and goats. And as a scientist, I had looked at data and—in fact, I had helped—Texas Tech had a contract co-sponsored by the Wool Growers Association, the Fish & Wildlife Service and Audubon to go into eagle nests and pick out all the bones in an eagle nest and analyze all the bones and—and try to infer from that what the feeding habits were of Golden Eagles, especially in these high eagle attack report zones in Texas. And I helped sort bones and did—I didn't do very much in that, just a little bit of help with a colleague but assisted it enough to have taken an interest in it when I was a graduate stu—student. And—and found it fascinating that the eagles were taking very few sheep and goats, virtually no adults and very few lambs and kids and most of those taken when you could—when you could make any conclusion at all, you had to conclude that they were scavenged and just pieces of—of animals would show up in a nest. And they would be old enough that it was obvious the eagle wasn't capable enough of making a big kill. So our approach was, if you killed every eagle in West Texas, you wouldn't solve the rancher's problem on

mortality on their kids and goats because something else is killing their kids and goats. And we rocked back and forth a long time with the livestock industry when a forward thinking ag extension agent named Dale Rollins(?) to prove Audubon wrong, initiated a program called Operation Dead Lamb. And this program—in this program, they brought ranchers in and showed them how to analyze a carcass to prove that eagles killed it. And then they invited ranchers to scour their pastures for lamb carcasses, analyze the carcasses and turn in any that were eagle kill so

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they could begin to generate the database to prove that eagles were indeed significant predators on lambs. Well what happened was they got 39 lambs in—in—in a two year study. That wasn't the thousands they expected. But they sent ranchers out to their pastures who really started looking at what was killing their lambs and they started realized it wasn't eagles. And the 39 that came in were necropsied professionally and it turned out that 13 of those lambs were actually eagle kills. So they began, through their own efforts, to realize that eagles weren't killing a high proportion of their animals, that their mortality problems were from another source and that that's where they ought to put their revenue and their attention. So it helped a little but for—for us to have the controversy in the first place but—but it was more of a help for the ranching industry to—to take a scientific approach and to learn on its own, without guidance from the Audubon Society what was killing their animals and what might prevent it. That—that—that exercise really translated into a better working relationship with Audubon and the livestock industry and—and our encouragement of that process and our sort of validation of their efforts, I think created some credibility with us. That we weren't just position based, that we were willing to re-evaluate if their data had shown a different—different outcome. We also—we also started a different kind of approach with respect to predator problems in acknowledging that ranchers had legitimate problems, that they were suffering losses and that the most important thing needed to get the basic—the basis of what those problems were, what was the real cause of—of their losses. And then what kinds of behaviors were more likely to alleviate those losses. And what we came up with and what the data showed us was that minor management adjustments and, in some cases

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major management adjustments, could often stop predation problems even on true depredation problems. It wasn't necessary to do the sort of panmictic killing of predators to solve problems even when the problems were caused by predators. That sometimes simple shifts like cleaning up carrion from a pasture so that you didn't track predators into the pasture. Timing the lambing and kidding to come a little later in the year after eagle migration had passed, eliminating poisonous plants in the pastures, watching for sure ewes and nannies with their kids because they tend to have the most problem, they tend to abandon their kids at a higher rate. Just management adjustments could often stop animals from dying and the—and stopping the dying stopped attracting predators into the pasture, predators that might start out as scavengers but after eating up all the dead prey might—or not prey but the—the carrion might then shift their appetite to live prey. So what—what we began advocate was a stepwise approach to predator—or to perceived depredation problems due to predators. And step one was to make management adjustments and try that. Step two was to try non lethal programs that discouraged predators, things like electric fencing, changing pastures, penning animals at night, the kinds of practices that



help reduce the vulnerability of—of the prey base, using guard dogs, guard donkeys and—and a variety of other guard animals to discourage predators. And then third, to—to attempt to focus any lethal effects on a target offending animal rather than on a whole species or, you know, a whole class of carnivores and then finally, a lethal—a broad lethal approach only as a measure of last resort. And we really never signed off or approved of broad lethal approaches that—that weren't target oriented. But we did sign off on target oriented approaches such as the toxic collar. It's a little

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poisonous collar that fits around the neck of a sheep or goat so that if a coyote attacks that animal at the neck, it poisons that coyote. It—it focuses in on a coyote that's not doing what it ought to do in its ecological niche. It's eating a sheep or a goat. It's not eating a rabbit or a rodent and it eliminates that animal from the population but—but it allows other coyotes that are behaving appropriately to continue to occupy territory and defend that territory against encroachment by other coyotes that might be killers. So I think our—our approach in recognizing that ranchers had a legitimate problem and trying to find some solutions and suggesting solutions also gathered some credibility for the organization. Maybe demystified us. We weren't so scary to them after that. Although I—I can't say we won them all over.

DT: You mentioned another controversy besides predator control, was it pesticide control? Can you talk about how that controversy developed and how Audubon and you dealt with it?

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DA: Well the—the pesticides were a big controversy between the environmental community and the ag community because agriculturists felt they had to have certain pesticides and certain other crop additives or they might lose a whole crop or a whole season of crops. And we were concerned about it both from the poison—both from the standpoint of poisoning wildlife and—and injecting poisons into the ecosystem but also poisoning our own food supply, poisoning us potentially. So our approach—there were

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groups that—that wanted to just ban pesticides and—and they may have been right. I mean, we may have saved a lot of trouble if they had just banned the pesticides and we moved on. But our approach was to minimize pesticides, to coordinate pesticides with other activities called integrated pest management, activities that tended to lessen a plant, a crop or—or an animal's susceptibility to whatever the—the villain was, whether it was a disease or a fungus or a competitor or what have you. What—what I think brought the environmental and the ag community closer together in the pesticide issue was—was twofold. One is that pesticide prices rose. It became very expensive to apply pesticides and as organic farmers were proving that you didn't always have to go resort to pesticides to make a commercial crop, I think that turned the eyes of some ranchers and opened up their minds to—to alternative approaches. And then we were seeing a rising incident of soft tissue sarcoma in farming and ranching populations, much higher among farmers, for example, than among people of the same socioeconomic level but in other pursuits. Even rural people in the same socioeconomic level but in other professional pursuits. And I think that the fact that we were concerned about their health and their—and their needs was—was a help. I mean, I was invited to serve on some advisory committees and—and to talk about what our concerns were about their health as well as about my own health. And—

and our—and our concerns for the health of the planet. So I think that helped—I—I would have to say probably the economic costs of pesticide application was as big a factor as—as any other factor though. People just stared looking for a better way and less expensive way to raise a crop. And some organic techniques do work.

(misc.)

DW: Do you remember reading Silent Spring early on?

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DA: Oh yes, yeah. Rachel Carson's book, Silent Spring was a—was a very important book and a real wake-up call for all of us, I think. She was—she was real popular around the campus when—when I was going to Texas Tech. Every—every biology student had read it and talked about it and thought a lot about what she was saying. Kind of intuitively thought she was probably right. And we were seeing it. We were picking up impacts of pesticides and—and various petro chemical problems in animals that we were collecting out in—in West Texas in the arid and semi-arid areas of West Texas and Eastern New Mexico. I worked on salamanders and we were saning salamanders out of ponds that had gross tumors and obvious mutogenic problems with multiple limbs and multiple digits on limbs. A lot of those, after I left and way past my research, were traced to a combination of diesel fuel and—and pesticide runoff that was going into some of these ponds.

DT: Tell us about some of the watershed environmental events in your career from planning the National Wildlife Refuges in Texas and the high points.

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DA: The—I went to work for the—for the Audubon Society in 1976. And I graduated from school in 1973 with my—I got my doctorate in 1973. So the Endangered Species Act had just been passed. The Clean Water Act, the Clean Water Act, all of those things had come up and were passed while I was finishing up my graduate—graduate school work. And then the implementation of all these bills were—were rolling along by 1976 when I came on board. I think the first watershed event that I was involved in that was kind of a landmark for me was the Alaska D2 Land Settlement Act. And that was the legislation that sort of set aside the National Parks and National Monuments and National Wildlife Refuges in Alaska. And—and Texas Audubon people were really effective in getting the Texas delegation to vote for setting aside great acreages of land in Alaska even though the Texas Petro chemical industry was fighting some of those designations pretty hard. And I was really impressed with—with the public support for wild lands and these wide open spaces, wild spaces. So that was an important one for me. In—in Texas, the National Wildlife Refuge System was in place in Texas and yet while Texas was producing through—through offshore oil and gas leases, producing by far and away, the lion's share of revenue that went into the land and water conservation fund, Texas was receiving very little of that money back in the form of natural wildlife—National Wildlife Refuges created in Texas. And we promoted sort of in a—in a fairly unorganized way, we promoted one refuge and then another with modest success. But in—oh when was it—it must have been the—the early '80's, the Audubon Council of Texas declared the lower Rio Grande Valley as a state priority because it was an area that had tremendous biological richness and it's also an area that was subjected to a lot of agricultural

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development. Since it was on the border, there was an awful lot of commercial development along the—the Rio Grande Valley. And our chapter down there did a great job

of pulling together the statistics on the biological importance and the economic trends and then the state made it a priority to try to produce a wildlife corridor from the mouth of the river to 200 miles inland up to Falcon Lake and to try to appropriate money to buy important rich areas along—biologically rich areas along the river, connect them by corridors of land or strips of land in between in a cooperative effort between private landowners, the state which had some holding and we wanted to encourage more state acquisitions along there and then the federal government in the entities of the Fish & Wildlife Service, the International Boundary & Water Commission and other—other federal entities that might have lands or manage lands along the river in an international sense. And it was a remarkably successful effort. At that time, the—the money for acquisition in the lower Rio Grande Valley had kind of stabilized at \$200,000 a year. In fact, a good year was \$200,000 of appropriations to make modest additions to a few existing refuges down in the valley. And our very first year of making this an Audubon priority, we sent delegations to congress. We really worked the Texas delegation showing them here's—the money's coming out of Texas and here's where all the refuges are being bought in other parts of the country and we have a real strong biological need to buy some refuges down here. We got the business community behind us in the—in the Rio Grande Valley. Coincidentally the—the Lower Rio Grande Valley Development Council had commissioned a study on what drew tourists to the Rio Grande Valley and they learned that the number one reason was climate and the number two reason was bird

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watching. So the business community got on board really—really enthusiastically as our pitch to them was help us preserve this resource that really brings revenue dollars into the Rio Grande Valley and isn't as fickle as peso devaluation and oil and gas international pricing, droughts and freezes that affect the agriculture community. We have a stable—we have some stable dollars here and we could have more if we had these Wildlife Refuges. Kiki De La Garza was—was the state representative and enthusiastically got on board and really championed his cause in the lower Rio Grande Valley. And our first year of working this effort, we jumped the appropriation from \$200,000 to \$12,000,000. Largest single appropriation for a refuge not in—in its early acquisition stage. And—and continued high appropriations for the next several years. I think they dropped from \$12,000,000 to 10 to 9 to 8 but considerably more money in the—in the millions of dollars and in the first couple of years, the tens of millions of dollars rather than in the \$100,000 range. So quite a lot of the Rio Grande Valley was preserved. Some of the best ranches were available. These were all bought from willing sellers. These were people who had their ranches up for sale anyway and many people were thrilled to know that their ranches were going to go to—to provide a National Wildlife Refuge and to be held in their current state rather than turning into another trailer park or another orange or grapefruit orchard. So it was a—it was a wonderful effort. It was a real effort in—in creating cooperative units with the business community, the agriculture community. Because we were also restoring ag lands. We were taking ag lands and planting trees and planting mixed habitat and growing old thornbrush community and can—and grow it in twelve years up to where it was really good habitat. The—the—the growing season is so

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long down there and the rainfall occasionally is so good that you can restore habitat within—easily within somebody's lifetime and there's a very reinforcing thing about

somebody going out and planting a few trees and coming back in twelve years and they're thirty feet high. And are housing a lot of birds and—and—and other species that they can see. So it was an—it was an effort that had a lot of sort of built in successes to it. Private landowners that didn't want to sell their land and didn't want to change their major practices were willing to cooperate in setting aside just a fringe of habitat right by the river and that allowed animals like the ocelot, jaguarondi and Texas tortoise and animals that can't fly from land unit to land unit, to crawl or slither or slink from place to place under—under better conditions than if they had to pass an open field or—or plowed area. So this wildlife quarter concept was and is alive. It's not finished and NAFTA has created tremendous economic pressures and competition for land. It's raised the land values quite high and it'll be difficult to—to completely finish it but the effort's still alive and—and it's a, I think, a real success story in cooperating within a community and within a whole state and even within Audubon. We got national help too. I mean, I—I contacted my counterparts in other states who had members who served on the appropriations committee in congress and said we really need the appropriations for this and could your grass roots people write letters saying Texas is a long way away but we fly down there and bird watch and we want to—want to see you appropriate money for this effort. So it was a—it was a terrific effort. It was really good and happy outcome. There—it's still a phenomenally rich area and—and an area that has—still has the potential for recovery and for rapid environmental restoration.

DT: You had mentioned that some private landowners were able to help out with the project by changing their practices along the river. Can you tell about Proposition 11 and other efforts to keep it involved and to help private landowners do the right thing?  
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DA: Proposition 11 was a—was an initiative that was started—wasn't named that, of course, at first but it was started independently by both the agriculture community and the environmental community. And both the communities recognized the need for a little more flexibility in what's called the agriculture valuation for land in Texas. Land in Texas is taxed at the same rate under the constitution but the value of the land can be set differently and there's a special sort of a special treatment of ag lands in that they're valued by what they produce per year rather than what the market value or the real estate value of the land is. And they were agriculturists who'd gone through the droughts of the '50's and had gone through a couple of minor droughts since then who were required by their taxing entities to stock livestock at a particular rate that they thought would be harmful if we were entering into another drought. So they wanted to be able to manage their livestock grazing a little more flexibly. Also the Endangered Species Act potentially could influence whether a rancher could—could engage in—in ranching practices in an area right adjacent to say some nesting and endangered species. At least the ranchers were worried that they couldn't do it legally or if they did it, even if they could do it legally, if it were to wipe out an endangered species, they would feel bad about it. And a lot of ranchers wanted to protect endangered species on their ranches but

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if it involved retiring that area, either temporarily or permanently from agricultural practices, then they felt they'd lose their ag valuation on that land because the definition of the ag valuation required them to have active agricultural productivity going on. So they felt they were in a box. They had—they couldn't—they thought they couldn't practice ag

the way the—the counties required them to practice it and yet, if they didn't do that, you know, if they—if they protected the land, they'd lose their valuation. So they went with one bill and, at the same time, we were hoping that agriculturists would stop selling out their land to real estate developments and hang onto it if they didn't have this tax problem. We wanted to see some incentives that helped people on large green places at—at least not be harmed if they chose to manage for wildlife rather than for cows and sheep and goats and pigs and chickens. So the two bills sort of stalled out in the first effort. The second effort we got together and we passed a bill but it was constitutionally flawed and then the third effort which is what became proposition 11, we passed a bill that allowed agriculturists the flexibility to declare a certain area as wildlife management—as a wildlife management area and manage only for regionally indigenous, native Texas wildlife and receive the same valuation as they would have had they been managing it for agriculture. This created a situation for the urban environmentalists where they knew that some rancher was, and many ranchers, were taking care of wildlife that they valued and, in fact, the public owns the wildlife. So ranchers were managing for species that belonged to everybody. And the urban environmentalists were happy to support that effort, to give ranchers and other landowners the—the incentive of managing for wildlife instead of for agriculture and yet not losing—not having to pay as if it was a high price real estate development.

DT: We've talked some about land. Will you comment on one of the other successes that happened on your watch, the end of the massive federally funded reservoir projects?

DA: Oh that was a happy time...

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DA: One of the watershed in environmental—environmental (?) in Texas had to do with the elimination of huge federal subsidies for—for water projects—federally funded water projects in Texas. And many of us in the environmental community felt that—that these water projects were tremendously destructive to riparian habitat and wildlife habitat in general and yet didn't—there wasn't an offset that was sufficient to justify their great expense. They certainly made some people some money but they—the cost benefit ratios on these projects were just horrible. And the Carter administration, because of the Arab oil embargo and—and a number of other economic considerations that were going on President Carter created a hit list of terrible water projects and decided by executive order that he was going to stop spending money on some of these projects and—and target some of the others that were working their way through congress for elimination or at least modification to where they at least had a one to one cost benefit ratio. And it was a time in Texas when the environmental community found itself as allies of a group of fiscal conservatives. And we weren't often working in the same room and pulling in the same direction with Texas' most staunch fiscal conservatives. But it was a fun time to—to be with them and to pull together on—on these issues. It was, at the time, I lived in Brown County and—and my congressman—I—I wrote and visited with some frequency and—and he never voted our way. Absolutely never. It became kind of a—a big smile. I would go in to get a pass to observe some action on the house of the floor and I would say this is the only thing I'm going to get from you so please give me a pass to observe the action. But—but, in fact, he voted against a—a whole—a whole laundry list of bad—fiscally bad federal water projects and—and the era really came with that when congress finally killed all of those water projects at once, it ended that pork barrel system that had just rolled along for decades and decades. It really saved the taxpayers a lot of money and it really saved the

state from many more environmentally destructive and very marginally useful water projects. That was a happy time for us.

DT: Talk about some of the less intelligent environmental decisions that you've seen come along and maybe start out with some thoughts about laws.

(misc.)

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DA: Okay. Some of the—some of the dumbest projects in Texas I think—I think Wallisville is probably head of the list. This was a water project outside Houston that was supposed to provide supplemental water to Houston as well as, I think, a modest amount of flood control. But as originally designed, this water would be about knee high and about 200,000 acres or so. I can't even remember the statistics but it was a huge, huge project, a massive lake and the water would all be under 3 feet deep, or most of it would be under 3 feet deep and very, very hot and—and most eutrophic, just boiling with bacteria and algae and the—the least likely place for Houston to really want to go and get its drinking water. And—and it was just one of those big federal boondoggles of a water project. It was going to make some contractors a lot of money and provide a modest benefit to the City of Houston and—and in so doing, was going to wipe out some really important biological areas, especially some cypress and tupelo swamps and—and, you know, important wetlands on the Texas coast. Wallisville limped through, staggered through, was defeated in a—in a lawsuit and then reinstated through a technicality. And it exists today. It—it's not the massive project it once was and, at one time, it was sort of step one in an effort to channelize the river—I'm blank—is it the—I'm blank on the river—the Trinity River. Yeah, the Trinity River all the way up to Dallas/Fort Worth to create the largest inland port in North America by having these ocean going vessels steam all the way up the Trinity River to Dallas and Fort Worth. And—and Wallisville was at the end of the—of the stream, so to speak, so if Wallisville couldn't go in or couldn't go in in a huge navigable way then the entire Trinity River project couldn't go forward. So even though we didn't defeat Wallisville, by scaling it down and limiting its size, we defeated the Trinity River project long enough that—that it couldn't survive the economics of state cost sharing and—and user cost sharing and it—it died.

Although they're bits and pieces of it still alive and there—there are still flood projects and some navigation projects on it but it wasn't the massive and horrible project that it could have been. Wallisville was a real lemon. Other lemons—I think a lot of the reservoirs in

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Texas were kind of lemons. A lot of them were built in areas that silted rapidly and—and their—the life of the project is about 20 to 30 years and some of the best ones, Stacey reservoir was another—was a lemon. We didn't defeat that one. We kind of held it hostage for a while but it got through.

DT: Tell us about that fight.

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DA: Well it was a—it was a fight that was probably—probably should have been defeated on economic—purely economic argument. It was a very expensive large reservoir destined to not hold very much water and destined to—to not provide much in the way of local impacts that were positive but extremely expensive, likely to silt up rapidly and there was an endangered species in the area. The Concho—Concho River water snake was in the area. And the project was held up due to the Concho River water snake for a while. Senator Benson, who for the most part was a friend of the environment was really not a friend on

this issue and just insisted that—that this project go forward and—and essentially it did. There were some modifications. There were some, I think, bad science that went on, some tizzing and tainting with respect to the science but eventually the project went forward and the water snake was not wiped out by the project. My opinion, the water snake was certainly an issue in the project but it was generally a badly designed and badly done project that shouldn't have gone forward anyway. There will be people in San Angelo who beg to differ with me on that. But it—it was, I think another real lemon for the Texas taxpayers and the U.S. taxpayers to swallow.

(misc.)

DT: We were talking earlier about harmful decisions in Texas from an environmental standpoint and I was wondering if you could run through some of the others that you've had the pleasure to ...

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DA: That I've had the distinct pleasure to observe. The—the bad decisions, bad policy decisions in Texas would—will—would fill volumes but one of the most recent ones has been the continued grandfathering of polluting industries, particularly air polluting industries in the golden triangle area over in East Texas. This—Texas produces 2/3 of the nation's carcinogenic air emissions. It's a huge load. And yet, we grandfather industries and don't require them to meet the same high air quality standards if they were polluting at the time that the Texas Clean Air Act passed. There were promises made when that first act passed that these companies needed to be grandfathered in and given a little extra time because if they had to implement immediately the kinds of technology that were required to meet Clean Air Standards, they would make the decision to move out of the state or out of the country rather than continue in Texas because they couldn't afford to retrofit their companies. But this grandfathering and the threat of going out of business or moving away has—has drug on and drug on for literally decades. And these same companies are still making the same claims that they can't afford to do it while new companies come into Texas and build their buildings and hire their staff and somehow manage to meet the state clean air standards. Just this year, we had another go round in

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the legislature in an attempt to remove the grandfathering of these old industries and our governor saw fit to give them one more chance to initiate a volunteer program of air emission reductions. And those of us who have watched the air steadily decline really are not enthusiastic that this volunteer program will—will result in anything in good. When I was in high school, I had a chance to go to New York to New York City and—and it was the most polluted city in the United States at that time. And I thought, how can these people live this way? How can they tolerate it? And after that Los Angeles, of course, passed New York City and there have been several days the last year when Houston, Texas has passed Los Angeles. So the—the town that I called my hometown is now one of the worst polluted cities in the nation and our governor still allows the industries that create that pollution to be grandfathered in under some veiled threat that they might leave and my view is good riddance. I think there's—there is room for cleaner neighbors to come in and take their places. I think that was a terrible decision. They're going to have to bite the bullet one of these days and—and clean up Texas or—or it's not going to be a fit place to live. We're having real respiratory illness problems in those counties. An increase in cancer rate, although not as high as you'd expect for that—the pollution load that those counties take.

But it's—it's too much of a human price to pay and it's unnecessary to pay that kind of price for progress.

DT: Could you touch on the recent efforts for privatizing some of these parks, trying to get them more in an entrepreneurial, self supporting mode?

(misc.)

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DA: Another—another trend in Texas that's disturbing to me is privatization of Texas natural resources in—in two respects. There's a real movement to privatize wildlife in Texas. It's a real aggressive movement, especially among some large landowners in Texas, to essentially own the wildlife that exists on a ranch. And the privatization of wildlife is really dangerous. It's biologically dangerous because people begin to breed for certain characteristics that may be desirable from a hunting standpoint or some kind of fad aesthetic principle but as people begin to manipulate the genes of—of wildlife, they begin to make the wildlife less fit to adapt to its own environment. And I really—I really strongly dislike the idea of privatized wildlife and manipulation of—of the genetics in wild populations. And of—of equal concern to me—when I look at Texas and I look at the destruction that's occurred, that has destroyed wildlife habitat, and—and put categories on the causes of destruction, I would say that roads, utility corridors, a shift to either industrial or—or municipal developments, real estate, residential real estate developments and—and large recreational amenities that aren't environmentally friendly such as golf courses, soccer fields, baseball diamonds, football fields, water parks, those kinds of things, are—really very destructive. And Texas' system of parks has been a real—real necklace of jewels for Texas, a—a system to be very proud of even though acreage per capita, it's very modest for a state this size and this population. We're somewhere about in the middle of the nation on acres per capita of parkland and when you consider that 240,000 or so acres is Big Bend Ranch in one part of—of West Texas,

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our acres per capita come way down when you talk about the acres that are really accessible to a large part of the population in Texas. And yet, the State Park System, in an effort to wean itself from public tax money is trying to encourage entrepreneurship among the park managers and to develop additional sources of revenue on state parks to help fund those state park operations. And the—the people who are developing these—these revenue opportunities on state parks are not looking any more imaginatively than the kind of developments that have—have harmed habitat on private land for years. So we see more roads going through state parks. We see golf courses being developed on state parks. We see things like the herds of longhorn cattle showing up at state parks because they're neat and not because they bear any—any relationship to the environment or the history of the area. And oil and gas leases being given, not just to simply cut across the park and then repair the habitat, but actually pump jacks and oil exploration and development on state parks. Hotel—hotel concessions and—and there's more and more—satellite TV's on—on park RV hookup pads and all kinds of things that may generate money for the parks but they also generate the same kind of urbanization that's cost us and has caused the—the lack of habitat in a concentration of people that's created the situations that caused people to want to go to a park and get away from it. So I—I think it's just a terrible trend. I think that's it's wrong headed for our Parks & Wildlife Commission and the administrative leaders of Parks & Wildlife to go that route rather than going to the public and getting what



has always been broad public support for taxpayers monies to pay for parks and for park management. I think it's just tragic. The Bastrop Golf Course is a—is a pet issue of mine. I think it was a tragedy to take a very

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nice old 9 hole golf course and expand it into endangered species habitat to create a very mediocre 18 hole golf course. And—and in so doing destroy a tremendous amount of habitat and have potentially adverse effects on all the rest of it or much of the rest of it from—from the management of the golf course, the kinds of things that are needed to keep a golf course from getting too moldy if the rain is high or from getting too dried out and—and diseased in other ways if the rain is too low. I just—I—I think Texas' parks in the past have been natural areas and places where people can go and become restored and renewed and—and get back in touch with the land and the resources that have a real calming and renewing quality to people. And when they just become more theme parks, more areas of crowding and frenetic activity I—they no longer serve the purpose that they would have served and—and in so doing, they also destroy wonderful habitats. I would never have supported the state owning Bastrop if I had thought that Bastrop was going to double their golf course and—and wipe out Houston toads in the process. The same thing for a lot of other state parks. I was a real supporter of park funding and of Texas buying the best from willing sellers, getting—getting the—the best areas that were for sale. And now I really second guess that support because if the best that's left goes to Texas Parks & Wildlife Department only to be turned over to entrepreneurs who would put in a hotel and a swimming pool and a golf course and a—and a soccer field and a—and—and be able to do it even cheaper than they can do it on private land because they don't have the capital investment of the land, I—I just think that's tragic. I hope it doesn't happen. I hope that a more forward looking commission and a more forward looking leadership would—would change that trend quickly.

DT: Would you talk about some of the other movements that you see, I think one that you mentioned was the move from clean to acceptable risks?

(misc.)

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DA: One of the—the trends that I've seen in—in kind of an anti regulatory direction in the State of Texas and nationwide has been a change in the goals and the expression of goals for—for—from agencies that deal with polluting industries, pollution. There was a time that—that the goal of pollution control was to get as clean as it was technically possible to get and to continue as technology improved, to continue to get cleaner and cleaner and cleaner. And—and that was an appropriate goal after industry had worked for centuries in ways that—that made our state dirtier and dirtier and dirtier. But there was a change that occurred and—and in some respects, I can understand the—the justification. The—the argument from the industry side was if it costs us 100 million dollars to clean up 99% of this problem and it costs us 200 million dollars to clean up the last percent, is that a good expenditure? And that kind of—that kind of—of characterization of the issue makes any—makes any normal person think no. It's—it's not worth it to spend twice as much money to clean up one percentage point. But the evolution of that attitude was to get to what was called acceptable risk. In other words, how dirty can we be before the public refuses to accept the risk? How much can—how many people can we kill with increased respiratory diseases, increased cancer rates and—and premature deaths due—due to combinations of

environmental effects before the  
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public rebels against it. And that evolved into conversations that occurred at EPA on how much a human life is worth. So if an industry was going to kill 6 people—you know, 6 very vulnerable people maybe with respiratory disease or older people or babies by continuing the pollution load, but they were going to create or generate a certain amount of revenue in their community, if a human life is worth 20 million dollars and they're going to kill 6 of them, then if they made more than 120 million dollars in revenue, that was an acceptable risk. It put a dollar value on human life. It put a dollar value on what it ought to cost to protect a human life and it changed the whole evaluation process from hey guys, we've got to clean this up to hey guys, how dirty can we get? At the same time that this movement on acceptable risk was rolling through the EPA, there was also a tendency to regard people who were vulnerable to environmental insults as losers. There were a lot of analogies made to natural selection and, you know, how the—that you may get rid of these people but maybe they ought to—they deserve to die anyway because they don't have the genotypes of—sufficient to stand up to these environmental pesticide loads. And there were some real heartbreaking conversations that occurred at EPA. There were people, idealistic young people who went to work for EPA thinking that they were going to clean up Texas who sat in on conversations with the administrators of EPA and industry and tried to come up with, you know, what is the number where we agree to kill people and how many people do we agree to kill with this industry. And a lot of really good idealistic and bright scientists just walked away from those jobs, just didn't want to play the acceptable risk game anymore. The way that acceptable risk came about was also, I think, very, very scary because industry would couch acceptable risk in terms

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like this. It's less likely that you'll be killed by my pollution than that you'd be hit by lightning on a golf course. It's less likely that you'll be killed by this new plant going in than that you'll be killed in an automobile accident in your life. And—and the assumption was that people accept risk every day and some accept very high risk, getting on—getting in your car and driving to work and home is often a real high risk behavior. And if you can accept that risk then you ought to be able to accept all these pollutants that—that also put you at risk. And it—and if it gets you then you should have been eliminated anyway because you don't have the right champion genotype and you should be eliminated from the population. These things were really scary and they—they also denied the fact that the risk of your getting hit by an automobile was not lessened by the fact that you were also breathing polluted air. And—and this risk was additive on top of all your other risks. And the fact that every single polluting industry that came in with every single pollutant with lower standards, was adding another so-called acceptable risk. And how many acceptable risks can a person take before—before we're all done in and done in prematurely by all these pollutants. So that's a—that's a issue that's really bothered me, continues to bother me today. And I think we need to get away with it. I think there's some—some ground other than saying everything has to be 100% clean but I think the acceptable risk approach is a—is a head in the sand approach and—and lets industry off with—with far less responsibility. It also externalizes the cost of pollution. If the cost of pollution is my life and my life—industry has decided my life is worth 20 million dollars, then I want my heirs to get that 20 million dollars. The—the expense of their cleaning it up is—is my death. In

order to avoid cleaning it up, they agree that I'd

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get to die. And that's an externalization of—of expenses that I don't like. And I think—I think people need to understand the risk that they're being put to and—and to get behind some of these efforts to clean up pollution and to change EPA's thinking.

DT: Shifting costs and benefits around, I think you've seen one alarming trend, the mitigation approaches that have been sort of distorted. (?)

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DA: Yeah, Wetland mitigation. Well, another trend that—that bothers me and disturbs me and—and especially as a biologist is the—the trend toward applying mitigation. And in—and what mitigation actually means.

(misc.)

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DA: Another trend that's disturbing to me and—with respect to environmental deterioration is—is some new and fairly creative ways of interpreting mitigation. In the past mitigation was a principle that said essentially—with respect to wetlands at least, if you destroy so many acres of high quality wetlands, then—then you're obligated to create some high quality wetlands somewhere else to offset it. And—and that idea of mitigation might be characterized as  $4-2+2=4$ . If you take away something but you put something back, you come out even, not net loss of wetlands as our—our once President

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Bush said. But the idea of enhancing areas or creating new wetlands to offset the ones you destroy evolved into saving a wetland from future destruction by buying it. So if you had a 100 acres of prime wetland and you were going to destroy that, you could go buy another 100 acres of prime wetland and give it to the Nature Conservancy or the Texas Parks & Wildlife Department or the Fish & Wildlife Service and that would mitigate the 100 acres you lost. Now that—that comes out to  $100-100=100$ . That doesn't work. When you—when you save a wetland by buying it, you haven't added any new acres of wetlands, you still have a net loss of 100 acres of wetlands and all you've done is you've said, they won't get to make that deal over here cause we've locked this one up. In my view, that's not true mitigation. The next step is that 100 acres has already been bought and is held by the Nature Conservancy or Parks & Wildlife or Fish & Wildlife and this industry wants to destroy 100 acres of wetlands but they're going to pay the Nature Conservancy a little more money to help them manage their wetland. And that's even—in my view, even worse. There's no mitigation that's occurring there. The obligation that the Nature Conservancy or Parks & Wildlife or Fish & Wildlife has is to appropriately manage this area. It's supposed to already be mitigation land and—and to justify another loss by—by paying some operation and maintenance on this new area seems to me just the broadest—the next to the broadest distortion of mitigation. The broadest distortion of mitigation is to just pay some organization that's trying to save wetlands and pay their administrative costs and the money's not even tied to a particular wetland or a restoration effort or an enhancement effort. If you tie all of that in to the fact that, in Texas, when the Corpus Christi State University studied mitigation in Texas, they

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found that 75% of mitigation didn't work in Texas. So even when you're trying to mitigate projects, they're not being mitigated. The main reason that 75% didn't work was that 66%

of the efforts, the mitigation wasn't even attempted. The industry agreed to mitigation and then never applied it. And there was never any enforcement that required them to do it. So mitigation is kind of a myth. It's—it's a perception of balance—mitigation as applied today is a myth and a perception of balance where—where no balance exists. There's another trend in mitigation where small acreages of wetlands are allowed to be destroyed and—and the money goes into a pot to buy some large and significant area of wetlands that you don't destroy. That's better than nothing but it's still 4-2 doesn't equal 4. Unless you're enhancing wetlands or creating new wetlands of equal value to the ones you destroy, you haven't mitigated and the term mitigation is a misnomer.

DT: You mentioned the distortion of the balance. Maybe you can explain what you mean.  
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DA: There's a—there's an attempt to justify additional habitat loss and—and environmental insults by stating that especially from the standpoint of the person or the entity that wants to destroy habitat to say, there are these benefits that I'm going to create from this destruction and I'm going to also gain some benefits myself from this destruction. And sure it's a bad thing to do but we need a balance between this absolute

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protectionism, on one hand, and this absolute destruction on the other. The problem with that is that every generation makes their balance. So when my great grandparents settled in West Texas and they gave up half of their wetlands in West Texas and gave up half of the—the native mid grass prairie in West Texas in the name of economic balances, the half that remained was supposed to be the balance that in my grandparents' generation, they gave up that half for more economic advantages and more attraction of—of people there to have a growth industry and so forth and my parents came along, there was another half gone. In my generation, there's another half gone and if every generation in the name of balance gives up half of what we have left, that's not a balance. We're at the point now with Texas having lost so much of its hardwood forest, so much of its wetlands, almost all of its mid—mid and tall grass prairie, you know, tremendous—almost all of it, South Texas, Palm Forest, from 40,000 acres to 39 acres of contiguous Palm Forest in—in South Texas as an example. So much of our coastal plain that—that anything that prom—that—that justifies itself by balance has to be something that ex—that strictly puts things back the way they were. There's no way you can destroy habitat in Texas and call it a balance anymore because the balance has shifted way, way over on the side of destruction and development.

DT: In seeking to restore or keep some measure of balance, I think you've worked with a lot of non-profit groups and certainly Audubon. But also (?) Conservancy and (?) and if you could mention some of the things that interested you there, I'd appreciate it.

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DA: Well I've worked with other environmental groups. Before I went to work for Audubon, I was active in—in the Texas Committee on Natural Resources and—and the Texas Committee of Natural Resources actually spun off the Texas Organization for Endangered Species or actually it was another Ned Fritz led drive along—along with some key scientists around the state. There was an effort to generate a community of scientists who were truly studying these species and could give us a heads up on, not only things that were in trouble right away, but monitor populations of species and—and see what was happening, what—what trends developed as Texas continued to grow economically and in population. So Texas Organization for Endangered Species was predominately populated by scientists. It

was not real strongly policy oriented. It was more accumulate solid, scientific facts about what's happening and then hand those facts over to entities that wanted to use them. And I think it was a good, solid scientific organization. It created lists of species that appeared to be in trouble or at least appeared to be in—in decline. And I think have—had and have a lot of credibility. The organization has leadership problems. It's just like any other non-profit organization. The biggest burden in—in an organization like that is continued unpaid leadership and it's really difficult to keep it going and keep the energy up. Ned also helped start the Texas Nature Conservancy and I was involved in some of the early forming meetings of—of that. As—as true to Ned's nature, it couldn't just be the cookie stamp state organization just like the Nature Conservancy but in Texas. It had to have its own state constitution and bylaws and—and have a certain level of independence from this big national megalith that was going to control it. I—I think eventually it evolved into—into a very similar office from the other—as other state offices. But originally it had an—an identity somewhat different because of Ned's leadership and his both interest and paranoia about the way institutions operate. It may not be paranoia if it really happens, I guess. The Nature Conservancy was important in Texas as TOES was, Texas Organization for Endangered Species, created a database of—of information about endangered and—and threatened species. The Nature Conservancy created a land acquisition opportunity in Texas and also a brokering opportunity where land could be bought opportunistically from willing sellers and then brokered to the appropriate agency or other private owner at the appropriate time so that really pristine areas could be acquired when there was an emergency, when they were available and the other acquisition alternative might have been destruction or—or reduction of the value or elimination of the potential for the public to enjoy some of these areas. So I think they played a—an important role and continue to play an important role. They are also—they—they carry more of a halo with industry and—and with some of the more affluent power brokers in this state because they're not conspicuously activists on policy issues. And that—and it helps to have—I think it helps to have a diversified environmental community. One of the things that I think has been unfortunate in Texas in the environmental community is a perception that we're a monolithic community and that, at least in—in the old days when I was a professional member of the environmental community that if they called me and got my opinion on some project that I spoke for everyone in the environmental community. Or conversely if they called and talked to Ken Kramer who headed up the state chapter of the Sierra Club, that if Ken Kramer made a pronouncement on some environmental issue that all the rest of us would fall in lock

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step because we all believed the same thing, the same way. And that was never true and it was, I thought, never a strength for us to be perceived as monolithic. One of the things I tried to do as an environmental leader was to make sure that Audubon had its own separate identity and was understood as being separate and peopled somewhat separately from the other environmental groups and conservation groups in Texas. Because I felt that got us—gained us more places at the table and I thought we deserved more places at the table. We're not the same people. We're not all the same people just carrying different membership cards. In fact, our memberships are—are quite different.

DT: Speaking of things not being so monolithic, one of the more interesting things I've heard that you've been involved with is Planet Texas where you took people from many

different perspectives and drew them together to manage a piece of land. Can you explain more about how that came about and what sort of success you had?

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DA: Plan-It Texas was a—an—an effort—I was invited—it certainly wasn't my—my brainchild but it was an effort I was invited to participate in. It wasn't named that at the beginning but a group called Holistic Resource Management of Texas which is a—an agricultural group with a—with a more holistic approach to agriculture found it discouraging that the environmental community and the ag community were so often at odds and—and so often in acting out their activisms in their two communities, spent an awful lot of money and an awful lot of energy and time and neither group really won or

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was particularly satisfied with the outcome of a lot of political battles. And HRM of Texas leadership felt that we had so much more in common among our issues that there ought to be a way of creating some dialogue between the environmental and agriculture communities and at least working together on the things that—values in the areas where we agreed. So they pulled together the leaders of agriculture and the leaders of the environmental community and began to—to generate some dialogues on what was important to us and what we feared, what we cared about. And—and I think they did a good job in getting a good mix of people. There was certainly a lot of suspicion and paranoia and—and no small amount of people thinking, I've heard this all before and I know exactly what he's going to say and I know exactly who he's go—thinking about when he says certain things. But—but many of us, to—to give credit to the group, attempted to do this, to try to bridge with—with alternative communities, predominately agriculture and environment but we also had state and federal agencies involved that were involved in either ag or environment but the state agency and federal agency prospectors are somewhat different from the advocacy groups in those communities. And—and the focus of this issue was endangered species. There was a time in Texas when it was a very volatile issue and there was an awful lot of heat, more heat than light being generated on the subject of endangered species. The agriculture community was maintaining that, in the first place, the Endangered Species Act and other protective policies were in their way and that they couldn't engage in—in profitable agriculture endeavors with this Endangered Species Act hammer hanging over their heads and—and yet, by the same token, they also believed that they had endangered species on their land

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because they were doing something right. They wouldn't have endangered species if they weren't doing something right. So the environmental community was wrong to—to judge them or attempt to regulate them because they could engage in ag practices without harming endangered species. And the agri—and the environmental community came to this debate with the position that—that that was probably true, that you could probably engage in a lot of different agricultural practices and not hurt endangered species and if you did that, the Endangered Species Act wasn't a threat to you. That—that all it took was a little planning and a—and some knowledge, some scientific knowledge about species needs to be able to work this stuff out. So, as we started talking, someone came up with the idea that we ought to put up or shut up. That we ought to manage—that all of this was sort of armchair pontificating on the part of leaders that weren't involved in—in land management on either side. They were just the talking heads of these activist organizations

and that if we really wanted to demonstrate that, let's get a ranch that has endangered species on it and let's manage it and first let's see if we can produce a profit using the best expertise of all these ag leaders and all of their—all the multiplier effect of all the knowledge within their communities and let's see if we can't protect endangered species using the—the mirror expertise in those organizations. And let's see if the act—the Endangered Species Act and other regulations get in the way. And the environmental community was saying, trust us, these acts are not going to get in your way. If you do this thing right, I mean, if you're sincere about wanting to protect species, you can do it anyway. And the ag people were saying, trust us, there will be a bother. They'll be in the way. So we made an agreement, sort of a gentleperson's agreement at the onset, that if

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we found out that laws got in the way and could be—and the laws could be revised, that the environmental community would join with the ag community to make some needed changes. Not to lessen the protection on the species but to alter the law so it was more reasonable and—and more workable for the ag community. And the ag community that if, in fact, the laws didn't get in the way that they would publicize that to their members and—and reduce the level of paranoia within their community. So we—we put the word out that we were looking for a ranch to manage and, to our surprise, got lots of offers and constitute a committee to go around Texas and look at a variety of these ranches and try to pick the one that might best represent what we hoped to accomplish. And we ended up picking up the Red Corral Ranch just outside of Wimberley—between Wimberley and Dripping Springs. And we managed that property for about 4 years. We—we had a—we shifted from a stocker lease to a cow calf lease. We shifted from just continuous grazing to a high intensity, short duration grazing system and we also began to develop other economic opportunities on the ranch that used the presence of endangered species as an asset rather than a liability. The landowner's had some little cab—had a cabin in the area where the golden sheep warbler was the endangered species involved, where the golden sheep warbler was nesting and so we began to market weekends in the cabin as a bird watching and get back to nature experience and—and later this whole—this whole marketing effort evolved into a bed and breakfast operation that brought the ranch more revenue than they got from their entire cattle lease. We also suggested that they modify their deer hunting lease from—from the lease that they had to a least that was more sustainable, that created a—a higher quality deer herd. There were

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just a lot of modifications made and we grappled with the whole endangered species issue and also grappled with clean water issues, wetlands conservation and—and ran some workshops on the ranch to show what we were doing and how we were doing it so we had an education spin-off effect from that. And ultimately wrote a—wrote a book about managing central Texas land that had endangered species on it. And that book now is being distributed by all of the organizations within Planet Texas. So it was effective in that we did—we did manage to provide additional revenue, quite a bit more revenue flowed to the ranch after all this brain power worked on it for 4 years. And the ranch is much more of a holistic ranch. The—the people that are running it are running it in a way that's—that's much more planned and—and includes inventories of the natural resources that they have, as well as the ag resources that they have and plans to protect both. The—the organization also evolved in the meantime though and the people who were there representing

environmental organizations, I think in every case, ended up changing jobs and moving on so they remain connected to Plan-It Texas but they no longer have—they're sort of ambassadors without portfolio. They no longer have the—the direct connection to their environmental organizations. And much the same happened to several of the members in the agricultural community. So now the organization's trying to go back and invite the current leaders of the ag and environmental organizations to come back into this and sort of provide the—the organizational connections that it originally had. The effort was good. The individuals who learned to work together and trust each other and appreciate the expertise of the two communities worked out really well but the organizations really didn't dramatically change style and change their normal

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way of—of handling these issues or—I would daresay you'd be hard pressed to find a difference in the literature of either the Cattleman's Association or the Audubon Society before and after Planet Texas. I mean, the local groups were somewhat different but the national groups were not really changed by this effort. But I think it was a good start, a really good approach and I think it's a model for a way to deal with disputes and—and to test assumptions with—with respect for both communities and with respect for the—the expertise that exists in both communities.

(misc.)

DT: Could you go from your description of the Plan-It Texas and talk a little bit about your work in organic peach farming business where you brought in a viewpoint of agriculture and the environment?

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DA: Well one of the—one of the practices—one of the spin-offs for me for Planet Texas was a closer connection to leaders in the agriculture community and a connection with the information that's available in the agriculture community to do a better job. Texas is doing a lot better job in—in organic farming and in minimizing use of pesticides and has a—a whole department within Texas Department of Agriculture that's dedicated to organic farming. In—in my other life, besides my—my public professional, environmental life, I had bought into a small ranch in—between Austin and San Antonio. Bought into a partnership in a—in this ranch and it had a—a small peach orchard, about a 3 acre orchard with around 90 trees when—when I first bought into the partnership. And we talked about changing that—we're real near Fredericksburg and there's a huge peach market in Fredericksburg and what a—what a 3 acre orchard could do for the owners or for anybody else was somewhat arguable. But there was a niche in organic peaches and, in fact, when—when we began to discuss getting into organic peaches, shifting the orchard over, the—my partners had not—had not applied pesticides or fertilizers to the trees anyway for a couple of years just as a money saving effort. And we looked at what it would—what it would cost us to get into the certified organic program and found it was well within our reach and decided that that was a niche market for us. That—that there was only one other certified organic peach orchard in the state at the time so we decided let's go for it. Let's go organic with this peach orchard. And I was pretty committed at that time anyway to organic food when I could find it and afford it. I just liked the idea that—especially after fighting the pesticide industry for—for decades. I liked the idea of not consuming their products. And—and I liked the presumed health benefits of doing that. So we committed ourselves to go organic and we had the records on the farm and were able to—to go into the certification program away



and operated the peach orchard now, I guess for—since 1991 so we're—we're coming up on 8 years of—of operating organically. We didn't get the certification right away but we adhered to—to the policies and more and joined the Texas Organic Grower's Association, some of the other private groups to get information and share information about, not only the peach raising but marketing strategies. It's been real interesting. It's been a real intellectual challenge to do it and—and it's been easier than I thought it would be in many respects. There's a lot

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of mechanical management that's done with an organic orchard. You get out and weed eat and—and mow rather than use any kind of pesticides or herbicides and I shifted over from—from many days of weed eating to purchasing white Chinese Geese that liked to graze under the peach trees and help keep the plants low under the peach trees. And, in the process, fertilize the peach trees. And I—and I also went with a little flock of Indian Runner ducks up in the orchard last year that chased grasshoppers and really made a significant difference in the grasshopper infestation in the orchard. Unfortunately, raccoons made a real significant difference in the population of the Indian Runner ducks and I'm now out of the duck business for a while until I can outsmart the raccoons. We protect our peach trees with net wire fencing and hot wire on top on two sides and then hot wire—7 wires of hot wire on the other two sides, running 9.1 kilovolts through that—that fence. And that keeps out the deer and it keeps out most—most other species, except in this net wire, the holes are large enough that a small raccoon in a dispersing phase can get in and so can a ring tail cat and what we tend to do is trap them and release them outside the orchard and—and give them enough of an unpleasant experience—I mean, we're not cruel with them but it's not real pleasant to be in a have a heart trap anyway. But we hope that—that it's enough of a hassle that after they've been trapped a few times, they just decide the orchard is not a fun place to be. And we—we're still attempting—we have a neighbor who has a pacemaker and we can't go with hot wire all the way down on his side of the fence because if he should touch that hot wire, it really jeopardizes the functioning of his pacemaker. So that's our compromise and that's the side the raccoons are coming in right now. But we're—we're just continuing to grapple

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with it and try to find effective and creative ways of both raising the peaches and then delivering them to a market that—that helps us make—make some money on the operation. It's been a neat community to be in touch with. The organic growers in Texas are—tend to be a really mentally interesting, somewhat—somewhat non-conformist group of—of ranchers and—and they've—they've just been a lot of fun to associate with and learn from. And it's—and the customers that we have out in the peach orchard have been really great. It's—it's been terrific fun. We've had grandparents bring three generations of their family out to—to stand out in the orchard and pick peaches and eat peaches right off of a tree. It's amazing how many people don't know that peaches grow on trees rather than vines or stalks or something. So they bring these little kids out to pick peaches and they, in the process, usually pet the horse and chase a goat and have a little farm experience while they're there. That's been fun to be able to deliver that and fun to watch kids respond to—to an agricultural effort that we think is living gently on the land.

DT: One of your hats that you wear is being a teacher. What message do you try to instill in your students?

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DA: I always thought I was going to be a teacher. I—I went through—I pursued a college program assuming I was going to teach and, in fact, taught for three years before Audubon lured me away. And—and I was invited back to speak at Southwest Texas after I had worked for Audubon for ten years. One of the students in the audience—I—I spoke

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to the Tri Beta club which is a biology honor society. And one of the students in the class after my speech said, if you were to come back and teach, would you do anything different? And I said, absolutely I'd do things differently especially teaching a freshman class because I said, I've been working up at the Texas legislature and people are so appallingly ignorant about biology and the implications of—of altering biological habit—you know, habitats for—for species that I wouldn't spend five minutes teaching some freshman how to spell platyhelminthes or to know that that's the—the name given to a group of flatworms. I'd be spending time telling people when you do this to wetlands, here are all the creatures you hurt and here's why you hurt them and—and how to find better ways to—to engage in developments and improvements if you will. And I'd spend time teaching people that when they park out the land below their trees and create this kind of golf course or English countryside look, that they've eliminate all the habitat where birds and small mammals hide during storms, not to mention all the berry producing plants and, you know, a lot of the food supply for these wildlife. Well twenty years later—ten years after that speech, I in fact, left the Audubon Society and was hired to come teach some freshman zoology classes here at Southwest Texas and it was put up or shut up time. And so I did teach my classes differently. There are a certain number of things that you have to teach. The students are tested at the end and they have to be able to perform at a certain level so I couldn't completely turn my back on the traditional, academic agenda or curriculum but—but I did work in, as much as possible, the kinds of consequences and interconnectedness that we have in our—in our habitat and—and I really made an effort to—to do what I said I would do ten years previous to that. One of—one of the best things that happened to me, after that first semester of teaching, is this student came in—he had done quite well in the class. He had made either a low A or high B and he came in and said I just want to tell you that I'm a senior business major and I put off taking this because I hate science. And I put off science till my senior year and he said, I—I thought I'd enjoy biology and I just wanted you to know you've ruined my life. And I thanked him for sharing that. Asked if he wanted to elaborate—he was smiling when he said it. And I said, how did I ruin your life? And he said, well I had my whole business plan made. I know exactly the business I want to go into and how I'm going to go into it, how I'm going to line up the money and how I'm going to line up the customers, how I'm going to market my product and he said, now I've got to worry about all these biological impacts. And I've got to worry about factoring in the cost of minimizing those impacts and he said, I've got to start all over again. And—and he said, I will never be able to make a business decision in my life without thinking about all these biological consequences. And he said, it's just ruined me. And I thought well, that's exactly what I hoped. I don't know how many people came away with that same message or—or took it very far but that was exactly what I hoped to accomplish and I hope I'm still accomplishing that instead of just some simple and sort of esoteric information. I hope I convey to my students both my own love for the environment, my intellectual appreciation for the propriety of the natural system that we see. The fact that we're looking at—at 600

million years of evolutionary wisdom and that we shouldn't be too arrogant when we start tinkering with systems that have been together and tried and tested and proved successful over 6 or 700 million years, I hope I convey that to my students and convey a sense of wonder and humility to them.

DT: Are there places that you like to go in Texas where you can appreciate nature? Could you describe one or two of those places?

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DA: There are a lot of places in Texas. Despite all the gloom and doom and all my concern about—about the losses that we endure, Texas is still a rich and—and wondrous place from the standpoint of natural resources. Big Bend—the Big Bend area of Texas has—has always been a favorite. Well it's been a favorite since my young adulthood. I had heard about it a lot as a kid growing up because my brother would go out there on—on scout trips. And I never saw Big Bend until I was in my early 20's but as soon as—as I drove into the park, I felt like I was home. There was some just really magical mystical feeling to me about Big Bend. It may have just been so much vastness without utility lines and roads and buildings and things that intersected it. But there's a real rugged honest about the Big Bend area and a real biological richness out there if you—if you understand it—take the time to understand it, there's a—just a tremendous system at work in—in the Trans Pecos part of Texas. Fort Davis and the Davis Mountains are another area that I think are just wonderful out in West Texas. My great grandparents settled in West Texas between Lubbock and—and Amarillo and I went to graduate school, I mentioned I think, in—in Lubbock and fell in love with that land, the—the flatness and the vastness of it. The fact that you could see a thunderstorm coming from three days away. And—and just those great prairie vistas were—were—were really beautiful and the—and a quite different experience than a girl growing up in bayou

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country in—in Houston with the big live oaks and pine forests and that sort of thing. The Rio Grande Valley was an area that I wasn't impressed with until I went back as an environmentalist and started finding these—these precious places. To me, it just looked like a really busy, intensively agriculture and tourist area. But—but when I found Santa Ana National Wildlife Refuge and then the Audubon Sabal Palm Forest and Bentsen Rio Grande State Park, lots of these areas just boiling with birds and—and teaming with wildlife and began to understand the biological crossroads that exist there between sort of the northern most extension of a lot of tropical species, the southernmost extension of a lot of temperate species and then the—the western deserts interdigitating with coastal plains. It's just a biological Disneyland and a wonderfully rich place and I—I have enjoyed going back there. Laguna Atascosa on the coast down there is also a—a terrific place. And I—I've thought about that in the past. I've been asked often by people, well we're coming to Texas, what should we see and where should we go? And I really have to rack my brain, not to come up with sites but—but to come up with sites that are close enough together. Cause there's not a place—there's not a part of Texas that doesn't have its unique beauty and its particular characteristics that are just—that either are quietly renewing or absolutely breathtaking and—and awesome. It's hard for me to come up with a favorite. The—the Big Thicket in—in East Texas is just wonderful, fabulous, rich area and gives such a sense of—of prehistory and—and propriety. Something that just seems like it's been there forever and ought to be there forever and yet is very, very vulnerable and very fragile. Those East Texas bogs are—

are wonderful in that way too. So it's—it's almost like there's not any place I don't like except golf courses. You know, and intensively developed—intensively developed areas. I—I—and I understand, we have those. We have to have them. I just wish that people would—would put something back for wildlife in every endeavor that they do. I wish people, whether they had an apartment with a window box or whether they had 5000 acres or—or 50,000 acres, if everyone would put a little bit back for wildlife and would educate themselves about what's—what's real and what's really helpful versus what's token or sort of guilt dissuading but not very biologically significant. I think it would be a wonderful thing. And I think that people really have a connection to wildlife and to land. It's just that we need to reach out and touch it—and touch them with specific information, things they can do.

End of reel 2020

End of interview with Dede Armentrout