TRANSCRIPT

INTERVIEWEE: Carol Cullar (CC)

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

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Please note that the recording includes roughly 60 seconds of color bars and sound tone for technical settings at the outset of the recordings. Numbers mark the time codes for the VHS tape copy of the interview. "Misc." refers to various off-camera conversation or background noise.

DT: My name is David Todd. I'm here for the Conservation History Association of Texas. It's February 22, 2006. We're in Eagle Pass, Texas and we have the good fortune to be visiting with Carol Cullar who has been a poet, an artist, a writer, an editor, a teacher of Earth Science and art and has run—the operations manager crew for the Lehman Research Foundation and most recently, has created and run the Rio Bravo Nature Center. And for all these different aspects of her life, I look forward to hearing about them and thank you for spending time with us. 00:02:08 – 2359

CC: I enjoy it, look forward to it.

DT: I thought we might start by asking you about your childhood and if there might have been a experience when you were quite young that—that suggested you might be interested in the outdoors and teaching about the outdoors.

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CC: Absolutely. Two—two factors, really. I grew up on a small farm in Western Oklahoma that's right on the Texas border. And we spent every moment barefooted and outdoors and drowning out crickets and playing in the dirt and harvesting apricot trees and helping in the garden. And my dad had honey bees and we helped take of the—the baby pigs and we chased the roosters and they chased us. So if the weather were clement 00:02:56-2359

then I was outside and generally barefooted for the first six years of my life. And then my parents began to move from small school to larger school to larger school in their teaching careers. And then in the summer my dad got his Masters degree. And he did that in western Colorado in Gunnison, Colorado. And rather than taking afternoon classes, he took trout fishing. And so we had a big food box all packed up with our cornmeal and our flour and whatever else we were going to take with us that day but we had a permanent traveling box and he took Architectural Drafting and teaching of

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Industrial Arts classes in the morning and then every afternoon we would hit a different trout stream somewhere on the Gunnison River or up Grasshopper Creek. And my mother would take a paperback book and her folded chair and she would sit and read a book. My dad would get down into the stream and be fly casting and they forgot they had us. So my sister and I just ran loose up and down the canyons there in Colorado. And tasting things that we had no idea whether they were edible or not and discovering goose berries and currants and—and animals and plants and playing with minnows and it

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was just it was really a wonderfully idyllic way to grow up. And I think what has gotten me into all of this conservation movement is the fact that children today simply don't have that opportunity. They play in organized sports, if they're outside. They're—they're on a sports field where there is a single monoculture grass that has been mowed to oblivion. All the weeds have been sprayed with poison and removed, the trees have all been trimmed and we put cotton wool about all our children now—a—days. And I lived in a 00:05:07-2359

tree. I grew up, there wasn't a day that I didn't climb a tree and jump from branch to branch and swing off of the tops of the—the whatever. Drop down on the chicken house roof and kids today are all protected and they're sheltered and they don't get out and they don't play in the mud and they don't play in the dirt and they don't play with the wild creatures and the horny toads and the—used to put a chair down over the ant bed when I was a child. And I—I felt like I laid there for hours. Literally hours, watching the harvester, the red ants, watching them work with—with making trails and removing rocks

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and bringing in food and it was so much fun and it—it truly did, it made me a part of the earth, it connected me to—to what I felt like was some of the most important, at least joyful, parts of my life. So I—I really think it's incredibly important that if we hope to protect the earth today, if we are going to do anything about conserving aspects of natural places for our progeny then we have to do it through interesting the children because they're the conservators of the future. And if we don't get them out there and having fun

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with playing with bugs and enjoying being out in nature and canoeing or wading or all these things then we're not going to have anyone who has a vested interest in protecting the natural places on the earth. So that—that's why it's important to me. But it does stem from those earliest, earliest days of playing outside.

DT: I understand that—that from an early age from your teenage years, you—you've written as a poet and I'm curious if the—the idea of beauty and lyricism is something you've often found in nature or—or not?

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CC: Well, I—I think I'm greatly inspired by Robert Frost—preface that, by his writings. The man was an SOB. I did—that—he was mean. He was not a person that you would like but his writings and where he wrote from in—he's are very important. He was considered a regional poet. He grounded even his most complex statements and his most complex poetry in nature and used that as a spring board then for complex

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thought and philosophy. But when I did begin to write, I—I very much felt that this particular region of the country is under represented in writers and that being a part of the earth gave my poetry and my own writing a groundedness and a reality, a—a sensory reality, that if you take that away then you—you simply don't have the richness and you don't have the—the—the visual stimulus or—or what it takes, for me anyway, to make a

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powerful piece of writing. So I do, I try to ground much of—much of what I write in natural sensory phenomenon.

DT: After taking classes in art and everything from weaving, I suppose, to other kinds of skills you—you found work teaching art and I'm curious if –if you're interest in learning about art and

passing on lessons about art also reflected your interest in the visual world around you. 00:09:06-2359

CC: Of course it did, yes. The—the main thing is because I am very interested in the natural plants and wild flowers and the local indigenous animals much of my work has been with the particularly block prints of the native animals and I do—I do—linoleum carvings of—I did a whole series of the native animals that live in this part of the country.

DT: Can you describe some of those native animals that you made block prints of? 00:09:42 – 2359

CC: Oh sure—sure just—just horny toads and I—I'm just—I'm not ready yet to call them a Texas horned lizard. There going to always be horny toads for me because we grew up where there were thousands of them and could go out with a shoebox and catch a hundred baby horny toads. Watch them, look at them, play with them, let them go at the end of the day. So I—I've done horny toad, scorpion, bobcat, what else? Long horn cow—that was really the first in the series. Let me think— paisano the which is the road runner the marvelous, incredible, amazing, amazing bird. The road runner female wants her young to survive. To do that she picks that baby bird up every day and shakes it as hard as she can and if it doesn't fight her back she eats it. Kills it and eats it. And so

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here come along next day, here comes mother bringing food, caring for her young and then at one point during the day she's going to fight that child and get it to fight her back because once she does abandon it, it's got to be able to fight and survive. And I've always used my mother as a parallel for that bird but I did a ... okay, paisano, alacron

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which is a scorpion, the white tailed deer, of course, bobcat, I can't even—thirteen in the series, this—this recent series, so that tied in with the...each one of them was done for a cover of the literary journal that I published which was called "Maverick Press," so.

DT: Why don't you tell us about your work editing and producing these journals of poetry? 00:11:45-2359

CC: Okay. Well, I was here again, living in Eagle Pass isolated really, cut off I felt in many ways from a—a—a literary or journalistic writing other people in the—in—all seem to be off somewhere else. Not a lot of people writing in Eagle Pass at the time and very interested improving my own poetry and simply set up a—a literary journal that e—e—eventually we were having submissions from the Ukraine, from Japan, and Spain,

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England, Canada, every state in the United States. And that first year there I—I set up to actually begin publication twice a year, had eight thousand literary submissions. Short fishion—fiction, but mostly poetry. And in reading an—and deciding what was good and what was bad and what I wanted to include was an incredible learning experience. And it enabled me then to home my own writing, improve my own writing, and then as

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well showcase other writers from all over the world. And just –it was something fun to do so I would then carve each—we published twice a year. And I would carve out a small block print for the front cover. And since we were "Maverick Press" then I wanted to showcase the other animals in this part of the country. So I did that for eleven years and at some point I felt like that it was just simply—I had learned what I could possibly

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learn from it. It was time to go on to something else and immediately after that is when I then began focusing on working with outdoor science education or outdoor nature studies and involving work for the Lehman Research Foundation.

DT: Just to make sure we—we start as early as possible, did you teach Earth Science for a bit at Eagle Pass School?

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CC: Yes I did, yes I did.

DT: Can you talk about that experience?

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CC: Okay, yeah. I—I was—I was teaching art in Mexico City and at the Colegio Medicano which is a school primarily for embassy personnel people. But we had about half Mexican enrollment with our Mexican families and then embassy families. I taught there for two years and it wasn't working out well for my daughter at all. She was second and third grade at the time. Seven, eight years old. And it was very traumatic experience for her and decided we better come back to the United States, get her calmed

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down because she was very—developing lots of anxiety and—my sister and her husband lived here in Eagle Pass and they said, "Well tell them you can teach Earth Science" because they were always looking for science teachers and I had had thirteen hours of advanced Botany and primarily wild flower identification classes at Hardin-Simmons University when I got my B.A. degree. And you only had to have twelve hours to teach science. So I came here sure enough, taught Earth Science for a year and a half and then an art job opened at the high school and I chose to go in—back into that. Don't have to grade as many papers when you teach art so that's how they—that tied it in together.

DT: Well it sounded like your Earth Science classes both an opportunity for yourself to refresh and relearn some of these topics and also pass on some of these messages about of science and really the naturals around Eagle Pass.

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CC: Exactly, exactly. One of—one of my grave concerns is because right now what I do are—I carry a science program around to the various elementary or middle schools, high school even here in town. And what I invariably run into when you begin to talk about wildlife, you hear without fail someone says something about tigers or kangaroos or—animals simply are never going to exist in this part of the country, you see, but it's

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what they've seen on TV. And they love animals. Children always want to relate to animals. They're excited by that but they are starved for and simply not exposed to what we have right here. They have no interest in simply because they don't know what we have. And if they have seen a skunk it's because it was run over on the road, if they've seen an armadillo it's because they it was taking a nap. You know that joke about oh, look at the armadillos, they're all taking naps at the beside of the road? So they don't have any kind of grounding in the wildlife of our region and we're actually a part of the

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Tamaulipan Biologic Province. It is one of the—it is the most diverse as far as the number of species of plants, and the variety in species of animals and insects on earth because the—the Tamaulipan Biologic Province is just about the size of the state of Illinois and extends from right about here in Eagle Pass all the way to the Gulf of Mexico

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down into Mexico and all the way over this way into the mountains around Monterrey Mexico. So if you picture an area the size of Illinois that runs from the coastal marshes which would involve our shrimp and all the variety of the rich inner—coastal waterway animals and species and then all the way up into this part of the country, right along the edges of the Chihuahuan Desert. And over into the mountains because you have then you have wildlife that's marine, you have fresh water aquatics and then you have the elevation changes that makes for incredibly diverse plant life as well. So they're not

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exposed to that. The kids really are not familiar with what we have here and because of that, they simply don't value it. And it spreads over into adulthood so that when you do come in with all the growth and the development of people moving in to the Rio Grande and the basin here, you get developers who come in with the bulldozer and they blade off every square inch down below the level of the top soil. And yet they will call it Vista Heights and they've wiped out the vista or they call it Cenizo, which is the purple sage, they'll call it Cenizo Acres and then they come in and bulldoze out all the Cenizo. If we

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want to change that, if we—if we hope to have any kind of cherishing of what is natural, we have to do it through approach. You're not going to get it through the politicians; you're not going to necessarily get it through the adults because their habits are all set when they're four to seven years of age. So that's my focus and that—that's my hope and in attempt then is to develop an appreciation and awareness in youth here in the community for what we have here. I don't want them to yearn for beautiful green lawns and lush bushes and brilliant, brilliant, brilliant flowers that have to be watered at least once a day here in Eagle Pass. It's nonproductive. It brings us then to the Rio Grande

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and the fact that this basin, this part of Texas, is one of the fastest growing areas in the entire United States. The Rio Grande is not growing. It has exactly the same number of drops of water in it that it had a hundred years ago or fifty years ago or is going to have a hundred years from now. So the reality that we're faced with is that there is even already talk of turning it into a concrete lined water ditch. And it serves now as—it's one of the longest sewer systems on earth. Piedras Negras as a city, dumps eleven million gallons of 00:20:57-2359

semi raw, semi processed human sewage into the Rio Grande every day. Eleven million gallons. Now, it is semi processed at this point but you do not want to swim in fish south of town, okay? Now the irony of that is from just south of del Rio to the middle of Eagle Pass, about where the international bridge is, we have the—some of the most beautiful and we do have the cleanest and less conta—least contaminated section of the river for the whole eighteen hundred miles that it runs. And so, on the north side of town we can wade and fish and swim and eat the—even the fresh water clams if we wanted to.

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But south of town it's not recommended simply because of the pollution. We have to focus on what's going to happen to the Rio Grande, what is going to happen to the people who live here, how will people living here forty years from now supply their drinking water? We want—I hope the people who live here who understand the problems, to be the ones that are solving the problems. We don't want the problems solved by someone in Washington, even someone in

Austin. It's too far away. We've got to have people who cherish and understand and respect this—this ecosystem is really a very brittle, very fragile one. It all rises and falls on what care we take of the environment and the Rio Grande.

DT: I think this helps us understand your interest in educating young people while we can still... 00:22:49-2359

CC: We have to, yeah.

DT: ...understand and—and be flexible. Can we just take a—a break here? (misc.)

DT: You told us a little about your teaching career both as an art teacher and as an earth science teacher. I was hoping that you might be able to tell us about your work with the Lehman Research Foundation

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CC: ... Okay

DT: ...where you—you got into even more educational working a lot outdoors.

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CC: Well, that was my first experience with outdoor science education. And they were having a little trouble getting their paper work finished for their non-profit status. And I initially started doing some grant writing for them and writing the 501(c)3 papers for them. But then the grant people wanted to see what kind of programs they were actually involved in and so then we bec—I put on another hat and become their Outdoor Education Program director and we did hikes and science lectures, walks, adventures with various girl scout troops and—and cub scouts and—and youth in the community

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over there in Dimmit and Val-what is it?

DT: Val Verde? 00:24:15 – 2359

CC: Zavala, maybe Zavala County, okay? Not—I'm not sure. Val Verde is up at Del Rio. And it was really transformative for me because I had always loved the outdoors and I didn't—I didn't realize what the disconnect was between someone who was born—I was a war baby and we've had three generations, at least, two—two full generations since then where the kids were girls scouts, yes, but we got them on the hiking trail and they were doing their girl scout cheers or their—their cheerleader cheers and they were gossiping and they were giggling and they were walking arm in arm and their—their focus was all inward and on themselves as a social group. And so we began little by little pointing out things on the trail, animal footprints. Where they began to look outward beyond themselves and they began to actually look at these towering hundred foot trees, oak trees and what around them. And then one little girl found a bone on the 00:25:33-2359

ground. Well it—to her it looked like a shark tooth and—and that's sort of a metaphor for the disconnect between kids in this part of the country and what they have seen on television. For her it looked like a shark tooth and she hadn't thought about the fact that we have very few sharks here and—but it looked like a shark's tooth! And then we got to looking, there other bones on the ground. And we—at some point—you can't let a child discover everything because they don't know it all yet, you see. So at some point, we—we explained that it was a garr tooth. And they began to look and there were—there were

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wonderful, wonderful and everybody got to—got to have a little fish bone. It was a garr so we

talked about the alligator garrs and the actual species living in the Nueces River. And then somebody further down the trail noticed a feather and so then we got to talking about birds. And before—within twenty minutes, they were competing with one another to be the next person to find something on the trail. And they went from being inwardly focused then to actually connecting with the world around them and—and what they were seeing and the—whether it was just a leaf with and insect egg or whatever. And I 00:27:03-2359

got so hooked and so excited about promoting, I don't want to say causing—promoting, supporting, encouraging that kind of discovery for them that I just loved it. It was—it was a real kick for me, to—a just really enjoy because I love the hiking myself and I wanted to pass on that same joy that I had as a child or that—that same connected—connectedness that I feel to the earth itself. And so, that's—that's where it started so we would bring—bring groups of kids and take them through the forest, and it quite

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literally with a lot of those kids, was the first time they'd ever been on a hike, first time they'd ever been out in nature, the first time that they had ever thought about each bird footprint, each track on the earth, each dug up spot on the ground is connected to almost everything else and they—you can find a section in the earth where there is a—a dove footprint and you can show where he walked in a figure eight and then took a dust bath. And the history is written right there in the track or the trail side or whatever and they begin then to relate to the world around them in a completely new way.

DT: Does this remind you of John Muir's insight about connectedness? 00:28:42 – 2359

CC: Exactly. I wish I had the exact words on that quote because—here, I—I think it's important enough to—to include. This, it is for me, what ties all the world together and what he said was, "When we try to pick out anything by itself, we find it hitched to everything else in the universe." And he said that in 1918 in one of his very early books. And I want the kids to have that understanding of th—of the connectedness particularly of the ecosystem. How if we come in and we bulldoze off all of the—all of the prairie or we bulldoze of all of the chaparral or we remove all the under story then there are whole species and whole worlds that will simply either cease to exist, become extinct, or go somewhere else. The, for example, over in the forest there at the Lehman Research Center, the prothonotary warbler is fairly common. It nests only trees and shrubs and bushes shorter than six feet. Well, here's what's happening in so many of the large 00:30:06-2359

ranches and so many—because Texas is a private property state. There is no public park, there is no preserve land. There is no facility to get out in nature within sixty-five miles of Eagle Pass. But here's what's happening to the ranches today, they're being sold to people from Houston and they'll come in and they'll buy the ranch and if it isn't subdivided into twenty-acre ranchitos, little tiny subdivision housing plots, so everybody can have a little horse and their own five acres and their own small section of—of earth, they'll come in and they'll expect to have the land look like a park. And there one of the

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main things that we would do is take the children to the fence line at the Lehman Research Foundation and show th—show them a piece of property across the fence where the people bought for a hunting lease and came in and bladed under the huge massive trees and it was beautiful. It looked just like a city park. And ever deer moved over to the Lehman Research

Foundation simply because we maintain the under story and the underbrush. We encourage that and—and maintained it as a natural habitat. So we didn't come in, wipe out the under story and move all the prothonotary warblers off

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somewhere else. There are other birds that migrate only through riparian water courses. They—they do not fly across exposed, empty areas of land. And if you come in and you give every individual five acres or ten acres and they clear that, then that species, that—that bird is not going to be able to migrate a—at all and—and see that would lead to its extinction. So we have to have some kind of understanding of how everything does connect.

DT: Can you tell us about some more examples of programs and outings that you ran while you were at the Lehman Research Foundation?

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CC: Certainly. Okay. We worked with the Monarch Watch, which is a citizen science program set up by Dr. Chip Taylor at the University of Kansas. They do migratory monarch research. We worked with the—Dr. Karen Oberhauser—is another citizen science project out of the University of Minnesota and that's called Monarch Larva Monitoring Project. And that one involves looking for the native milkweed, assessing the number of eggs and successful larva, and doing some statistical collection of information but working with the monarch butterfly and the milkweed which is their only native plant, their only food.

DT: What do you mean by citizen science and what's the importance of that? 00:33:38-2359

CC: Okay. This is a ideal way, it's a cooperation between genuine researchers and scientists who need thousands and thousands of bits of data collected and untrained, uneducated, or—but—but sincere and really interested people to help in collecting that data. And there're all types of programs like that. One of the most interesting and informative ones for elementary children is called "Journey North." And Journey North was set up by a woman—Elizabeth Howard. I believe she lives in Massachusetts. But

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it's a national program and they have simply studied the—the migratory processes of various birds and whales and what else? Butterflies, insects all across the United States. And it has become such a large thing that it involves students even in Mexico, the United States and Canada. So they're—there're quite a few studies where the scientists need the data. They hire or actually not hire, they—they encourage volunteers then who participate and, for example, I didn't get a degree in science. I have a degree in art. In—I'm very, very interested in science, very interested in education and as—as a

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unscientifically trained person, I can still participate and collect data for a researcher who then he—he does the research and the number crunching and writes the article and I feel like that, as a citizen, I have become in part a scientist that participates in broadening the knowledge of, for example, the monarch butterfly. And the kids love to participate. They really enjoy—it's not just empty busy work at school... They're literary involved in collecting data for scientists that will eventually be written up in—in whether it's Luppa Doctrine, journals or whatever. But it—it—it's real science.

DT: Tell me about the program called "The Journey North."

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CC: Okay. I think Journey North may have been operating ten or twelve years, at least and was

set up when Elizabeth Howard was a graduate student possibly. And it has simply grown and expanded until there are thousands of elementary kids all across the United States and it is a—it's all held together by a website and they communicate with schools as—in central Mexico. The kids can do all sorts of kinds of studies. Whether it's planting tulips and watching and studying and making observations of when they spring from the—from the ground and then you report that data. It gets posted on a website, kids a hundred miles north of you report when their tulips come up, it's reported on the

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website and then it's graphically represented on and actual map and you can look at that map that's color coded and you can follow the spring time up the face of the continent. Just like when the monarch butterfly migrates and goes south. You can—we—we report our data of when—what's the first migratory monarch, what's the last migratory monarch, and then someone there in the Journey North Center is representing that graphically on a map or a chart. And the kids learn scientific process. They learn to—to record their data, they learn to make reports. So it just spins off into so many as far as

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writing activities, research activities, but in most of these, in most cases, all of this research is outdoor science education. So we want to get them out of the classroom, out of the book, and out in the real world, where they're actually planting tulips, or putting tags on butterflies or actually involved with being out in nature.

DT: It sounds like you have two kind of strains here in your work. One is to help people appreciate what's local and endemic and special about the Eagle Pass area. But then also to help them understand how Eagle Pass is connected to the rest of the continent through migrations and the...

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CC: Exactly, exactly.

DT: ... regular end of the flow of the season. Is that fair to say?

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CC: Exactly. For example, one of my greatest interests and one I spend the most with—with working with kids and whatnot, is for example, the monarch butterfly migration. Eagle Pass is on most maps on earth simply because there's absolutely nothing here and the map makers don't like that big empty space. And so we—they get—even though we're a little tiny town they'll put that dot on the map. Well the irony of that is, that—for—in reference to the monarch butterfly, the monarch butterfly reaps and reproduces and hatches out up around the Great Lakes all through central United States

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and about August they begin to migrate. And we—we finally in 1976 discovered where they migrate to and it's a very small region down in central and the transvolcanic mountains in central Mexico. But we have monarch butterflies scattered all over the United States all the way from the Great Lakes region up into New England, North Carolina, all the eastern coast, down through central Kansas, Nebraska, North, South Dakota. They begin to migrate south. Well as they do so, they funnel down into a

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narrower and narrower path. The—the ones from the central, even New England and Nebraska all that region between, they funnel down into what's called the central flyway. By the time it gets here, the central flyway which has been as wide as half the United States, the central

flyway's only about a hundred miles wide. Well Maverick County is thirty-two miles long and if you picture a bell curve of dis—distribution, very few monarchs west of Del Rio, almost no monarchs south of Laredo. Then you have a hundred mile path and Maverick County sits right at the peak of the bell curve. Eighty

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percent of the entire migration passes through this part of the country. Well if it's a two hundred million butterfly migration, eighty percent of that is a lot of butterflies. So starting about the ninth of October until near about the ninth November, there will be hundreds of thousands of butterflies covering the trees every spot you could imagine all over this county. It is—it's a perfect, perfect metaphor and opportunity for the kids here to realize that we are an important region. That we could in reality, be very important to an entire species and it connects us then with people in Canada and people in Mexico. So

we're not just a little nothing place on a map or an empty place on a map we—I want the kids here to see us as tied to the rest of the earth. That—that—that the ecology here and the environment here is important nationally or internationally.

DT: Well, speaking of this international role, have you been able to see any changes in the migration patterns. The timing or the number of monarchs that are coming through and what does it mean to the whole population that is shared between Canada, the United States, and Mexico?

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CC: Okay, very good question. I just, in the first week in December, attended the Western Monarch Conference and Dr. Chip Taylor from the University of Kansas who heads the monarch watch presented his—his newest theory and he has taken the information collected by the people involved in monarch watch and the monarch larva monitoring project and the data that we send in in the spring about the numbers of monarchs that are hatching out here along the Rio Grande. He's taken that data and is able concretely with a hundred percent parallel has determined that the number of

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monarchs that hatch out in the spring in southwest Texas is what determines the entire population for the rest of the year. Y—y—the process involves about four generations. The monarchs have migrated in the fall from October to November, migrated to central Mexico. They stay in a small region of the mountains in—in very cool climate to keep themselves in semi suspended animation simply be—so they don't break into sexual reproductive—active sexual reproduction. In the spring then, they return to Texas,

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southwest Texas, San Antonio, and south, in this part, find milkweed, lay eggs, and immediately die because they already lived eight months, see. That next generation, it's called gen one or generation one. Generation one then flies north as the milkweed moves up the continent each—as spring develops and the milkweed comes up out of the ground 00:44:33-2359

the butterfly, probably through smell, follows that milkweed, laying eggs frenziedly. Well now gen one will live between will live between two weeks and four weeks at the most. The females lay between four hundred and sixty and a thousand eggs and they die. The males mate so reprepeatedly that they wear themselves out in actual mating the females wear themselves out in laying eggs and generation one goes from here to say Oklahoma. Generation two lays eggs, lives

only two weeks, three weeks, dies. They

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have a third generation the flies up around the Great Lakes about July—June, July, that—see exponentially growing each time because say we started out with a hundred individuals laying eggs here. (Coughs) Gen one would—a thousand times that minus whatever predators were wiped out. Gen two still exponentially if each female is laying a thousand eggs, even if only ten percent survive, then we keep growing and growing and growing. So by August and the first of September, we have two hundred million monarch butterflies in the eastern half of the United States. They begin the migration back down through here. And I've lost my train of thought on tie—how that ties all together.

DT: Well you were telling me how Eagle Pass might represent a little sign of what's happening through the south of border..

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CC: Well here's what Dr. Taylor says, "So goes Eagle Pass, so goes the nation." If we do not have enough rainfall to produce a healthy crop of milkweed from Eagle Pass, south or from San Antonio in this part of Texas then—or, here's the other thing too—or if we have a huge crop of fire ants that year, we will have a hundred percent fatality even though the females from—from the fourth generation that migrated south, even though they make it back up here and they lay eggs, if the fire ants are good that year, they can wipe out. If the drought is bad, if the milkweed hasn't come up, then there's not enough

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food and if—if gen one is small, then two, three, and four because it's all built on those original numbers, they can't get any bigger. And so if we have a small over-wintering population in Mexico, it was because the milkweed and the fire ants were working against that—that first generation. Okay?

DT: Are you seeing any impacts from the genetically engineered corn up in the Midwest or from the destruction of some of these cloud forests down in Mexico?

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CC: Alright. Another program that Dr. Tabor has—Taylor has instituted in addition to the monarch watch is the monarch weigh station program. And what has happened—farmers are only allowed to plant fifty percent of their crop in B.T. corn. The B.T. corn wipes out—it causes a fungus to grow in the—in the any larva, any predators belly any caterpillar that eats corn. Milkweed, traditionally in the Iowa and the corn crop states, Nebraska, Kansas, all through there. Milkweed traditionally grows along the road sides,

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in between the rows and around the edges of the fields of corn. And yes there has been a most definite impact. There was a big scare of—about five years back about the findings that the pollen from the B.T. corn were falling on the milkweed leaves. And if it is ingested then it does kill the monarch caterpillar. Out in nature there's not as much. In a lab, the pollen will stay the leaf. Out in nature the winds blows—the pollen on a corn is very heavy. It doesn't fall and dri—it doesn't drift like wildflower pollen and so there's less concern there but more and more crops are also going to round up ready. Crop status

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where people are putting more and more chemicals in on the crops, they're getting fewer and fewer weeds. And so the—the weed control and milkweed in considered a noxious plant in many states, particularly in Canada. It—it is eradicated—this—and butterfly enthusiasts are really

upset and trying to—to get that changed simply because the milkweed is not invasive. It is a native species and it doesn't harm anything. There are few species that are incredibly poisonous and as few as five or ten plants in a bale of hay can kill a cow. But those species are—are rare and they not any species that the monarch

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is dependent on to survive. So yes, there is—there is some concern, research still being done particularly on the B.T. corn and—and what an impact it is but the roundup ready crops have made a big difference in wiping out the—the native milkweed. So Dr. Taylor then have—has suggested that we set up these monarch weigh stations and that people grow native milkweed because it is decorative and it's beautiful and it smells good, so that we have yards or public gardens or flowerbeds at schools or whatever where we will have—provide some kind of habitat for the butterfly, for the monarch in particular. If we don't, they're not going to live.

DT: And then looking south I had heard that there were concerns of both about logging down in the cloud forests and also, is it a wind storm that—or...

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CC: Well, okay we—yes. There—we can't fight mother nature and the—here again, this is the interconnectedness of everything. When you put—tug on one thing in the universe, you're going to find that it's all connected. If we're going through a period of climatic change, and—and I think it's pretty clear that we are, I'm not willing to say that we are going—going into a period of global warming but we're definitely going in to precipitous climatic changes and—which means that we quite possibly could have more violent storms or more violent weather patterns and we've had in the last six years, two

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winters in the preserves, in the transvolcanic mountains of Mexico, where there were ice and snow storms and generally in Mexico the winter is a dry season. So that you have six months of dry in the winter and six months of wet in the summer. But when you get a snow storm in the monarch butterfly preserve, the weight of the snow on the heavily, densely, clustered monarchs the—they had six inches of snow. That weight broke the branches. When the monarchs fell, there was then after that a freezing rain. Monarchs, i—it's hard to imagine how thick they are on the trees unless you have seen them because there will be literally ten million monarchs in less than an acre. Forty trees with ten

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million monarchs on it. It looks like densely clustered vegetation. And so when those branches broke, the butterflies on top were covered with snow and freezing rain. The—about a two inch layer of those butterfly's wings froze together. The monarchs beneath them were perfectly healthy and could've survived but they could not escape from this layer underneath this layer of dead monarchs. And so I was down there about two weeks after that first snow storm and the—the smell of rotting monarchs—because milkweed is very pungent it's very, very strong smelling sap. The sap itself can even be very

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dangerous. If you get it in your eyes, you can go blind. But it has a real strong smell and that's all they eat and so they smell strongly of this really, really pungent death. It was really sad to have oh, areas about tw—twenty to forty feet wide and a couple of hundred feet long and it w—they were six to eight—eighteen inches deep in dead butterflies. It wiped out about eighty percent of the population. Now the irony is that when it—that happened the second time, three years ago, that was one of the biggest populations we had ever had in the United States. They estimated it

was over two hundred million

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butterflies. Even if you wipe out eighty percent of that, then you have twenty to forty million butterflies that were able to climb up off the desert floor and get back up on the trees, dry themselves back out and recover from—from the ice and the rain. They were then able to still remigrate; it's called remigration, in the spring and reproduce. So this boom and bust, this—this near wipe out to going to where there too many and they eat too much of food. This is natural in nature. That simply happens. Happens with the deer

populations, happens with the wolf populations, happens with the coyote populations on a very regular basis. If you have a good year then a—the—they reproduce hugely. If you have bad year, then they're all going to die off. But what we hope then even though the boom and bust and the millions dying in ice storms—what we don't want to do is have anything what a human might do interfere with that natural boom and bust because it's—it's possible and it's not happened yet, but the people that are concerned about it are screaming loudly and hopefully early enough on that the tolomondes, the illegal thugs,

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the—the m—Mafioso that goes and illegally logs the trees, they come in with—guarded with machine guns, they come in with every kind of power tool imaginable. Big, huge spot lights and they move in to a spot in the forest and they can knock down and haul out on logging trucks acres and acres and acres every night. Each of those Oyamel fir trees that the butterflies do roost on is worth a thousand dollars or—yeah equivalent to a thousand dollars at the lumber yard. The land belongs to communist based community farms and those people live at subsistent levels and the lure of easy money and a

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thousand dollars a tree makes it critical that the Mexican gover—government act to protect those. But if you take away their livelihood then you—you shove these people over into even harsher circumstances and even worse sub—a—you know just subsistent existence. So it—it—it's a problem, it's a concern. Right now there are fifty nine thousand acres or hectares, I'm sorry, fifty nine thousand hectares which is acre and a half preserved and the thing is the logging is not happening inside the core areas of the

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little canyons where the monarchs are roosting. But if you don't protect the periphery and if you—then eventually the—the trees on the outside edge are going to be cut. Then the next thing they'll cut are the trees closer in and sooner or later, the butterflies won't have anywhere to go. We're not looking at that within the next twenty years but much beyond that we can't predict. So the nice thing about it, trees are renewable resource. What we need to do and there are some programs doing that, planting—trying to plant almost a million trees a year because in fifteen years, twenty years, the loggers will have

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something to harvest. But Canada and the United States are sort of big brothers looming over the shoulder of Mexico and they're not giving enough credit to what the Mexican government to simmer not to the environmental protection agency in Mexico is doing. It's sort of, you know, that—that ugly American thing where we want to go in and tell everyone what—what we know is best and that isn't going to work so—but there—yes, but Canada and the United States and is—is very concerned with the country. And so we have to work together and not try to push

them around in their own country.

[End of Reel 2359]

DT: You've told us some about the Lehman Research Foundation where you started some of your outdoor classroom work. But about six years ago now, Mr. Lehman died and the Lehman Research Foundation went out of existence and you had to segue into a new effort. And I was wondering if you could tell us about the next chapter in your outdoor education work. 00:01:51-2360

CC: Okay. Well working for him it was the first opportunity that I felt like that I had had to take all my varied interests and skills and—and abilities and actually put them under one umbrella. And then when the foundation ended, I enjoyed the work so much that I simply did not want it to end. And I actually dreamed that I set up a nature center in Eagle Pass remembered the dream when I woke up and I thought, "Oh, I can do that!" And so I—that was probably August and by December 22nd, I had found four other individuals that would serve on the board of directors. I had written the 501(c)3 papers to apply for non profit status to the IRS and done our incorporation papers and

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gone to our incorporation from the State of Texas and all the business papers and whatnot involved. And so fortunately all those things are retroactively dated. So when the permits all came through, we were in business. And I began doing programs and activities in the public schools and with the scouting troops and whatnot. We were very fortunate because early on I was doing fairly regular articles and nature articles and whatnot in the local newspaper and they have been very supportive. I mean they'll publish any article absolutely about the environment or animals or wildlife or native gardening with native plants. They'll publish absolutely anything I send them. So

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they've been very supportive and same thing for the radio station here in town. We have guest and lecturers come through and take them over to the radio station and they're very happy to interview them and get them on the air and people call in and ask questions and stuff. And we—I got a phone call from a—from a rather irascible, you know, gentleman and, "Well I want to know what the nature center is and I want to know what's going on over there." And told him a little bit about what we were hoping to do as far as outdoor science education programs and didn't want me to be associated with the Sierra Club in

any way because he was sort of concerned about some of their policies. And that was it, didn't hear from him for a while. And then I was contacted again by the—Dob and Kay Cunningham. And they own about seven hundred acre ranch in South Quemado Valley. Quemado Valley is fifteen miles north of Eagle Pass. They have been as cooperative and interested in youth education and the learning to appreciate and respect the land as Mr. Lehman was at the Lehman Foundation. And so when we need a place to take the kids on a nature hike or a geology hike or access to the Rio Grande or bird watch, then they

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have volunteered their ranch. And as long as it doesn't interfere with those couple of months a year when there are deer hunters about or we would be scaring off the game, then all year long then we—we have basically I just called up and say, "There's some girl scouts want to come for a butterfly hike." And they have been really, really warm hearted and helpful in all of our endeavors. So...

DT: Can you describe or speculate at least about what is about Mr. Lehman and the Cunningham couple that led then to want to open up their private property to children and for education? 00:05:59-2360

CC: I don't think that we're going to be able to preserve our heritage. I don't think we're going to be able to preserve the environment if we simply don't carry that love for the outdoors to the next generation. And it—it doesn't take educators and scientists to realize that. I think that the realization comes from the people who are right now stewards of the land. And what we are seeing more and more and more in the—the ranches in Texas is the—the—they have raised their children but the ranchers' families and their kiddos are going off to be attorneys and they're going off to be doctors and they're going off to—to other places and there's not always someone to leave that ranch

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to that's going to continue that stewardship and take care of the land into the future. And so we've really been fortunate to have Mr. Lehman and then Dob and Kay Cunningham. But the—the people who are now in charge of caring for the land and seeing that it does preserve itself—they're interested in that heritage and carrying it forward.

DT: Could you tell us about some of the articles and radio programs that brought your operation to the attention to Mr. Cunningham?

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CC: Okay. Sure. We had done things like talking about native bats and the Mexican free tailed bat migrates through here in the spring and fall. And their favorite food is the casebearer moth that eats pecans. And there is a large pecan orchard industry here in Quemado Valley, Maverick County. (Cell phone rings) Excuse me, sorry about that.

DT: Could we pick up where we left off? You were telling us about the life cycle of the—of the bat...

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CC: Sure. Okay. I had written an article in the local paper here about the Mexican free tailed bat that migrates through Maverick County spring and fall. Their favorite food is the casebearer moth. Well, that devastate pecan crops and the—we have a large pecan industry here in Maverick County and also in Maverick County, I'm sorry, here in Maverick County but also up Quemado north of Eagle Pass. And so I had—I had done some mentioning on the radio and articles in the paper about the free tailed bat but also want to encourage the gardening with native plants... so I'd written various articles about that kind of thing just—just to keep a public profile going so that people were aware of what we were trying to do at the nature center.

DT: What was the argument that you made for planting natives? What was the value you saw to that?

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CC: Oh, well the thing about it is there's so many people moving here to live along the Rio Grande that the population forty years from now is simply not going to able to be supported by the amount of water that we have in the Rio Grande. We have to change and already we're seeing what will eventually be the death of agriculture. Agricultural waters that are being used now to grow pecan crops are simply, eventually going to be switched over to residential water simply to maintain the households and the—the people living here. And so we're looking at the—the death of agriculture along the Rio Grande

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in—in forty years. There's simply not going to be water allotments and it'll transfer over to—to

people drinking water. And it's really important that we stop growing lush vegetation, trees that demand forty, fifty gallons of water a day. We've got to stick with and we've got to begin to plant and we've got to co—encourage people to grow what's native, what will live without water, what—what will live with just whatever moisture or rainfall that we have. So...

DT: In speaking of water, I think that you had once written that the fish populations in the Rio Grande had been changing. That twenty years ago you might have almost two dozen species and now it's now perhaps half that.

00:10:54 – 2360 CC: Exactly.

DT: Why are there these changes?

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CC: Well unfortunately, it's just—it's the nature of the beast in that we came in and we—down the Rio Grande we have wonderful, wonderful beautiful lakes. Lake Amistad is fifty-four miles north of here. Lake Falcon is nor—south of Laredo and the—those reservoirs prevent disastrous flooding some of the time. They act as a catchment and excellent water source for communities around the region and for what agriculture we—we still have. This was a large winter garden area at one time and the numbers of acres allotted to winter gardening have co—diminished constantly. The number of acres

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allotted to orchards and any other agricultural processes for irrigation purposes are diminishing constantly. They're getting converted over and bought out for residential water. And I've lost my train of thought again. Sorry about that.

DT: Well you were talking about the decline in the fish population.

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CC: Right. Well we built the—the—the—the Amistad Dam and the Falcon Dam. And when you dam a river, you change its flow pattern. You change the sand bars that form and are ripped away by floods. You change the vegetation along those banks simply because the vegetation isn't ripped away by flood. Man has to control that water because

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we don't want people washing away in the thousands. It is—it's an inevitable result of man interfering with the natural flow of the river. Where—there are two movements as I see it in the conservation movement, the wise use or what they call sustainable development and the preservationists. And somewhere between those is—is the reality of what's happening out there along the Rio Grande. But we have to be aware that for every action there is a opposite and sometimes unequal reaction. So as long as the Rio Grande was flooding, and the sand bars were forming and disappearing and—and the

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natural process of the river were occurring then we had about twenty two species of fish. Once the river was dammed, then the environment changed and so—for various reasons, whether it's increased pollution, whether it's increased sewage, whether it's eutrophication from increased agricultural run-off. We've lost—we're down to about nine species now here in this section of the river. So—and those aren't coming back. We went from twenty-two species twenty-five years ago down to nine species and they—they—those that are gone are not going to come back. DT: While we're talking about water, I know there've been some proposals recently to take well water, groundwater and export it from the area somewhat north of here to San Antonio, Laredo, and other growing metropolitan areas. Do you have any insights about the history of that and

what the future might hold for those proposals?

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CC: Well we're going to have to find water somewhere. It's going to have to come from somewhere and we may wind up buying it from Mr. Pickens up in the Texas panhandle up there around Amarillo. Is that the Ogallala water basin or the—what's that, the under res—the preserve and I've blanked out on the definition of that word.

DT: The aquifer...

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CC: Aquifer. Blank, blank there for a minute, yeah. I think it's the Ogallala Aquifer. And what's that? Seven hundred miles from here, almost? Six hundred miles from here. It may very well be that that's where our water will come from forty years from now. There have even been pie in the sky outrageous proposals about a pipeline all the way from the Mississippi River or from the Missouri River, I mean, that would run for a thousand miles to bring water into this region. We just don't know, say—you know, they say we live in interesting times. Forty years from now, the world will have a very different face. And populations continually are shifting from colder, northern states,

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factory industry with the—NAFTA has had a big impact on the number of people that are moving into this region. It'll be interesting to see what the—what the face of the world looks like. I think we're going partially through a natural extinction as far as species numbers worldwide. The number of species are diminishing and some of those unfortunately, pretty rapidly. Some of those as a result of—of human development and growth patterns and society just—civilization spreading out over the earth but it'll be interesting to see what happens. DT: Let's talk a little more about conservation issues here in the Eagle Pass area. I think that one issue that's often been discussed involves the Carbon I and II coal utility plants that are south of here in the Piedras Negros area. Do you have any thoughts about that, both the mining that goes on and the air missions that are related to the plants?

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CC: Exactly, exactly. Eagle Pass is about thirty-two miles northeast of the—the Carbon I and II and the huge power plants. We even actually buy some of our electricity from those power plants. They create coal—they create electricity by burning coal. It is a high sulfur coal. The emission standards and requirements are different for plants in the United States. What happens is high sulfur coal mined in the United States, my understanding, is still shipped to Mexico by the train load and we can't burn it in our country but they can burn it thirty-two miles south of our country and guess which way the wind blows, okay? What has happened as result of the coal burning in just those two

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power plants is that the visibility in Big Bend State Park has been reduced by sixty percent. It's a continuous, continuous, continuous cloud blowing on the—on the prevailing winds in that direction. That track is visible north of Albuquerque. So what is that, eight hundred miles? Almost a thousand miles that the pollution from those two plants spreads out and blows into the United States. They're vast, vast seams and beds of coal all over this—this Carbonifera, the—the region just across the Rio Grande here. That's why the city across from us is named Piedras Negros which is black rock. What

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we have to do is work with the NADBank, the American Development Bank. We have to work

with that kind of situation in Mexico, even though the finances come from the United States, if we want the problem solved even though it's across the border in a foreign country, we're going to have to address their emission standards and hopefully put scrubbers on their towers. We are—right now the NADBank is financing sewer treatment plants in the cities along the Rio Grande although it's the Rio Bravo when it's over there. Almost every major city coming up the Rio Grande now has sewage

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treatment plants and they were paid for by the North American Development Bank. And it's in our best interest to do that because you can't build a wall down the middle of the river and you can't build a wall to keep the air pollution out and you can't build a wall to keep the people out. So we have to work as a unit because the—the plants and animals don't recognize any national barrier. And so it—it is a joint solution. It's a joint problem and it has to have a joint solution. DT: This makes me think this sort of partnership approach that you're talking about reminds me that you're the new chair of the Rio Grande, Rio Bravo coalition.

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CC: I have to do a correction on that, okay? Their paperwork is all in arrears, they are sort of going through a flux right now. I resigned as the—from the board of directors last year. I served as president the year prior to that and during that time they hired a executive director that I became very concerned with the—the way she was managing the—the foundation for the board and began—I began to try to call for accountability and—what happened was she wound up stealing over seventy two thousand dollars from the RBBC. And I even became more frustrated with the other members of the board and their failure to handle—they wanted to just give her walk. They wanted to let her keep

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the money, they did not want to prosecute, they did not want to publicly emb—embarrass the Basin Coalition. And it reached a point where every time we turned around, we found some more money that was missing. And it was—their idea to save face reached a point where it was enabling her and—and she wasn't going to pay back a cent. And I—I didn't pull a snit and I didn't throw a fit or anything. It's just that I can't be a party any longer to this. And so right now actively and as far as programs and whatnot, I—I've stepped away from them and I hadn't heard lately what—what they're actually doing.

DT: Maybe apart from the coalition and the whole infrastructure that they have, you could talk about the interrelationships between the south side and the north side which I think you just touched on this issue with the—with water and population and air pollution but also, between the mouth of the river down near Brownsville and where it rises almost into Colorado, north of Albuquerque. Can you talk a little about the Rio Grande as a whole system? 00:23:26-2360

CC: The Rio Grande certainly, yeah. The Rio Grande starts in southeastern Colorado. It runs for eighteen hundred miles. It touches five states—wait, is it—it may be more than five at this point. It's three—I believe it's three states in Mexico—I—I've lost count on how many—touches several states in Mexico and at least three here in the United States. In that basin, we already have three and a half million people in population and we have to work together. We have to work with the Native American tribes in New Mexico, the State of New Mexico, the Native American tribes in Mexico itself, and the other states along the Rio Grande. If we don't, then things happen like the—the near

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war—remember when Mexico owed millions of gallons of water to the United States and there were demonstrations with the farmers pulling their tractors onto the international bridge and blocking access down in Brownsville and some really hot tempered exchanges because the people in the lower Rio Grande have to have, you know, their water has to come from all the way down through all this other territories possession and nature solved that for us. It became a moot point immediately after we got the what, couple of ten inch rains through here and Lake Amistad filled up and the—there wasn't a shortage

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any longer. But that will happen again simply because it's man trying to measure and allot and account for every drop of water where the arrival of that water is dependent on mother nature, see. So—so, yeah. The problem will continue and so we have to have education and we have to have some kind of cooperation that—that works to at least make governments aware that this is a single unit, that it isn't two countries, you know, that—that either do or don't get along. (misc.)

DT: Miss Cullar, I was wondering if you could tell us a little bit about your background and interest in art. I understand that in the late 1960's you started making wood cuts and linocuts that portrayed wildlife and other natural subjects. Can you tell about how you got started and maybe discuss two or three of these prints that you've made?

00:26:35 - 2360

CC: Okay. Well, I was—had always been a weaver and even did my master's thesis in macramé which was three dimensional knot tying. And was pregnant with my daughter and didn't want to be doing su—quite as strenuous work. And so I began doing something that I could simply sit at a table and carve and have always been very interested in the native wildlife. And I think the first one I did was an owl and a squirrel and you know, just—it just little creatures, little—little simple creatures doing their thing. Then later when I was editing the poetry journal, I wanted a—bought printed cover for

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each of the publications and that evolved in then to a series of thirteen native animals. And I was living here along the Rio Grande by then and so ea—almost all of them have a sunset, and they have the mountains, the Serranias del Burro that are across the river. You can step out of my house and look about sixty-five miles west across the basin of the Rio Grande and there's this little ridge of mountains out there. And so I always stick them in the background so that—that you have a sense of the place but that's—that's what I have done is various animals from around this part of the desert.

DT: Well why don't you show us a few of them.

00:28:09 - 2360

CC: Oh okay, okay...

DT: So that you can demonstrate...

00:28:12 - 2360

CC: Right here. This one is the—the rattlesnake, which in Spanish is called, two names really. It's called the cascabel which is a jingle bell or culebra and culebra is more specifically defined as slitherer and so there's the rattlesnake. And I always like the high contrast black and white. When I was publishing the literary journal, then each issue I would print this image on a t-shirt, silk screen it onto a t- shirt, and the sale of the t-shirts is actually what supported the literary journal because you—publishing you're not ever going to get rich. You can't make enough selling the magazine itself but everybody that had published in the magazine then wanted a t-

shirt with the front cover on it so I sold the—the t-shirts to support it. Okay would you want to see another?

DT: What are the plants on the right hand side?

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CC: Oh, okay. This—this is I think it's pretty sure it's monarda which is the horsemint which is very distinctively purple and the flowers grow sort of tiered. You know, you'll have a flower, the stem grows up through the flower cluster and then another flower and as it grows through the season, then you get these knobbed funny, funny. But it's called horsemint bee balm family plant.

DT: Okay... 00:29:47 – 2360

CC: Okay? There you go.

DT: Maybe you can show us another one of these.

00:29:49 - 2360

CC: I'll put that one, put it right there. Okay. And then here's this one. This is alacron which is the let's see, is that level? There you go. This is the scorpion with the Serranias del Burro in the background and the sunset. So...

DT: And I gather this is the Rio Grande flowing through...

00:30:13 - 2360

CC: Yes, I always put the Rio Grande flowing through there and a—and a clump of Mesquite trees.

DT: What seems like from the culebra through the—the scorpion that you're showing that there's beauty in this part of the country but there's also a little bit of menace.

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CC: Always, menace and drama, yes, uh huh, definitely. I'm glad you picked up on that. 'Cause you're right see, it carries out. Now, not so much here, do we—we don't have one of the—I have the roadrunner somewhere and after you look at the roadrunner for a little while, you realize that she is killing and eating the lizard. She's killing the lizard and got it under her claw. And then there's—I did another one of a praying mantis and after you look at it for a little while, you realize she's eating the head off of the male so, yeah. Okay. So here, this is—this is the white tail with the white tailed deer.

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Maverick County has some of the highest hunting records year in and year out. There are more white tail taken out in Maverick County than any other one county in Texas. We have a huge industry for the harvesting or the hunting.

DT: And these are some of the Boone and Crockett very large racked (?) deer...

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CC: I think so. I think we—I think we get some pretty good size deer, yeah. You might get I think larger ones are a little further south, south of Laredo, Hebbronville, where they have the absolute biggest that I have ever heard of, yeah.

DT: Tell me about the plants here. It looks like you've got some cactus on the left hand side. 00:32:01-2360

CC: Yeah, I'm very fond of the nopal or the prickly pear and their fowers—flowers are just so beautiful so I've included prickly pear in several of the images and then the Mesquite Tree coming in from the side here.

DT: I understand the Mesquite Tree has been important in this part of the world for thousands of

years as a source of protein and a browse Tree. Can you talk a little bit about the role in the... 00:32:30-2360

CC: Well, I know that the beans are certainly good to eat and they're—they're heavily foraged by all the—all the weathering goats and cattle and whatever, all the animals in this part of the country. And they make a good jelly. You can certainly cook with them. You can also, if you're trying to do survivalist things, you can live off the land on whether it's the Prickly Pear and the Mesquite beans and all sorts of—lots of vegetation out there for sustaining all this variety of wildlife that we do have. Do you think that one's too small here? Here's...

DT: Perhaps you can give it a stab and...

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CC: Right, here. This is a series in here with the—the roadrunner and the—the jack rabbit and then the one in the middle is the armadillo and the year that I did this one was when the comet Hale-Bop was passing—passing by and we had real good clear skies, good visibility for that. So—those may—those may be a little bit small to see.

DT: Well thanks for showing those to us...

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CC: Yeah!

(misc.)

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CC: Can you zoom in on the foot? Her—her foot with the lizard?

DW: That's as far as this camera goes.

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CC: Okay. You also notice that's there generally virga in the clouds—virga is the rain that falls out of a cloud but evaporates before it hits the bottom.

DT: Miss Cullar is an accomplished poet and is a publisher of poetry and some of her poetry she's written is related to natural history and the natural world. And so we're going to try ask her to read some of these poems and maybe explain what inspired her to write some of these pieces. 00:36:08-2360

CC: Okay. What I'd read from is called Mavericks in the Chaparral. The—a collection of the Eagle Pass poems and these are some of the poems that I have written about this region and that we're all heavily influenced by this part of the country over the last twenty-seven years that I've been here in Eagle Pass. This one is called He's Crossed the River. "The local scandal rag has said, Foul Play Is Suspected. They fetched his body up from the river below the black train bridge where it had snagged on pilings, half in, half out of water. He wore his blue jeans about his ankles, six stab wounds to the heart, seven cuts to the liver, and three throat slashes where his life ran out. Two roses and a

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snake, a girl's name, and five other tattoos on unnamed body parts, adorn his corpse. They hauled his puffy, four-day dead remains out the Texas of side of the Rio Grande, which must mean that this is hell." You know, the River Styx and in Roman where you, once you cross the River Styx then you were in hell or puga—purgatory? So if he got dragged out on this side, has to mean Texas is hell.

DT: Very good. 00:37:44 – 2360

CC: A lot of these are influenced by the—the—this perpetual condition of the illegal aliens crossing because they—they would come to my house, I suppose in twenty-seven years by the

hundreds, and ask for food. And if I had tacos or tortillas or whatever and I would give them food and they'd sit down on the steps and then I'd go in and call the border patrol. And before they'd finish their tacos, the border patrol would come and get them and carry them all back to their country.

DT: Do you see a connection between these natural migrations of the Monarch Butterflies and the Mexican Free-tailed Bats and people?

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CC: The inevitability of all of it, yes. That's the next poem. You lead in perfectly. All right, this is called Punto Final, which is final point or period. Punto Final. "This book of bones was but of brief history. White pages scattered midst chaparral. Femur and tibian gnawed in ultimate punctuation by coyote and zopilote to rate a single codicil in the local weekly news—the skeletal remains of an unidentified alien were found today on the Flores ranch. Undaunted by two hundred miles of rolling guajillo, huisache, mesquite, and cactus stretched eternally in a haze of heat, they write their brief passage in sand and reach alone their destination. Never knowing that no boundary fence nor

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spoken word of law or legislation has ever stopped the flow of man, of people, in migration. Yet ranchers find their bones, brief pages torn form our history lesson." I'm sorry; I always get real emotional on that one. I've been real lucky in my walks and hikes to have not come up on a body. But most of the people I know have—have either fished them out of the canals or found them on the ranch and it's tragic. I really think it is. I don't know the solution. I don't know that a worker's permit program is really what's adequate but that's probably what will go toward—I don't think anyone should be in the

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country illegally. I—I have seen it not bankrupt but drag down our educational system here in Eagle Pass where we are educating. It's one of those don't look, don't tell things where there are probably more than two thousand students in our school system who are citizens and live in Piedras Negros but come here to school everyday. And financially, it's—it's a drain on tax payers. It's a huge problem in our prisons across the nation. So it is—it's a problem that—that is more people clambering for a solution but...

DT: Does this give you pause and maybe give you some chance to ponder this whole dilemma about population, about immigration and internal growth in the country and what you do with the growing population and limited resources?

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CC: It does. Certainly, of course. Just last week the census bureau in Mexico announced a two million population lost in the Mexican population just last year. And they attribute some of that to birth control but most of it to the term they use is migration. And so what we're looking at is the browning of America and as a linguist and as a poet and writer, I have always incorporated the Spanish words into my own writing and I feel that English a hundred years from now will have a very different complexion. That it will—it will be a pastiche. It will—it will be a patois or a Creolization of the language and become much more rich and—and interesting because of that. But yes, I—I see this

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as an inevitable movement for the poor people who are hungry and starving and it is inve—evitable that they will seek to enter this country and we're not going to be able to stop that. We—we might be able to legislate it but we're not going to stop it. So, yeah, this one is called Spring.

"Spring settled onto the desert like a fat woman lowering huge, soft buttocks onto the brittle webbing of last year's lawn chair—uncertainty in every quivering descent refusing to trust her full weight—first testing winter's field-dressed thorns, an inconspicuous blossom or two on very short stems, of course, then a settling of

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palest chartreuse over the mesquite. Her intent is clear, her course inexorable, but her hope is to distribute her vast girth over the land with equal economies of motion and passion, with strength to spare in the event her intended target might not be ready for a full onslaught and an emergency pull up might be necessary rather than a three point landing to full stop. But once settled, spring is well situated refusing to budge until the sweltering sun of summer sends her further north with the imprint of the chaparral's prickly webbing stamped in the flesh of her rounded thighs. Majestic, she sweeps toward the plateaus and prairies, the pillowed rest of the northern states and leaves the desert of the southwest, a broken lawn chair in the dust of summer."

DT: Nice.

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CC: Maverick Pulse. This sort of captures my pleasure at living here on the border—on the frontera. My great grandfather was a U.S. martial of the Oklahoma territory and ran around with Wyatt Earp when Wyatt Earp was over in Kansas City. That frontier spirit I think is—is—I inherited some of that and I have been my happiest—when I found Maverick County, I felt like I had really come home. And so I was trying to capture a feeling for what—what living on the frontier was like for me. This is called A Maverick Pulse. "We tell each other tales of wildness, of panthers in the monte," that's the—the wild country out around us—the Texas chaparral brush country—"at ease beside the

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narrow road as we are passing by. It pleases us—the isolation, the mavericks in the chaparral, the certain knowledge of the closeness of the untamed edge of things. We mentioned how the desert air speaks of distances thrown open to the limitless expanse of sky and whispers hotly through the dust of yet another fiery eve. While nostrils flare in primal reflex to catch the scent of dusty bloom, our ears attune to life's caesura and pulses subtly alter to fit a desert pace. El Indio on the Rio Grande is song and cadence of a bygone drum that thrums an autochthonal heartbeat through the canebrakes by the river and twines us in her untamed meter, till we know that panthers come. So we choose to live in desert places and tell each other tales of wildness, thereby taking to ourselves a measure of that primeval essence which pulls us near untrammeled, untamed edges of the world."

(misc.)

DT: Recently, a collection of nature writing about Texas came out. It's called Pride of Place. And you have an entry in there called Twelve Variations on a Theme of Why I Like... 00:46:53-2360

CC: Or Why I Live In Southwest Texas. Exactly, yeah.

DT: Could you perhaps read a few passages from that?

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CC: Sure. I'd be happy to, yeah. The book's published by N.T. North Texas University Press. David Taylor is the editor and it's actually, the—they're selling it at Amazon right now so it is available. I don't think they've shipped any copies yet because that's how hot off the presses it is but he very graciously asked, I think there are fourteen contributors from around the state. And since there's that big, empty space on the map, you know down here, I was able to fill the gap for

the Rio Grande. I think there are actually two writers from the Rio Grande. But this is Twelve Variations on a Theme or

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Why I Live in Southwest Texas. "A few years back I had just finished installing the wood stove in the studio here on the Rio Grande, when my mother gave me her old tea kettle, the one she started married with back before the Second World War. The relic added a whimsical touch to the rustic stove and I planned to fill it to provide needed moisture to the heated air of my inaugural fire. As the first splash of water hit the dusty kettle's bottom, a pungent aroma sprang up claiming my senses in one staggering assault. I was enveloped by the odor, thrown back to western Oklahoma from whence my family roots diverge, where the sandy road threaded across the railroad track south to my

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grandfather's farm, where the pear sprang tall by the path to the barnyard, where the earth wrapped us in cotton patches and shelter belts, far stretching milo fields and the fresh monsorgum. A few months later on a trip to (?), I mentioned to a fellow monarch enthusiast my powerful response to that encapsulated odor of my birthplace and learned from her that the French had long known the potent strength of the earth's essence giving it a name: Terwar. What if there is an essence—what if there is an essential home place stitched up in the fibers of our being, locked in our sinews and the molecules of our

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synapses. Is it only country kids who grew up on the back of a dusty tractor who feel this tie to the earth? Must you have run barefoot a thousand miles through the soil of your youth to pattern that scent into your nature? If we drink the rain water and the cistern water, bathed in the pumpings from the well, are our molecules not bound together with the rivers and the streams, the vegetables from the garden, and the honey garnered from a 00:49:51-2360

million blooms? Thus it is what we brought—thus it is what brought me here to this ramshackle place on the banks of the Rio Grande a quarter century ago that is relevant but what holds me here that is everything. The limestone deposit that lines the new electric kettle is as much a part of the calcium in my bones as is the pollen in the local huisache honey an integral component of my flesh. And so when the taciturn folks scattered through this serenity of thorns that is the Tamaulipan biotic province and southwest Texas respond to the query of why we stuck it out here, put down such deep roots. Our likely response is well, it grows on ya.

DT: That's great. Thank you very much. (misc.)

DT: Let me ask you, you've been an educator for many years and I'm curious what sort of message you might want to pass onto children or perhaps their parents or descendants from all those that you have dealt with over the years. Some sort of message about what's important about the natural world and protecting it.

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CC: Okay. I spent thirty five years in a classroom off and on chronologically. Retired seven years ago. And what I miss most is that—that day to day in the trenches, talking to the kids and instilling in them what I think is important and my values. And if I have one thing only for parents is to stress how important it is that you instill within your children a sense of wonder. The most important gift I received from both my parents was an inquiring mind of, "Oh let's go see what that was." "Stop the car I think I saw something." And mother, on the way to Colorado,

she'd have us turn around and we'd go back. So every—every summer for six years, we went to Colorado and we didn't go

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there in a straight line, we went there in circles. And my dad would turn around and we'd go back and it'd be an interesting plant, it would be a rock, it would be something. We need to spend more time with our children. We need to spend lots more time with them outside in the natural world, helping them connect and understand complex patterns over time, cause and effect of our behavior and our actions. We need to get them outside off of the organized sports field and out into where there are natural living wonders and natural living things. They take to it like ducks to water. It is absolutely—it doesn't take

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ten minutes to—to change a child's life forever, to make them want to begin to explore and interact with the natural world and that's my message. That's what I'd like to see happen. DT: All right. So you see that there is a—a natural connection between children and the natural world. Much like, I guess we started with when you were saying that John Muir knows that there was this connection between everything in the universe when you tried to…

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CC: Exactly. They have that natural sense of wonder. They're not—they're not prescribed by restrictions. They're not with any other agenda in mind, and we don't want to hit—it's also I want to caution people about so much of our environmental education today is scaring people to death with global warming or butterflies are all going to die or we've got to conserve this, we've got to watch that. If you hit a young child with all the overpowering, staggering, staggering impact of the negative things that man is possibly doing to the environment and you do—you overwhelm that child at an early age, then you're going to burn them out and turn them off rather than awake them to the wonder

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and the—the beauty and the majesty of the earth. And so what—what you really want to do is don't scare them to death with holes in the ozone and that kind of thing before you imbue them with a love and an interest in and then a genuine desire to protect and to cherish what is there. We want them to—to love it and care for it and—and enjoy it and not simply feel like it's another burden on their psyche that they have no way of conquering because it does look right know like it insurmountable. And we just can't—we can't let that be the lesson. Okay, the lesson has to be that it is there and it is beautiful and it's—it's fun and—and exciting and all that.

DT: Now that's a hopeful note, a good note to end on. Thank you very much.

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CC: Yeah. I enjoyed it. Thank you.

DT: All right. End of tape 2360

End of interview with Carol Cullar