

Tallgrass Prairie Preserve

The largest protected area of tallgrass prairie on Earth, spanning 39,000 acres near Pawhuska, Oklahoma.

Tallgrass Prairie Preserve Transcript

Chapter 1 – 1:17

Introduction

Announcer: The Tallgrass Prairie Preserve near Pawhuska, Oklahoma is the largest protected area of tallgrass prairie on Earth spanning 39,000 acres. The prairie is a complex environment harboring a rich diversity of plants and animals. Prior to its purchase by the Nature Conservancy, the Preserve was called the Bernard Ranch, which had been part of the Chapman Bernard Ranch of 100,000 acres. The tallgrass prairie goes beyond what the eye can see. What Walt Witman called that delicate miracle, the ever-recurring grass.

Bison are the most prominent attraction of the Preserve. The herd numbers more than 2,500 and grazes over 25,000 acres. Annually, over 10,000 visitors drive the scenic route on public country roads through the heart of the Tallgrass Prairie Preserve to observe the bison. Starting and ending in Pawhuska, the complete drive is approximately 50 miles and takes about two hours at a leisurely pace.

The Tallgrass Prairie Preserve is open daily from dawn to dusk. There is no admission charge. Listen to Harvey Payne and Jenk Jones tell you the story of how this Oklahoma prairie land became a preservation site. Brought to you by foundations and individuals who believe in preserving Oklahoma's legacy one voice at a time at voicesofoklahoma.com.

Chapter 2 – 5:04

Our Storytellers

John Erling: My name is John Erling. Today's date is July 15th, 2014 and we're recording this interview here in the offices of Voices of Oklahoma. This story is about the Tallgrass Prairie Preserve in our state of Oklahoma. Also there is a Tallgrass Prairie National Preserve in Kansas, a Midland National Tallgrass Prairie in Illinois and a Manitoba Tallgrass Prairie Preserve in Manitoba.

Joining me in the discussion of the Tallgrass Prairie Preserve in Oklahoma are Harvey Payne and Jenk Jones. Harvey, nice to have you with us.

Harvey Payne: Thank you.

JE: What they say about you is this: that you're a Community Relations Coordinator at the moment for the Tallgrass Prairie Preserve. You are, of course, a very distinguished nature photographer. Your photos have appeared in hundreds of newspapers including the New York Times, the Los Angeles Times, USA Today and your photos have also been published in many magazines including Alaska Magazine, Oklahoma Today, The New Yorker, Southern Living and many, many others. Your photos have appeared in calendars, books and 104 photos are included in a permanent prairie exhibit at the Smithsonian in Washington, DC. All of this has got to make you feel pretty good.

HP: Well, that's true, but it's because of an interest in the prairie and an interest in the great American West. You know, I've been photographing that part of the world for a long time and had a pretty good collection of photographs, so when it became popular, people came to me wanting photographs. Then when this book *Big Bluestem* was done, I got a call from an ad agency in New York City. They were doing this prairie exhibit for the Smithsonian at the National Zoo in Washington, DC and they wanted 37 photographs. Then they would call back and say well, do you have this or do you have that and the list grew to 104, but it was partially because I was one of the few that had photographs that they needed.

JE: It was also the fact that you were such a professional photographer. Your interest in photography, did it begin as a young boy?

HP: I was raised on a ranch right on the Osage and Kay County border. Our home was in Kay County, just a few miles from Osage County, but we had property in Osage County as well. It was a border, but there wasn't any distinction in the land forms. I was very interested in wildlife and nature as a child. A lot of curiosity of what kind of a wildflower is this or what kind of a bird is that, so then when I started taking photographs, I became more interested in identification because the photograph was meaningless if you didn't know what it was. That was something that grew out of my interest in nature as a child.

JE: You were actually born where?

HP: I was born in Shidler, Oklahoma in a doctor's office. Dr. Dozier delivered me.

JE: What year was that?

HP: That was August 25th, 1947.

JE: That makes you how old today?

HP: I'm 66 years old.

JE: All right, so you were born in Osage County and it turns out that your love of this in what we're talking about today is largely in Osage County, so they were fortunate they had this child of the prairie to document it.

Joining us is Jenk Jones. You are the former editor of the Tulsa Tribune. You worked there for 32 years. Much of your writing covered politics, space, travel, history from around Oklahoma and the nation and the globe. Prior to that, you worked at the Anchorage Times, Minneapolis Tribune and your college paper, the Colorado Daily. You were former treasurer and director of the Associated Press Managing Editors Association and a member of the Oklahoma Journalism and University of Tulsa Communication Halls of Fame.

What drew you? What was your first connection to this issue of tallgrass?

Jenk Jones: I fell in love with the Osage. The cognisente call it the Osage. It's not Osage County or the Osage Nation, it's almost like Shangri-La. It's almost a mythical thing. My dad used to take me up to Pawhuska to the old Duncan Hotel for lunch when I was a kid. Go up there in the fall, the beautiful big sky and the grasses and the space, then you'd have the cattlemen coming with all their regalia. You still had blanket Indians in those days. It was to me just a magical thing. It was Hollywood without having to go to Hollywood.

I'd written from literally every corner of Oklahoma and almost every county of Oklahoma, but the Osage to me is maybe one of the ten most interesting counties in America with its rich history of the Osages themselves and then the cattlemen. It was the Ponderosa before there was a Ponderosa, then the great oil plays and discoveries and finally the outlaws who are a colorful chapter in their own. I just grew up hooked on the Osage.

JE: The two of you collaborated on the book *Tallgrass Growing: Birth and Success of the Great Oklahoma Prairie Preserve* and you will find that book in our bookstore section.

Chapter 3 – 3:06

History of the Tallgrass Prairie

John Erling: The original tallgrass prairie. Tell us how big it was, where it ranged and how many acres—over the years it, of course, took quite a beating.

Harvey Payne: Well, the tallgrass prairie as a landform was probably the largest in North America. If not the largest, it was certainly one of the largest. The tallgrass prairie occupied the central portion of the United States. It stretched from southern Canada to the Gulf of Mexico. It spanned portions of 14 states. The Nature Conservancy's official line is that it encompassed 142 million acres. Some range ecologists will tell you it's more like 250 million acres.

But a very large, very productive landform that evolved since the last ice age, and it was generally shaped by three ecological forces. It was shaped by the climate. This part

of the continental United States gets enough rainfall to produce up to 10,000 pounds of dried forage per acre per year. It's incredibly productive. That's about twice the average, but it's a very productive landform. So, it was shaped by climate.

It was shaped by grazing. The prairie is meant to be grazed. If it's not grazed, it will deteriorate, so it was shaped by grazing, primarily by bison. The most numerous animal on the Great Plains was bison. Second was elk. But the elk were killed out by 1830.

The third factor that shaped the tallgrass prairie and probably the most significant ecological force was fire. It was fire at different seasons and it was fire that was started naturally by lightning, but primarily by native Americans. So the tallgrass prairie is basically a human-induced landscape.

It went from that to the most threatened landform we have now in the world, more so than tropical rain forests that get a lot of attention. But less than ten percent of the original tallgrass prairie remains. Some people will tell you that's more like one to four percent. But with the development of the steel plow and with white settlement, with fire suppression, with removal of the fuel through cattle grazing, and with the extirpation of the bison on the Great Plains, the tallgrass prairie as an ecosystem ceased to function in about 1850 to 1870. The last recorded bison anywhere on the tallgrass prairie as a eco-region was in 1851 in northern Osage County.

So with the removal of the bison, with the removal of the fuel through grazing with cattle, the prairie ceased to function. It just basically died until the Nature Conservancy came on the scene, and our goal on the Tallgrass Prairie Preserve is to restart those ecological processes that shaped this giant landform, so it can continue to evolve into whatever direction it goes.

Chapter 4 – 4:11

The Nature Conservancy

John Erling: Tell us, what is the Nature Conservancy?

Harvey Payne: Well, the Nature Conservancy is a private, nonprofit conservation organization.

It is not an affiliate of the federal government, it is not supported by tax dollars, it is supported by donations.

Jenk Jones: And one of the interesting things is that, one way or another, we had preserved practically every type of natural habitat you can think of. We had coral reefs, we had swamps, we had mountains, we had deserts ... On and on and on. The one big gap was the prairie. Harvey can explain this more fully.

This had been talked about for decades, to have some sort of prairie preserve. When we finally got to the development of what is now the Tallgrass Prairie Preserve

in Oklahoma, it was the first big purchase the Nature Conservancy had ever made, twenty-nine thousand acres originally. It changed the whole philosophy of the Nature Conservancy.

Previously, they bought just a few acres at a time, to protect an endangered plant, or frog, or something like that. The Oklahoma Preserve was the first time that the Conservancy allowed a state to go beyond its own boundaries to raise money, because fifteen-plus-million dollars was more than could be raised in Oklahoma alone. And it changed the Conservancy's philosophy, so that now the Conservancy is involved with millions of acres, all over the world, and trying to conserve land and species. So, it was more than just a big place in Oklahoma, it was a whole lifestyle change for the Conservancy.

At this point, I would like to just mention a few people. There are a lot of people behind the creation of the Tallgrass Preserve in Oklahoma, but many people deserve credit. Four, in particular, I want to mention: Joe Williams, who was the Chairman of the Board of the National Nature Conservancy, as I recall the title at the time this came up. Joe Williams not only had company assets of his own, but being a nationally known businessman, he had the wherewithal to reach out to other businesses around the country, and raise the money. We raised a third of the fifteen million in Oklahoma, but fifteen million dollars is a lot of money to raise. Without Joe, I don't think the project would have ever flown.

Mary Barnard Lawrence, a member of the original Barnard family, who had been a cowgirl up there during the war, doing the hard and dirty work when the men were off fighting, was very instrumental in getting the Conservancy and her family together at the time they were going to sell this.

Frederick Drummond, whom you have interviewed and ... When Frederick does things, he does them in a big way. He is now a member of the State Conservancy Board. But when he gave his blessing, it was very, very important in Osage County, because the Drummond Family is the great family of the Osage.

And the fourth one is Harvey Payne, because not only was he director for 18-plus years, but his photography, his lectures, and the fact that the Conservancy was smart enough to appoint a local boy—he and his dad were well-known and well-respected in the county. If we had brought in some zoot-suit easterner, it would have been much more difficult. As Harvey will tell you, when the thought was that this would be a National Preserve, a federal government type of Preserve, Harvey has a great quote: He said, "You could have come out for communism and been more popular." I think the fact that you had Harvey and Frederick Drummond, two well-esteemed locals, really made a huge difference in gaining acceptability.

JE: How many acres in total now for the Tallgrass Prairie Preserve?

HP: The Preserve encompasses forty thousand acres, plus we have a conservation easement on an adjoining 6,000 acres, so we have 46,000 protected acres. Of those, we own or manage about forty thousand.

JJ: It is all part of the geologically five million acres, that runs from Osage County almost to the Nebraska line.

JE: So the Kansas part is not what we are talking about?

HP: No, we're not.

JJ: No. But at one time, the original talk was to create a mega-acreage National Preserve, which would encompass both Oklahoma and Kansas, and that went and fell apart, as Harvey can tell you.

Chapter 5 – 6:17

Opposition

John Erling: Now let's talk about the proposal of protecting the tallgrass prairie. The federal government decided in the 1930s the land needed to be protected. In fact, Interior Secretary Stewart Udall visited the area in 1961. What happened at that visit?

Harvey Payne: I wasn't a part of that, but we need to go back before that. As Jenks said, "We have almost 400 different types of land forms protected by The National Park Service umbrella. We have national forests. We have national seashores, national rivers, lakes, deserts, you name it. The tallgrass prairie was considered the missing link in the National Park Service System, and it was a goal of the federal government and the nation's major conservation organizations to establish a tallgrass prairie park.

The simple fact was the land was too valuable. You look at the land that's included in the National Park Service System, and it's generally land that homesteaders didn't want. They very much coveted the tallgrass prairie because it was a very fertile, productive, temperate land form.

Since the '30s, the Park Service and the other conservation organizations wanted to see this happen. Those efforts initially were in the Flint Hills of Kansas, and Stewart Udall you mentioned...I've read about it...they were met by armed Kansans and said, "You're not going to do this here."

You've got to remember, in Oklahoma, we have a lot of lakes, and we have a lot of land that was condemned by the federal government for the Corps of Engineers to make lakes. My great grandfather was in the land run you mentioned earlier in 1891, so my family's ranched in Oklahoma since 1891, and the land that he bought in 1917 in Kay County was condemned. Much of it was condemned. Where my father was born and raised was condemned for the Kaw Dam.

There was a very strong local sentiment against condemnation. You mentioned Stewart Udall's trip in the '60s where he was met by ranchers with guns saying, "You're not going to do this here," and then in the early '70s, there was a proposal that was talked about. I didn't see anything in writing, but it was talked about to condemn 300 to 350,000 acres in Northern Oklahoma and Southeastern Kansas to establish a tallgrass prairie national park.

People were fed up with condemnation. They were very against federal ownership of land, and when this idea came up, it was very unpopular. Then in 1984, an effort became in Osage County to establish a tallgrass prairie preserve. People had been against this idea for all their life, and they were opposed to it.

A local newspaper editor called me. I was practicing law in Pawhuska, and he said, "What do you think about this?" And I said, "I'm opposed to it." He said, "Why?" I didn't want to say because I'd always been opposed to it, so I said, "We'll lose our tax base." He put that on the front page of the paper, and in 1984, Senator Nichols established a task force to look into this prairie preserve idea. I was asked to serve on that task force, and a representative from Audubon tried to get me kicked off because he said I was put on there to kill it.

This task force was appointed by the interested parties. The task force, after looking into it for about a year, unanimously recommended to establish a tallgrass prairie national preserve.

JE: The Osages living there were very distrustful of this as well. What would happen to their mineral rights?

HP: Most Osages don't live in Osage County. Most Osages don't even live in Oklahoma. Most Osages live in California, Arizona, Colorado, or New Mexico. Their only connection with Osage County is a quarterly head right check that they got for their royalty interest. They basically own all the minerals in Osage County. They didn't want to do anything to disrupt that. The minerals were produced under regulations established by the Bureau of Indian Affairs [BIA]. They did not want the more restrictive park service regulations.

The oil and gas producers were strongly opposed to it. They didn't want more red tape. The ranchers were opposed to it. It was a very unpopular idea.

You mentioned Frederick Drummond. When I first introduced John Flicker, who was a Vice President with the Nature Conservancy and went on to become President of Audubon for a long time... When I first introduced him to Frederick, Frederick tapped him on the chest and said, "We killed this in Kansas and, by God, we'll kill it here." That's how Frederick started out.

Frederick wound up making the motion for the Nature Conservancy to do this, so there was a complete change in Frederick's thinking. There was a complete change in my

thinking, and there has been a complete change in most of the people in Osage County and the surrounding area.

JE: What did happen to the mineral rights of the Osages?

HP: Untouched. They're held in perpetuity, in trust, by the federal government for the Osages.

JE: But, there's no discovery going on.

HP: Oh, yes, there is. There's been a lot of drilling the last few years, a lot of horizontal drilling, horizontal wells. A number of new wells have been drilled on the Preserve.

JE: On the Preserve?

Jenk Jones: There's slightly over 100 producing wells on the Preserve.

HP: Actually, it's grown to about 150. When we got it, it was 107, so we've had about 43 wells drilled on the Preserve.

JE: They're good operating wells?

HP: Well "good's" a relative term. We had several horizontal wells drilled on the Preserve. None of them are in production now. They've all played out.

JE: How many do you think are operating today?

HP: How many wells are operating on the Preserve? My estimate would be 140.

JJ: Some of the older wells over in the Pearsonia area where, if there wasn't much play left, they have cleaned out a lot of those wells, the old pump houses, shotgun houses and so on that were all part of that oil play, so there has been some restoration of the land there, plus restoration of land that was damaged many years ago by oil and salt spill.

Chapter 6 – 6:54

Purchase of Preserve

John Erling: Much of this acreage were actually owned privately by the four-acre ranch in the far north and the Chapman Barnard Ranch which is a short distance southeast. Talk to us about how you were able to purchase from them and were they willing to sell?

Harvey Payne: Well, you have to look at the economic side of things. If you remember, in 1973, cattle prices got really high and the federal government imposed price regulations restricting the price of beef. Those laws were to expire in September of 1973, as I recall. Everybody thought cattle prices then would go through the roof. Well, they went the other way, they went through the basement. You had a series of events. You had the Jimmy Carter Administration when interest got up to 21 percent. If a cow man is in the cattle business, it's not something like the stock market you can get in and out of at will. You've got land that you either own or lease. If you don't operate it, somebody else is going to. If you're leasing it and don't lease it, well, somebody else will and then you're out. If you have the cattle, you can't just get in and out of the cattle business.

You had ranchers that could not service the debt that they encountered in the Carter Administration. They were upside down and some of them were in such a bad financial position, they just literally stuck a pistol in their mouth and pulled the trigger. I know of several instances where that happened. You had land in the early '80s that was for sale largely for economic reasons.

The Adams four-acre ranch was not being actively marketed but it was for sale. Some of the Drummond properties were for sale. The Barnard properties were different. The Barnard Trust owned 29,000 acres. No one in the family wanted to be in the ranching business and manage something like that. The income they would receive from their ranching holdings were minimal. They could have gotten much more had they invested it in a certificate of deposit. They would have gotten several times more money. The family wanted to sell. You had a situation in Osage County where you had premier tallgrass prairie that was for sale, that historically had not been for sale.

James A. Chapman and Horace G. Barnard started buying land in Osage County in 1915 and it simply was not for sale. They put together over 100,000 acres of the best tallgrass prairie that there is and it wasn't for sale. It was off the market. Well, with Chapman dying in '66 and Barnard in '69 and their interests going into their respective trusts, the Barnard family wanted to sell. To carry it forward to the federal proposal, in 1987, a bill was introduced in the United States Senate to establish a Tallgrass Prairie National Preserve with a maximum size of 50,000 acres. In 1988, that bill died. Also, in 1988, the Mormon church came to town and at one time, one signature bought almost 70,000 acres from the Adams family.

A big chunk of what was to be in the Tallgrass Prairie National Preserve was gone. It was sold and it was not going to be for sale anytime soon. You need a representative sample of tallgrass prairie to have a Tallgrass Prairie Preserve. You can't have a postage stamp-sized preserve. The Barnard Ranch was the only one for sale. In 1989, the Nature Conservancy purchased that.

Jenk Jones: It's a unique piece of land, too, because it's the meeting place of America. The eastern part of the Preserve is the last remnant of what was the great eastern forest that ran all the way from the Atlantic into the middle part of America. The western part of the Preserve, you go from trees to open grassland almost immediately, roughly along the 36-inches rainfall line. This is literally where the eastern forest meets the Great Plains. It makes it especially dramatic.

JE: So, the Nature Conservancy then would buy the Barnard part of the Barnard Chapman Ranch.

HP: That's correct.

JE: Eventually, the Chapman Ranch was sold.

HP: It was not officially on the market but it was purchased by Bill Reeds. What happened is

for the last ten years before the Conservancy bought it, Bill Reeds from Tulsa had leased the Chapman and Barnard holdings. In his lease, he had a right, if they wanted to sell it, he had the right to pay 105 percent of the price for which they were willing to sell and he got it. It didn't reopen the bidding process. If they were willing to sell it for \$200 an acre, he could pay \$210 an acre and get it, end of bargaining. When the Conservancy signed the contract to buy the 29,000 acre Barnard Ranch, Bill Reeds did not exercise his option to buy it.

Then the 35,000 acre Chapman portion came up for sale a few years later and the Conservancy entered into an agreement to buy that. Bill Reeds said I'm paying 105 percent and I get it. That's what happened. He got it. He owned it for three years and sold it to Lee Bass from Ft. Worth who continues to own it and has added another 15 or so thousand acres. Lee Bass now owns almost 50,000 acres that surrounds the north and west side of the Tallgrass Prairie Preserve.

JE: There have been people who asked him, would you donate or can we buy to add this to the nature Preserve?

HP: Lee Bass has been a very good neighbor. You know, he owns a lot of land in a lot of states. He is very interested in conservation. He was on the Texas Game and Parks Commission for a number of years. He has a strong conservation background and interest. He has been using his ranch there in Osage County to foster conservation. He has made it available for prairie chicken studies. He is altering his burn program to make it more beneficial for wildlife without negatively impacting his ranching operation. He's been a very good neighbor and we're very happy with him as a neighbor.

JE: People cannot go onto his ranch.

HP: It is private, and you know, if I were in his position, I would not let people on it either. I can't fault him for that.

JE: We should point out here, too, that Joe Williams with the Williams Companies was chairman of the National Board of Governors of the Nature Conservancy.

HP: That's correct.

JE: Then we have another name that will play in this, John Sawhill, who headed the—the Conservancy's national offices.

HP: That's correct.

JE: Those are names that we will continue to talk about. Now,

Chapter 7 – 3:34

Description of Preserve

John Erling: Let's take a look at the land, Jenk. Describe the land for us.

Jenk Jones: It's a beautiful piece of land. The western part of the Preserve, as I said, is the

beginning of the Great Plains; it's almost treeless. The eastern part of the Preserve ranges from scrubby post oak and black jack oak at the extremes back into lovely forest and riparian's tree along the stream beds and so on, it's a very thick forest so it's contrasting.

The southeastern part of the Preserve is heavily with canyons and so on. We don't let the bison in there because getting them out of there would be virtually impossible. The land varies about 400 feet in elevation yet it's watered by several good creeks, primarily Sand Creek but Wild Hog, Little Sand, Hickory, Dry, and other creeks. It's just a beautiful contrast of lands, open prairie, thick woods, scrubby lands.

Fire, of course, is also used there to keep the woods from invading, particularly the eastern red cedar which is a constant problem.

JE: Are there are different varieties of native rocks?

Harvey Payne: Yes. Basically, the western portion of the Preserve has limestone derived soils.

The rocks on the surface will be limestone. The eastern portion is sandstone. It's not a well-defined line. The two soil types will support different plant life.

JE: Types of grasses, there are many of them. How many plant species are there?

HP: We've identified 750 plant species not counting mosses and lichens that would make the count double. Of the 750, about 150 or 60 are grasses, the rest are broad leaf plants.

JE: So, there are non-native grasses that have come in too?

HP: Well, they've been introduced. Ranchers, historically, have tried to improve the forage capability of the ranch land. About ten percent of our plant species have been introduced.

JE: So, then is it true that the big blue stem is the tallest? Can that reach heights of ten feet?

HP: Ten feet. Yes.

JE: If the soil, if shallow, the Osage would like this. They knew the white farmers would not like it because the farmers couldn't till it.

JJ: Yeah, they said, "White man no put iron thing in ground here." They weren't considering drilling equipment.

JE: Yeah.

HP: There's kind of a romantic story. I don't know if there's any truth to it but I've heard it repeated a number of times. Historically, the Osages were encountered in 1673 by Marquette and Joliette or Joliette on the Mississippi River. They were near where St. Louis is now. Basically, through a series of treaties, they were pushed to southeastern Kansas about 1825. That was their reservation but when they would go on their semi-annual buffalo hunt they would come back and find whites living in their home and the Indian Agents wouldn't do anything about it. So they could see they weren't going to be able to stay in southeastern Kansas; it was too much desired by homesteaders.

Osage friends have told me this. They sent scouts out different directions to try to find a new home and went as far as Mexico but they wound up selecting Osage County.

The instructions they would give their scout, and this may or may not be true but I've heard it several times, is to throw a spear in the air and when it hits the ground if it sticks we don't want because somebody will be coming wanting to plow it and take it from us. We want rocky land and they found that in the Osage.

JE: That's amazing. It's probably true.

HP: Well they got tired of being pushed around.

JE: Right.

Chapter 8 – 2:17

Birds and Animals

John Erling: Besides the bison, what other animals would we witness there?

Jenk Jones: Of course, white-tail deer in abundance, coyotes in abundance, fox, badger, squirrels, more than twenty-something different, or maybe it's more than that, species of mammals. There's quite a bit of aquatic, fish and amphibians. There have been over two-hundred species of birds recorded; some of them are permanent, some of them are migratory, some of them are blown there by accident. It is a very rich biosphere.

Harvey Payne: And greater prairie chickens?

JJ: Yeah.

HP: And, as you mentioned, and as Jenk mentioned, the Preserve has a lot of different landforms, from upland prairies to bottomland hardwood forests, and everything in between. So, it is a birders' paradise, and we get a lot of people coming here just to watch birds.

JE: A side to this that nobody thought of when you were...

HP: That's true.

JE: ...when you were collecting.

JJ: Harvey mentioned the Bass Ranch and being good conservationists. One of the things that Bob Hamilton, who is now the director, is very adamant about, is using the Preserve to change the land use in all the flat hills, or to try to convince ranchers to do so. One of the reasons we do selective burning, rather than burn everything is, we want various varieties of plant life. We want old grasses, tall grasses, short grasses, mid grasses, because different creatures, like the prairie chicken, need different types of grasses and vegetation. The prairie chicken needs open space for its breeding dances of its legs. It needs thick cover for the hens to lay eggs and raise their broods. It needs an in-between so the chicks can maneuver through the grasses and pick up insects.

So, we have got quail, we've got prairie chicken, we've got dove, we've got small voles and moles, and all that stuff, and all these need different kinds of cover. So, when you

burn everything, as ranchers traditionally have, and it's just open, like a flat table, there is no cover for these species. We want them to have a variety of cover, plus the fact, having some of the older, taller grasses, acts as a kind of a bank, in case you have a real drought year, you've got something for the cattle to fall back on.

Chapter 9 – 7:24

Fundraising

John Erling: That was public support that you wanted but then comes the financial support because the full price for the acres was \$15 million. To raise that kind of money you would have to also go out of state. Tallgrass Prairie Preserve had to raise a third of that, let's talk about the meeting to discuss how in the world are we going to raise this kind of money.

Harvey Payne: Well, the Oklahoma Board of Trustees for the Nature Conservancy was hesitant to take on that kind of debt. As Jenk mentioned, this was the first landscape level project that the Nature Conservancy bought that they intended to keep. They bought some other large tracks that they sold.

Six months after they bought the Bernard Ranch they bought the Gray Ranch in the boot heel of New Mexico, 323,000 acres. Five thousand dollars a day for interest, it was eating their lunch. You had major financial concerns within the organization. The Oklahoma chapter agreed to try to raise however many millions and they wanted a commitment from John Sawhill the Nature Conservancy president that he would use his influence to raise the rest of the money nationally.

That's what happened. Oklahoma far surpassed their obligation of like two million or so. About \$6 million of the \$15 million was raised in Oklahoma but the rest was raised nationally. Everything from large corporations to school kids doing fund raising projects and sending 25 or 50 or \$100 with the most heart rending letter wanting to give their money to the Nature Conservancy for this preserve.

In October 1993, we reintroduced 300 bison onto 5,000 acres. One of the speakers at that event was Norman Schwarzkopf, just back from the Gulf War. One thing he said that struck me then and I still remember is this is truly a gift from the America people to the American people. He was right on the money, that would not have happened without national support for this project.

JE: Here in Oklahoma, you had strong corporate support and I would imagine the Williams companies were obviously one of those, can you name some others?

HP: Well, the list is very long. Kerr-McGee, Frank McPherson was the president of Kerr-McGee. They donated two islands that were undeveloped off the coast of Georgia. Little Tybee and I can't recall the second island, they sold those at a greatly reduced rate to the state of Georgia for parks.

Undeveloped islands, very rare—a million and a half of that money came to the Tallgrass Prairie Preserve. It was the first significant donation and really set the tone. The other corporations—The Williams companies gave heavily; Phillips Petroleum company gave heavily; Conoco before they were joined with Phillips donated.

Joe Williams gave a lot of his own money. Tulsans like Bob Lorton and Roxanne Lorton, they gave very generously too. It was touching to see the board support that we had.

JE: Finally, the \$15 million was reached in the autumn of 1993.

HP: It was an ordeal. We were trying to raise money when Oklahoma was in a very depressed economic state.

JE: Speak of the endowment and how that was worked out?

HP: Henry Little and the Nature Conservancy had a policy that 20 percent of every dollar would go into an endowment. It's hard to have the self-discipline when you're having tough economic times to make yourself adhere to that principle but he did and every dollar that came in, \$0.20 went into an endowment.

The Preserve is endowed and we can only spend the interest income generated from that endowment. Had we not done that, we would have had really tough sledding.

JE: You would have had to be begging and pleading and banging your cup every year. How big is the endowment?

HP: Well, it varies with the stock market basically but right now it's eight or nine million.

JE: That generates what a year?

HP: Well, we get five percent, we figure interest at five percent so we get five percent of the endowment to spend each year. Plus we have income from cattle grazing and we have income from bison sales.

Jenk Jones: Donations.

Harvey Payne: Donations.

JE: Even a little bit from the gift shop.

HP: That's right. We have enough money to fund the day to day operations. If we want to do anything special like purchase and holdings, we have to raise the money for that or to build housing for our staff. Everything we got was run down.

JE: Good point here. Building them from scratch. Harvey when you took over the original 29,000 acres of the former Bernard Ranch in late 1989, what was the condition?

HP: Well the condition was pretty bleak. The Bernard family had leased out the ranch. A tenant generally doesn't spend a lot of time or money maintaining improvements. We had a cowboy reunion in the spring of 1991. Where we invited all the cowboys and cowgirls back that we could find that had ever worked there.

The bunkhouse which was the headquarters was in such bad condition, they asked us if we were going to keep it or bulldoze it, it was that deplorable. We spent about

\$130,000. Chevron gave us 80,000. We spent about 130,000 renovating that. It took 14 months. We had to completely redo the roof, anything with mortar in it had to be replaced. Some of the flooring had rotted out. The windows were out. It was deplorable. The other housing on the Preserve was worse, pack rats living in the houses. It was pretty basic but one by one we got things fixed.

JE: That you wanted to restore them, it would have been easier to knock them but you wanted to restore and preserve history.

HP: We did and the visitor center was a vehicle shed where it had a wooden door that was designed to slide but it wouldn't slide anymore, you couldn't even pull a pickup in there and shut the door.

JJ: Dirt floor uneven.

HP: It was deplorable. That was probably the first building there and with Jenk's family and other help, we restored that building at a much greater cost than it would have been to tear it down and rebuild it. Now it's our visitor center and it's unique because it's such an historic building.

JE: Cowboys working the land. You needed the housing for them.

HP: Yes. We did.

JE: What did you do about that?

HP: We let them move in with the pack rats. It's about what it boil down to. The housing was substandard by any definition but cowboys are used to making do with what they have at their disposal. We had some pretty understanding employees and wives.

JJ: I might add that the bunkhouse is now on the national registry of historic places. That's very important. The little associations. One day I was working there and an ex-cowboy came up and he told me, you should have seen the poker games they played out on the veranda here. I don't think they were using chips, they were probably using oil leases.

Chapter 10 – 3:09

University of Tulsa Science Center

John Erling: A science center has been built on the Preserve.

Harvey Payne: Yes.

JE: Talk to us about that and its function.

HP: Let me back up just a little bit. As I mentioned, the Osage Tribe owns all the minerals on the Preserve and basically all in Osage County. They're administered by the Bureau of Indian Affairs [BIA]. They have an office there in Pawhuska. The Osages and the BIA were very skeptical about the Nature Conservancy coming in so we had a lot of public relations work to do. I had worked with a lot of those people for a lot of years and so we had made

really good progress dealing with the Tribe and dealing with the BIA.

Then I got a call that a TU professor wanted to get involved in oil and gas reclamation of disturbed areas. I thought, oh no, this is all we need is some ivory towered professor coming up here and messing up all the work we've done building bridges with the Osages and the Bureau of Indian Affairs.

JE: Let me just point, that's Tulsa University.

HP: University of Tulsa and the professor was Kerry Sublette. He's one of the best things that ever happened to the Tallgrass Prairie Preserve. He came up and he personally raised over the course of years over a million dollars of outside money to be put into remediating and reclaiming old salt waters and oil scarred areas. That's pretty remarkable.

He also developed a video to instruct the BIA employees and the oil producers how to remediate a saltwater spill or an oil spill. The problem he had is he would come up, he would raise the money to do this, he would bring students up and they could have actual on the ground experience. A great teaching tool but they had to collect their samples and then take them back to the University of Tulsa to analyze them. He said, "We need a research facility here on the ground."

The idea was born to establish an ecological research station that we now have and it's a joint project with the University of Tulsa. It's been one of the most successful and astounding developments on the Preserve. It includes a classroom that can be divided by the sliding door which is used not only for the Conservancy and its docents, but there are all sorts of ranch meetings, oilmen meetings, it's a sort of a community center. It has two laboratories, it has a specimen room, a conference room, satellite up-links so the professors can communicate back home. It even has tornado shelters.

Then, nearby, they took the old foreman's house and fixed that up so that you have to bring your bedding up, but they can up to two dozen people in there, so a scientist or a professor with some graduate students can come up and stay. It has kitchen facilities, washroom, showers, it's fairly primitive but nothing primitive about the research center. It's really made a tremendous difference because as Harvey said, these professors or scientists don't have to be running back and forth, sometimes hundreds of miles, to their labs at school.

Chapter 11 – 3:01

Building Projects

John Erling: Other building that went on was ponds. That was important.

Harvey Payne: We didn't build any new ponds. This part of Osage County was considered a dry area and cattle need to be close to water. There're some lovely streams there but they were too far spaced for most ranchers' tastes. Cattle just need to be closer to

water. Back in the '20s and '30s and later a number of ponds were dug, but those ponds thorough the years had become silted and lacked much holding capacity. During the last few years of drought we had we went in and restored those ponds; dug them out where they will have a much higher capacity.

JE: Roads; quite a few roads you had to build.

HP: We didn't build any roads, or very few roads, but we fixed up the roads considerably. The historic ranching practice was a road through the pasture once it got so muddy and so rutted that you couldn't drive it anymore without getting stuck, you just move over about 15 feet and make another road. That was just an erosion scar, so we went back in and gravelled the roads at a tremendous cost.

JE: What about building pens? That was different wasn't it?

HP: Yeah, that was a big change. We had the ranch pens there southwest of the headquarters up on top of a hill that were for cattle working. That wouldn't work for bison. There where the bison pens are; there were some cattle pens there, as well, but we took those out. Our staff members went from the Wichita Mountains in southwestern Oklahoma, to Ted Turner's ranches, and the National Bison Range in Montana, to places where they have bison in the Dakotas, Kansas and Nebraska and looked at the facilities they had for working bison, because we're going to have to work them each year.

They came back and our staff designed the pens. That was a continual construction project to continue adding on to the corrals. The original version of the bison working pens was pretty basic but now it's well developed and very impressive. Building pens for bison is a bigger deal than building them for cattle. They've got to be taller and stouter.

Fortunately Helmerich and Payne out of Oklahoma City, or their pipe yard in Oklahoma City, they have an office here in Tulsa as well, they donated the drill stem pipe; weighs 17 and a half pounds a foot. They donated the pipe. Tektube and Fin Tube, here in Tulsa, donated the tubing. All of those pipe needs were donated, plus Arrow Trucking Jim Pielsticker was on the Oklahoma Board of Trustees, hauled the pipe from Oklahoma City to Sand Springs where it was cut to length and then hauled it to the Preserve. It's thousands and thousands of feet. Our net cost for all of that tubing that's used in the corral building was donated. We couldn't have done it otherwise. It was a huge donation.

Chapter 12 – 10:04

The Bison

John Erling: We're talking about penning in, they are of course freed her roam on the reserve, but the pens are used how?

Harvey Payne: We annually round up the bison. We entice them now. We used to drive them with four-wheel drive ATVs, which became a wild west show. Cruising across the prairie

30 miles an hour or more trying to head off a running herd of buffalo in grass taller than your head with holes and rocks and ditches is not a smart thing to do. It didn't work out very well. Now we entice them with feed trucks. A few weeks before the actual roundup, we'll go out and give them cattle cubes with cattle feeders. It's just like cookies for kids. Instead of trying to drive them, we entice them.

JE: Sound the siren and that tells them lunch is on.

HP: That's how we get them in corrals now. We get them into a 50-acre holding trap and then we push them with pickups into the corrals.

JE: What an operation. You have a couple of square miles up there that you have the entire 2,700 plus animals, isn't it?

HP: That's correct.

Jenk Jones: For several weeks. It takes more than ten days to run them all through. Full mature growth. How heavy are they?

HP: We sell our bulls before they get to be that big. We sell our bulls now when they're six and a half years old. A mature bull can weigh over a ton, but the largest one we've had weighed about 1,850 pounds. That's impressive. That is a lot of buffalo.

JJ: I tell the boys who sometimes used to get too close, that's bigger than an NFL line from tackle to tackle and a hell of a lot faster and meaner.

JE: The bison are there not just for visitors to come to see, but they play some important roles. Let's talk about their impact on plant life.

HP: That's why they're there. The Nature Conservancy claims to be science based. Everything we do is based upon science principles. I've found that to be the case. The bison are there because they are the historic grazer that helped shape the prairie. The prairie in return shaped the bison. If you go back 12,000 years from now, you wouldn't see this species of bison. You would see an earlier species that was larger. The bison shaped the prairie and the prairie shaped the bison.

This species of bison that we have now, bison bison is about 5,000 years old, but they grazed the prairie differently than cattle. They don't hang out in the riparian areas. They don't shade up on hot summer days. They don't usually wade out into the ponds like cattle do in the summertime. Bison are prairie animals. They will be out in the sun. They eat large quantities of grass. A female bison will eat about 30 pounds of dried grass per day. They hardly touch the broad-leaf plants. I've seen them eat white prairie clover, but other than that, that's about it. So, they're there for the ecological force that they provide to the prairie.

JE: Then they became a tremendous draw for visitors

JJ: Oh, yeah...

JE: They come there maybe just to see a buffalo, I mean, a bison. Why did I say buffalo?

JJ: That's another accepted term. That goes back to the French confusing these saggy animals with cattle and the French word for beef is bœuf.

JE: Good. I'm glad I said it. In the early 19th century, North American bison herds totaled about 30 to 60 million animals, but they were virtually wiped out. Tell us how that came about.

HP: That was a combination of a lot of things. The bison were almost from coast to coast in the Continental United States and from Canada down to Mexico, but the greatest concentration of bison was on The Great Plains. They're a Great Plains animal. With westward expansion and exploration came a lot of things. First of all, you had people living here. You had Indian cultures that had developed around the bison. The Sioux for example, had moved from The Great Lakes region to The Great Plains. They became bison hunters. A number of Indian nations lived on the bison. They vigorously resisted white settlement.

JE: Because they used the bison...

HP: For everything in their life - for food, for religious ornaments, for clothing, for shelter. It was their larder.

JJ: It took about 13 to 15 bison hides to make a typical teepee.

HP: So when whites started encroaching into their bison hunting, they resisted. You had everything from sport hunters coming in to market hunters to provide food for the crews that were building the railroads and then it's not really stated so much in the history books, but The Federal Government was losing the battle with the Indians. The Calvary was getting whipped. I know that they decided that if we want to bring these Indians to the peace table, let's kill their food source.

If they're hungry, they're going to come to the reservations. If they're not, they're not going to come. I think it was an effort by the United States government to help subdue the Indian tribes.

JJ: A lot of the bison were killed because buffalo robes were very important in an age when people were still in carriages and buggies in the northern states. They often killed the bison simply for the tongue or maybe a bit of the hump, let all the other meat rot, and they killed it for bones. There are pictures of men standing on top of piles of bison bones 60 feet high, waiting for railroads to come by, put the bones in freight cars, and take it east to turn it into fertilizer. Trains would come through and there would bison on both sides of the trains.

People would be at the windows blazing away with rifles. It wasn't sport. Bison do not spook easily, so a professional buffalo hunter could set up his perch and shoot one animal

after another until he had gotten all that he planned to kill. Buffalo Bill of course got his name for killing bison for the railroad crews. It was just indiscriminate slaughter.

JE: Then population shrunk to I believe just over 500 in the United States, 550 in Canada. That's all we had left.

HP: That was it.

JE: Today, the population is estimated overall to what?

HP: In the Continental United States, it's over 500,000.

JJ: There's still some bison in Europe too. Maybe 3,000 in Belarus and Poland, but that's the European bison, one of three species. Bob Hamilton will claim that the ones we have are actually bison bison bison. You break it down into a third subspecies.

JE: The original gift was 300 animals from Kenneth Adams. Now the herd is 2,700?

JJ: Yes.

JE: They live off the land. Do they receive all their nutritional needs off the land or is there some supplementation that has to go on?

HP: They basically receive everything they need from the prairie. That's what happened for thousands of years. I had one fellow ask me right after the bison were re-introduced, a local rancher said, "I hear you're not feeding your bison in the wintertime." I said, "Well, you're right." He said, "Well, why not?" I said, "Well, do you think the Indians fed them?" Historically, they live off the prairie. They get everything they need from the prairies.

JJ: Salt licks is the one thing.

JE: We've changed that. There for a while, we were giving them salt and mineral as a supplement just in case they needed it, but we've discontinued that. We haven't done that for the last year or so.

JE: They can withstand the heat of Oklahoma to the cold, which is not as extreme as North Dakota, but it is extreme, and it doesn't bother them either way.

HP: Dr. Jim Shaw from Oklahoma State University said once that bison do not become stressed from cold. That's stressed, that's not dead, that's stressed, until it's a -43F. They're descendants of plasticine animals. They can tolerate extremely cold temperatures. Cattle, on the other hand, will not live through the winters we often have here without being cared for, without being fed supplemental feed. You don't have to do that with the bison. They get along just fine out on the prairie.

JE: Now there are few pure bison I believe. The cattle genes and the bison genes have mixed.

HP: That's correct.

JE: Where would be find pure bison today?

HP: The only herd that's considered genetically pure is the herd in Yellowstone. You've got to remember, the bison basically were saved from extinction by ranchers. One of the most famous is Charles Goodnight, but they didn't do it just for science purposes. They did it,

in part, to try to cross bison with cattle to produce a heartier range animal that wouldn't require so much care in the winter and could get by without supplemental feeding. That experiment really didn't work. That's where basically the cattle genes introduced into the bison gene pool.

JJ: You have eliminated the cattle genes in our herd.

HP: We have eliminated those that have cattle mitochondrial DNA. That is the DNA that drives the animal. You've got two kinds of DNA. You've got the mitochondrial DNA and the nuclear DNA. We have removed all the bison from the tallgrass prairie that had mitochondrial cattle DNA.

JE: Are there any characteristics of the bison that have cattle genes that have been diminished as a result of the cattle genes comparing them to the pure bison?

HP: I can't tell them apart. My untrained eye cannot distinguish.

JE: Their strength of tolerating everything did not diminish with cattle genes?

HP: No, it didn't.

JJ: They will say that even ones that had some cattle genes in them were 99.99 percent bison. It's the old thing is if looks like duck and quacks like a duck.

Chapter 13 – 8:17

Corralling the Bison

John Erling: Then the animals are rounded up to check their health and they get shots. Tell us what goes on.

Harvey Payne: We do several things. The natural predator of the bison was the wolf. The wolf that lived here is extinct. Nobody has any plans to try to re-introduce wolves, needless to say. We have to be the predator. Humans have to be the predator. Bison are pretty prolific. We have a very high calving rate each year, usually upwards of 70 percent of the breeding age cows will have a calf come fall, a weaning age calf. We have a limited space. We have them roaming on just under 25,000 acres. They've reached capacity, so each year in the fall we round up the bison. We do several things. That's our time to remove surplus animals.

We sell the bulls when they're six and a half. We sell the cows then they're ten and a half, but we'll also sell some two and a half year old animals and sometimes other ages. We act as the predator, in that regard. It's also our time to give them their inoculations. We give them same inoculations that a rancher would give his cattle. The best way to manage disease is to prevent it. We have a closed herd. We don't bring any animals into the herd that could bring diseases with them. We manage it by prevention of disease.

Jenk Jones: You already spoke of selling at an age. Obviously, they don't carry around a birth certificate. But each bison has a computer chip in its ear when they're being run through

the chutes. They go by with an electronic paddle, read the computer chip and they know that this animal is five and a half years old. It's had bloodlines from South Dakota and Nebraska. It's had its' shots for tuberculosis or brucellosis or whatever. We've got people sitting there right on the Preserve just a few feet away with computers logging all this in. The adults particularly are run through those chutes in under a minute on average.

HP: That's another thing we should talk about. Ranchers, initially, were concerned that you're bringing in bison and they've heard all the stories about brucellosis in the herd in Yellowstone and all the things that happened from that. They were concerned. You're bringing in bison. You're going to infect our cattle herds. The herd that was brought in was certified disease free. I don't know of a cattle herd that's certified disease free. The 300 animals were certified by the state of Oklahoma to be disease free. That alleviated a lot of concerns.

JE: Yeah. How fast can a bison run?

HP: Well, they can sure out run people. The story I've read is they can run 30-35 miles an hour, but they can do it for many miles.

JE: Those animals are how heavy?

HP: Well, a cow will weigh 900 to 1,100 pounds. A bull will weigh 1,700-1,800 pounds. They can run forever.

JE: Amazing that they can run that fast.

HP: And that long.

JE: We talked about the pens, but then there has to be a special type of fencing?

HP: That's correct. We have the drill stem pipe that's set in concrete six feet into the ground, that's a pretty strong barrier. Then we use what's called King Ranch woven wire, which is the heaviest woven wire we can buy that's used to run from post-to-post on the parts of the corrals where the bison are run in into them. Kind of a wing to direct them into the corrals. Then the corrals are made with the same drill stem pipe post set into concrete and then steel tubing running parallel to the ground. It's seven feet tall. We have a very substantial set of corrals.

JJ: In the exterior, I think around the Preserve, the whole, eventually, our fence will be 50-60 miles won't it?

HP: Yes.

JJ: By the time you encircle everything. That's done with some regular steel fence posting, but also periodically with this oil field pipe and I think seven strands.

HP: Seven strands.

JJ: These strands of barbwire are a quarter mile in length. As one of the cowboys said, when you get through wrestling with that for a day, you look like you've been in a cat fight.

JE: I'm sure. Humans talk about eating healthy, I understand the bison can distinguish between healthy grass and non-nutrient provided grass?

HP: They are very selective in their grazing preferences. They're always searching for high quality forage. What they're going to primarily eat will be the four major grasses that we have, which are big blue stem, little blue stem, Indian grass and switch grass. But yes, they know which plants are nutritious and palatable and that's what they go for.

JE: Then they take baths, don't they?

HP: Dust baths.

JE: That's important too to the Preserve.

HP: Well, it is. Where they have the wallows are a little microcosm. They will collect water in the spring.

JE: In the shallow depressions?

HP: Shallow depressions. They will support amphibians. They will support different types of plants than you'll find out of the depression.

JE: Then their hooves are meaningful to the ground as well.

HP: I think that's a little overstated. People like to write that the bison till the prairie with their hooves, well that's a little romanticized. There's not really that much tilling going on.

JE: The seed that comes blowing in the air, settles into their coat.

HP: Well, or they will rub up against a plant. Their coats have a lot of wool and they are big transporters of seeds, you're exactly right. They will scatter seeds all over the Preserve.

JJ: You don't find much of the wool out on the prairie; because, any time it's shed, birds and small mammals will pick it up for nesting. It's very, very soft fine material.

JE: While we're talking about this charismatic animal, is really what it is, you just stand and look at these beasts and you're just taken with them. We should point out it is the state animal of the state of Oklahoma.

HP: We call them charismatic megaphonia and they are. I raise bison myself, a few. The more you're around them, the more your appreciation enhances for their abilities, they're magnificent animals.

JE: I grew up in North Dakota and we had milk cows up there. My dad always talked about the cows that had different personalities, so when they came into the barn they would all act differently. I would imagine bison have their own distinct personalities as well.

HP: They do. They're very curious and it's easy to get attached to them.

JE: They could become a pet almost.

HP: No, not really. I wouldn't recommend that at all.

JE: You get to know a certain one and you know how that one acts and maybe some are gentle and some are not.

HP: That's true.

JJ: There's a sociology to bison herds. They are usually lead by an old cow. The cows I think kind of team up to keep an eye on the calves. At times the bulls act like the destroyers in

a convoy. They work the flanks and they're there to protect. They're much more sensitive to intruders being around, then say the calves are. Watching of a bison calf develop is like watching a child grow up except the bison calf moves in about two months through the period the child would take about five years in terms of its' relationship with its' mother and then getting introduced to other calves and to other members of the herd and then to birds, snakes and coyotes and everything else.

Watching them go through that process is wonderful. Their calves are reddish for the first two to three months after they're born, before they assume the more brown tone. They are so fascinated with this new world. When you drive up beside them, they'll look at you with these big wide eyes and then they'll usually bolt for mamma or someone else. A bison herd is just absolutely fascinating to watch. It's not just a bunch of animals standing there stupidly. They all interact.

JE: In the animal kingdom are they considered very smart?

HP: I consider them very smart. I don't know what a scientist would tell you, but I think they're very smart.

JJ: Their eyesight is not the best. Their sense of smell is extraordinary. I don't know about their hearing.

HP: They're pretty aware of what's going on around them.

Chapter 14 – 7:19

Tallgrass Prairie Management

John Erling: Let's talk about managing this tallgrass. We do that through burning. Talk about patchwork burning, what that means.

Harvey Payne: What happened historically on the Great Plains or on the tallgrass prairie would be fires. As I mentioned, the Nature Conservancy is science based and one of the first things we did when we got possession of the Preserve, was we commissioned Oklahoma State University to do a historical study to tell us all they could about the history of the southern Great Plains.

That's where we learned, among other things, that fire occurred at three principal seasons. In the spring time, which here would be March, early April. Those fires were set by lightning and by Native Americans. Then in the late summer, when it gets hot and dry, we'll have a thunderstorm that'll have lightning but no rain. We would get fires set by lightning that would be smaller in scale and smudgier because there would be a lot of green grass or plants mixed in with the dead stuff that would burn.

But they told us the highest incidence of fire and the one that probably is what made this a prairie rather than a forest, would have been burning in the fall, around the

middle of October when you have grasses that are maybe six, eight, ten feet tall and they're dead, and we've had a killing frost by then, so you have a standing tinderbox of fine fuel. Those fires were set almost exclusively by Native Americans. They can generate temperatures of up to seven hundred degrees Fahrenheit but those fires pass over the prairie so quickly, the ground will only warm a degree or two. It's the great equalizer and it's what made the tallgrass prairie a prairie rather than a forest.

What we're trying to do on the Preserve, is to mimic the seasonality of fires that shaped the prairie. We've got to reduce the scale because historically, the fires would have generally burned until they were stopped by some sort of a natural line, like a stream and it would take a major stream. You would have fires that would be much larger in scale. We've tried to reduce what happened on a hundred and 42 million acres down to 40,000 acres. We try to mimic the seasonality of fires. We'll burn about a third of the Preserve in any one year. That one-third is split about 40 percent in the spring, 20 percent in the late summer and 40 percent in the fall. We think that is a good approximation of what happened historically.

Jenk Jones: But they may burn the same place three years in a row, another place may not be burned for four or five years. They try to make it more of a random pattern rather than a very systematic pattern.

HP: When you burn and if you burn, dramatically impacts everything that lives there. The bison are very strongly attracted to the new growth following a burn.

JE: But then there's also the rancher's way of burning

HP: And that's evolved.

JE: Wasn't it at one time, they just torched the earth, from fence line to fence line.

HP: At one time, yes and still that's often done but historically, you look at ranching in the Osage, you had two types of ranching practices. One with stocker cattle which would generally be steers or sometimes heifers but generally steers, that they would bring in in summer. The traditional summer grazing was from April 15 to October 15. Then you had cow-calf operations. With the cow-calf operation, you didn't burn because they wouldn't have anything to eat. With a stocker operation, what became the practice is annual spring burning. The historic stocking rate was one steer to four acres for six months.

A fellow developed the concept of what's called double-early stocking and that's cutting the grazing period in half because the prairie grasses are most nutritious in May, June and first part of July. After the middle of July, the nutritional quality of the grasses starts diminishing. They start taking the nutrition from the leaves and depositing it into their roots for the next year. Why not capitalize when the grass is its most nutritious and the cattle will gain the most? The thinking was is to graze half the time from April fifteen to July fifteen but double the number of cattle. Instead of one steer for four acres, you would have one steer for two acres.

Conjointly, with that type of a grazing regime, came annual spring burning. Ranchers originally were taught burn fence line to fence line. Burn everything because you need to have what they call “homogeneity”. You need to have it uniformly grazed. If you burned part of the pasture where you have cattle and don’t burn part of the pasture, they’ll only graze the burned part and ignore the un-burned part. That was considered poor management practices, poor land management practices. Annual spring burning, fence line to fence line began the norm.

At the same time, the prairie chicken populations plummeted. The bobwhite quail populations plummeted. To me, it doesn’t take a rocket scientist to figure out if a prairie chicken doesn’t have nesting material and doesn’t have cover, it’s problem not going to make it. The prairie chickens declined by ninety percent and the range the prairie chickens occupied declined ninety percent. That’s pretty alarming. Anytime you only have ten percent of your population left, you’re doing something wrong.

What we are doing on the Preserve is what’s called “patch burning”. Instead of burning fence line to fence line in a pasture, we’ll burn a portion of that. As Jenk said, that is alternated. What we do where we graze cattle is different than what we do where we raise bison. What we’re finding through our research partners at Oklahoma State University is that if you burn in a patch burn method, the cattle will graze the prairie almost exactly like the bison do so you can have basically the same weight gains with your cattle and have a more ecologically friendly management practice.

JJ: That’s why we have about 11,000 acres set aside for cattle grazing. It’s not just as a revenue thing, which is it for the Preserve, but also they can study the weight gains by cattle and try to convince ranchers that they can put as much weight on their cattle with the patch burning system.

JE: Is the ranching community convinced about patch work?

HP: Change takes time. Some are and some aren’t. We mentioned Lee Bass, he is going to more patch burning than he has historically and some of the other neighbors are as well. The problem is it’s a different way of doing things, people are resistant to change, and it requires a greater investment in fire fighting equipment and a greater investment in labor. It’s more trouble.

Chapter 15 – 4:53

Oil Management

John Erling: While oil was good, and is good for our state, it also scarred the land. Brine spills, and oil spills.... Can you talk about bringing the land back to life?

Harvey Payne: Well, you got to remember, part of the Pearsonia Oil Field is a 100 years old or more. Back before people developed the production technologies that the oil patch has

now, they would simply drain the oil into ponds there by the railroad track, and put it on the railroad track from the pond. You didn't have as much environmental awareness as the oil producer does now, and you certainly didn't have the regulations.

So, we had everything from some pretty large patches that had been reservoirs for oil, or saltwater. You see sometimes in Oklahoma where the landowner has given the oil company the right to discharge saltwater across their property. It's not specific to Osage County; it is in a number of areas in Oklahoma. So, we had historic scars. And then, we had current problems. You have got to remember that, all of the wells in Osage County produce large quantities of saltwater, and small quantities of oil. So, they produce a lot of fluids. If you had the truth in labeling apply to the oil production, they would be saltwater wells, they wouldn't be oil wells.

So, you have a lot of fluids; the saltwater is generally injected back into the formation that it was extracted from. You have a gathering system to produce the fluids from the formation; the fluids are put in a tank battery; the oil is separated off and sold; the saltwater is piped back and put in an injection well, and it goes back into that formation. So, you're handling a lot of saltwater.

Historically, the lines that were used to transport the saltwater were made of steel, and what happens when you put salt on steel? It rusts. So, some of those lines, instead of pipelines, were sprinkler systems. Now, there has been a trend to use a poly pipe that's made of plastic, and they don't rust. But we had a number of spills from saltwater, and saltwater is much harder on the land than oil. Oil is biodegradable; it is going to not be so much of a problem.

Saltwater sterilizes the soil, and it doesn't stay put. The salt will migrate downhill, so when you get a rain, the salts migrate a little farther downhill, a little farther downhill, and pretty soon, you've got what started out to be a fairly small impacted area that has grown into several acres, and the topsoil is gone. So, it's denuded; it isn't going to grow anything, and it isn't going to get well. It isn't going to fix itself. That's where Kerry Sublette with the University of Tulsa came in, and developed techniques to remediate those saltwater-impacted areas. He has restored a number of them, and continues to do that.

Jenk Jones: One of the keys to what Kerry does is to try to do this economically. I was up there with a group of Russian scientists one day, and much of Russia is an ecological disaster as you know. They were interested to see ways that he had of remediating this land that would not break them, and he used things like ground-up hay and microbes, natural bacteria that would literally eat the oil. Saltwater, Harvey says, is a more difficult problem, but there are ways of bringing land back to life, and if you can make it affordable, so much the better.

JE: So, that was a challenge, too, as you took the land over, to clean up those, and now they are obviously cleaned up.

HP: Well, you got to remember, the oil business has often been as tough economically as the cattle business. The old saying in the ranching community is that “Every rancher will go broke one or two times in his lifetime.” Well, the same is true with oil men, and I remember when oil was nine dollars a barrel. What would happen is, you would have a saltwater spill, and it might impact an acre, and then they would want to say, “Well, we’ve destroyed an acre, the land is worth \$300 an acre, here’s \$300. And to go remediate it may be \$25,000; you talk to them about remediation, and “Oh, we don’t want to do that.” But like Jenk said, it has to be economically feasible.

You know, I think the oil men want to do the right thing, but accidents are going to happen. I mean, you just better plan on it, because it is going to happen. Kerry Sublette has helped develop effective techniques that work that have a measure of economic sustainability.

JE: Hmm-hmm (affirmative).

Chapter 16 – 4:42

Photography

John Erling: We talked about the buffalo, but the prairie life there. My notes are 41 mammal species, 210 bird species, 56 species of reptiles and amphibians, 23 fish species, butterflies, dragonflies. Do you concur?

Harvey Payne: Oh yes. It’s a very robust, widely developed ecosystem.

JE: And trees. You do have trees.

HP: Yeah, we have a lot of trees.

JE: We talked about it could’ve been a forest but you still have trees.

HP: A lot of trees.

JE: What species of trees might you have there?

HP: It depends on the soil type and it depends on the land form. Two common trees are post oak and black jack oak. Those will not grow on limestone based soils. You’ll only find them on sandstone based soils. You, generally, only find them on the hilltops or the ridges. In the bottom lands you’ll have everything from Shumard oak to different types of red oak. You’ll have ash, hickory, you’ll find hickory on the hilltops as well sometimes, elm, cottonwood, willow, redbud, I have a lot of redbud trees, hackberry. I mean, a very well developed forest.

JE: We’re all taken with the color of the plant life, which is amazing. As a photographer this must be a wonderful challenge. I’ve seen your work and you’re able to capture that. That must be very satisfying.

HP: It’s hard work.

JE: Why is it hard work?

HP: Well, you always want to portray whatever you're photographing in the best light you can. Sometimes the prairie itself will turn kind of a bronze color or red. I've seen grasses do that besides the plants like sumac that get so colorful sometimes. Every year is different depending on the rainfall and when you get it and the weather. So, as a photographer, you spend a lot more time looking for photo opportunities than you actually do taking the photo. You'll scope out an area and think, "Well, in two weeks it'll be like this and I'll come back here in two weeks." Sometimes it is; sometimes it isn't. you spend a lot more time searching for a good photo opportunity than you do capitalizing on it.

And the same with bison. Who wants to see a buffalo laying down on the prairie sleeping? You try to capture them when there's some action.

Jenk Jones: Tell them about your wounded rabbit thing you use on coyotes and bobcats.

HP: Well, use a predator call to try to call in coyotes or bobcats. They're not dumb; they don't fall for that very often.

JE: You're sitting in a blind like a hunter would be?

HP: Well, I've done that too but a lot of times I'll just be hiding in grass or up against a tree. One time the lens weighed 16 pounds; big telephoto lens without the camera on it weighed 16 pounds. Then you got a tripod. I walked several miles across the prairie trying to capture what I thought I was needing. I was in tallgrass on top of a hill and I put my hand down to sit and I put it on a rattlesnake skin that had just shed. I thought, "You know, I am braver than this; I'm not going to let that scare me." And the longer I thought about it I thought, "You know, that rattlesnake is not very far away and I'll never see him in this tallgrass." I packed up my stuff and left; I got out of there.

JJ: He finds that the coyotes and bobcat there are very disappointed when they get to what they think is going to be a meal and there's just Harvey.

JE: Mm-hmm (affirmative).

HP: They're pretty smart.

JE: The bison, you said, aren't skittish. How close could you get to a bison to take this picture?

HP: We don't recommend people get close to the bison. I've been seated out on the prairie and had bison come to me. Especially, the younger animals are very curious and they will come up sniffing, trying to smell you. Sometimes you can get in a situation that's dangerous. I had that happen once. A cow got pretty irritated with me. She had a young calf and she was making some sounds that certainly indicated hostility. I was in a bad situation so I just loaded up and left.

JE: Supposing it's just a bull and you out there and he sees you there. It is his instinct to want to do harm to you?

HP: Generally not, but you never know. They're wild animals and their mood can change in

the blink of an eye. Plus you get interaction among animals. Sometimes, two bulls will start fighting and they can run right over everything, including you. They won't even know when they stepped on you and smashed your intestines out. They can do a lot of damage without intending to. But they're not ferocious animals; you don't feel like they're out trying to eat you. But they can hurt you without intending to.

JE: Yeah.

JJ: And sometimes they can intend to.

Chapter 17 – 4:43

Wind Power

John Erling: Wind power has become major, particularly here, in the Midwest and up and down our corridor, wind corridor, I will call it. What is wind power's effect on the prairie?

Harvey Payne: There is not a positive effect. The prairie chickens are an indicator species, I think, to the health of a prairie. We have here, the greater prairie chickens. They evolved on prairies. They avoid vertical structures, they avoid trees, they didn't evolve with vertical structures, they I think, equate a vertical structure with a perch for a predator.

Research is shown that prairie chickens won't nest within a mile of a wind turbine. These wind turbines can be as much as 400 and 450 feet tall. They produce quite a bit of noise, they have a pretty large footprint, they'll have a road going to them, and then, you have to have transmission lines to transport the energy that's generating.

What it does basically, is further fracture the prairie and further subdivided it. The actual area that a wind turbine may occupy may be fairly small, but it will have a very large impact. For that reason, and others, a lot of people don't think they're very pretty, and the skyline full of wind turbines, isn't usually given a romantic connotation and your view of the Wild West. The Conservancy's opinion is that, "Without taking a position on wind energy, we feel that they should be in areas that are already disturbed, and leave them out of an unbroken, intact prairie landscape that is already very threatened."

Jenk Jones: We just don't know the extent of the damage. The Indians of course, are concerned about loss of eagles because that's the sacred bird to them. I think, probably, it's a fairly good loss of raptors. I'm worried and some of the studies in western Oklahoma discovered that they've been very good at annihilating bats. If you wipe out bat populations or seriously reduce them, then, you have insect problems because of the lack of bats and of course, as Harvey said, the transmission lines, that's a real disturbance of the area; so wind farms we just assume, see them elsewhere.

JE: We have wind power companies had the audacity to approach the Preserve?

HP: They actually have, and we said, "Thanks, but no thanks."

JE: Well, you got to ask I guess don't they?

HP: And there's no harm in asking I mean, it's a business proposition that's all it is. I don't have any fault with them asking. They said, "Well, we thought we knew what your answer would be, but we wanted to ask."

JE: But they know, what it does to our prairie too.

HP: They know, but they don't always say and accentuate the positive, but it has a pretty profound effect. The question is, we've lost a lot of what was the tallgrass prairie. It was a very expansive robust ecosystem.

We don't have the Carolina parakeets; we don't have the passenger pigeons. When I was a kid, we didn't have white tail deer, we didn't have wild turkeys, we didn't have elk, we didn't bison, we didn't have antelope, they're all killed out.

The thinking with settlers was to conquer the American west. It was nature's plethora of opportunity. There weren't any hunting seasons and people just took it out. All has been lost. The wild life department has reintroduced deer, have reintroduced wild turkeys, different species in what we had, but we still have wild turkeys. The Carolina parakeet, it's extinct, passenger pigeon's extinct, the Merriam's elk that lived here historically, is extinct so we've lost a lot.

How much can you lose and still have a functioning prairie? Prairies are what Walt Whitman called "the characteristic American landscape." To the casual visitor, that shows up from 11 to 2, when most of the prairie is pretty dormant, not much going on, doesn't get a glimpse of the prairie. But if you're there, at the first light of the day, and you hear all of the birds calling and you hear coyotes howling, and the sounds of the prairie, and the sights and the smells of the prairie, or if you see it the last light of the day, it has a profound effect on you. The more you study it, the more you experience it, the more you appreciate it, and the more you realize, how much you do not know about the workings of a prairie.

Chapter 18 – 6:29

Cowboys and Docents

John Erling: Cowboys, they're characters aren't they?

Harvey Payne: I've been around them all my life and they are characters, but they love the land. They love cattle. We wouldn't have a Tallgrass Prairie Preserve if we didn't have caring ranchers. Chapman and Barnard were cowboys in the purest sense of the word, and they loved the prairie.

The Nature Conservancy originally expected to find 250 plant species on that section

of land and it's three times that. That's indicative of the care that James A. Chapman and Horace G. Barnard gave the prairie.

JE: We've named some famous names that are involved in this. Let's talk about the docents who are trained to tell the story to the many visitors. How many visitors in a year would you be attracting?

Jenk Jones: Several thousand. It's hard to tell because a lot of people don't sign the books. Some of them just come to use the restrooms or they just drive through the prairie. They may not even come near the visitor center, but we'll have several thousand log in. Most years, we'll have all 50 states.

North Dakota is one of the ones we have trouble getting occasionally, or Rhode Island, and we've had visitors from more than 100 countries.

JE: But the docents play a pretty important...

HP: Jenk can speak very well to that. He's been a docent for a long time, and a superb docent. Generally they are the face of the Nature Conservancy. I have had so many calls of people saying "I'm wanting to come up and visit the Preserve. Will there be somebody there? Will there be a docent that we can talk to?" I get that question all the time.

If you can have a person there that's obviously enthusiastic about the prairie, or they wouldn't be there, I mean some of them have a very long drive, go through a lot of training and get nothing. They pay their own expenses. They have a very strong love of the prairie and that comes through.

Then their knowledge, and if you get somebody like Jenk, that knows more about Oklahoma history than anybody I've ever met, he makes the prairie come alive. It's so much more than punching a button on an interactive computer screen or whatever. To talk to somebody that can answer their questions and speak to their interests is priceless.

JJ: Our docents, we're such a mixed bag. I'm a historian and I know quite a bit about mammals and so on. Nick Delgraso is an expert on birds and can go on for hours about Red-tailed Hawks and Cooper's Hawks and so on. We have others.

One that I go to the prairie with quite frequently, Dwight Thomas, has a PhD in botany. He knows every blade of grass, every flower, every plant and tree. He has certain spots that he knows he can stop his car and go out and find particular biodiversity at this one place.

We have people of all sorts of different backgrounds. Some of them have been oilmen. Some of them have been schoolteachers. Just all sorts of approaches. It's pot luck who's going to be there as a docent on a particular day, but whoever it is, the visitor's going to learn something about the prairie.

JE: What are the hours of the Preserve?

HP: The Preserve is open daylight to dark. The Visitor Center is open from 10 to four.

JE: So, visitors can come up and see, as you talked about, the sunrise and the sunset.

JJ: It's all county road. You just have to watch out for the bison in the road.

JE: Well, people are coming in from around the world. There are thousands of Oklahomans who've never been to the Tallgrass Prairie Preserve. Maybe they didn't have an interest, but once they're there they're going to say "Man am I glad I made this trip." I'm sure you have heard that many times.

HP: I have...and it's touching to see the Preserve through other peoples eyes. I've taken a number of people up there and a number of people from foreign countries up there. Just recently two from a newspaper in Norway. To experience it through them is to experience it anew and to see it differently.

It was one of those days. Just a beautiful day. The bison were surrounding the T-intersection north of the headquarters. I mean, on both sides of the road, three different areas. This one gal was a photographer. She shot and shot and shot and shot. They'll probably use a couple of photos, but I mean they were ecstatic. It's refreshing to see that.

That's the reward the docents get. Bringing enthusiasm, happiness, and education to visitors that otherwise are going to miss out on it.

JJ: It works to the Conservancy's benefit because people who are enthusiastic often become donors to the Conservancy, or members. Also we do have some economic impact on Pawhuska. Harvey could speak better to that, but when you get several thousand visitors coming up there every year and Pawhuska is the nearest place to eat or perhaps buy a souvenir, it has some economic effect.

HP: Oh, definitely. Plus, the Preserve's budget is about a million dollars a year. Much of that is spent locally.

JE: Then I think we referred to the tax issue. You really didn't have to pay taxes, but you do anyway. That tax is used how?

HP: Well, it funds the county operations. We pay ad valorem taxes like anybody else. It's pretty substantial.

JE: That's a volunteer, obviously.

HP: Well, we could probably get out of it, but that would not be smart publicly. If you want to be considered one of the local people you need to act like one. I think the Conservancy does a good job with its local presence.

JE: Well, we are proud of Oklahoma for many, many reasons and this has got to be one of the big, major reasons we can be proud of this state. Not every state has this.

JJ: Well, I think it has an impact far beyond raw numbers. As Harvey said, he had a couple people from Norway. I've dealt with visitors from maybe 30 different countries, or say a couple people come in from New York. Well, they go back to New York, and they tell all

their friends about their experiences and so on. You have this ripple effect that goes out and brings additional publicity to the Tallgrass, but also to the Nature Conservancy and the whole issue of conservation itself.

JE: Well gentlemen, thank you very much for your time. Thank you for what you've done for that prairie. Generations to come who will listen to this interview will now know why it's preserved and how it was preserved. I thank you.

HP: Our pleasure.

JJ: Thank you John, as always.

Chapter 19 – 0:33

Conclusion

Announcer: (music) This oral history presentation is made possible through the support of our generous foundation funders. We encourage you to join them by making your donation, which will allow us to record future stories. , teachers, and librarians are using this web site for research and the general public is listening everyday to these great Oklahomans share their life experience. you for your support as we preserve Oklahoma's legacy one voice at a time on VoicesofOklahoma.com.