

## **1491: The Untold Story of the Americas Before Columbus**

### **EPISODE 102 – Environment**

#### **Opening Title Sequence - Narrator - 00:12**

We are the First Peoples of the Americas. We have been here from the beginning. Our ancestors navigated by the wind and stars crossing vast oceans and mountain ranges, searching for new lands. Over thousands of years, our ancestors became astronomers and architects, philosophers and scientists, artists and inventors. We created distinct societies and built vast trade systems that covered two continents. In 1492, our world was changed forever, but we did not disappear. Today, the languages and teachings of our ancestors remain, and these are the untold stories of the Americas before Columbus.

#### **Narrator – 01:30**

We've been taught that the Western hemisphere before 1491 was a sparsely populated wilderness, virtually untouched by humans...but this pristine world was nothing more than a myth. In reality, there were millions of Indigenous People living throughout the Americas, and the majority lived in large cities and towns. To provide for these large urban centers, innovative techniques were invented to modify and manipulate the environment. Our ancestors used fire to clear the land. They constructed canals that turned deserts into productive farmland. They built terraces on steep mountainsides to grow crops, and in Amazonia, they manufactured a soil so fertile, it transformed an entire ecosystem. These impressive modifications to the environment were driven not only by the needs of a growing population, but by an ancient respect and connection to the land and water.

#### **Dr. Greg Cajete – 02:35**

Like, a lot of Indigenous metaphors convey whole bodies of thought and philosophy and understanding, and this is many times not captured in an anthropological record, or an archaeological record, or historical record, because this is really the thoughts that guide the people. We have relationships to water, which is the most basic elemental relationship, 'cause water is life, you know, in all cultures, in all traditions, and so we have a lot of metaphors that reflect and that represent and that symbolize water in all of its various stages, from water sitting in a lake or a pond, or moving in a stream or a river, to water that is cycling in clouds and coming down as rain and snow, and so all of those forms of water are sacred in the context of Indigenous thinking.

#### **Narrator – 03:37**

Covering an area as large as the Continental United States, Amazonia holds 10% of the world's plants. It also had an Indigenous population that numbered in the millions in 1491.

#### **Dr. Eduardo Neves – 03:55**

So that idea that the Amazon is a tropical pristine rainforest is probably very recent. Rain forests grew up on top of places that used to be settled before. If we could go back 1000 years ago we would see a different landscape that we would see today.

**Narrator – 04:13**

About 2% of the land lies within the flood plain of the Amazon River and its many branches, and the soil here is fertile.

**Dr. Eduardo Neves – 04:26**

(Subtitled in Episode).

**Narrator – 04:37**

But the majority of the soil in Amazonia is too acidic for extensive agricultural use.

**Dr. Eduardo Neves – 04:44**

Normally Amazon soils are not very rich. They're very acidic, the pH is not very good. A tropical soil very fast will lose its fertility because of rain, leaching.

**Narrator – 04:54**

In the places where the soil was less fertile, Indigenous People engineered a soil called "terra preta," or "dark earth." Made from broken pottery, plant waste, fish bones, and charcoal, terra preta has been found in village sites that date back 7,000 years, about the time that pottery was first produced in the Amazon.

**Dr. Eduardo Neves – 05:15**

In Guyana they go back 5000 years, even more. In southern Amazon they go back to 7000 years. What's interesting though is the terra preta is the idea that they used for farming for improving the natural conditions of the soils were valid.

**Narrator – 05:44**

Traditional knowledge of farming, plant cultivation, and soil management is passed down from generation to generation among Indigenous People.

**Narrator – 06:22**

Terra preta has been found throughout the upland areas of Amazonia, often far away from rivers. Developing a way to make these soils fertile and productive for agroforestry was a matter of survival, but the abundance of terra preta soils next to village sites that were already in fertile areas has raised many questions about its origins.

**Dr. Eduardo Neves – 06:47**

And it's interesting because we are finding also terra preta soil in areas which are very fertile.

**Narrator – 07:09**

The essential ingredient in terra preta is charcoal. The people who made this soil used a slash and char method to create the charcoal. This causes less carbon emissions and produces a more stable product than slash and burn.

**Dr. Eduardo Neves – 08:18**

And this terra preta soils were very productive. Really, really rich and productive soils. They allow one to cultivate in the same spot for many years. Some of these orchards, or this managed forests, there was no need for farming. There was a very highly productive environment. That entails a different relationship with people and their surrounding landscape.

**Narrator – 08:45**

Villages were often situated in rings, and while the center of such a ring would be barren, on the outskirts of each village were middens, where food waste was deposited. The people who developed and used this rich soil were not farmers in the traditional sense, but horticulturalists. They simultaneously cultivated domesticated and wild vegetables, fruit, grains, and trees. The terra preta soil found in these villages may not have been intentionally manufactured in the same way as the uplands sites. It may simply be the result of thousands of years of manmade organic waste.

**Dr. Eduardo Neves**

One would expect to find those soils away from the settlement areas. But what we do find is in most cases the sites, the soils are in the very same place as where people used to live. In order to live well in the Amazon, one has to really be aware of the wealth of information. That takes really very sophisticated societies.

**Narrator – 09:46**

The ancient Amazonians discovered a way to sustain a growing population despite having acidic soils in much of their territories. The ability to engineer the soil to meet the needs of the people is one of the most significant environmental achievements of our ancestors.

**Narrator – 10:12**

Throughout North America, Indigenous People depended on access to hunting grounds as well as distant communities for trade.

**Dr. James Crippen – 10:21**

It's quite clear that people used to travel very, very long distances. It seems incredibly difficult, but people knew how to travel back then.

**Narrator – 10:29**

Communities were often hundreds of kilometers apart, with forests, mountains, and prairies in-between. Finding consistent and predictable routes of travel year-round was a necessity. The answer was a natural highway system embedded in the surrounding environment. Whether

flowing in summer or frozen solid in winter, the rivers of North America were a dependable transportation route for Indigenous People.

**Dr. James Crippen – 10:57**

The Dene people could travel thousands of kilometers on frozen rivers because they had such highly developed snowshoe technology. Traditional Dene snowshoes are still better than commercial snowshoes in many ways. They're designed for your feet. They're designed to deal with the exigencies of the climate in your region. You pick particular wood and sinew for them. They're sewn in different ways so that they adapt to different snow conditions, and you might carry more than one pair for different kinds of snow... and then, of course, in the summer, travelling thousands of kilometers along many of our huge rivers. The Mississippi, the Yukon, the Mackenzie... these rivers are enormously long, and you can travel on them quite easily throughout most of the year.

**Narrator – 11:45**

The preferred vessel for transportation along North American waterways and coastlines was the canoe.

**Dr. Charlotte Côté – 11:52**

The canoe was always central because we're a marine-based people. The rivers and the oceans were our highways, so we needed the canoes. So we became very skilled canoe-makers.

**Narrator – 12:03**

To adapt to the stormy weather and strong currents of the Pacific Ocean, the Peoples of Northwest North America carved heavier canoes from cedar.

**Dr. Charlotte Côté – 12:12**

We know how the waters are here in the Northwest coast. You could lose yourself out there.

**Narrator – 12:17**

While some coastal vessels were smaller and more suited for shoreline fishing, others were ocean-going canoes, carved from massive logs that required exceptional craftsmanship to build.

**Dr. Charlotte Côté 12:29**

They had various types of canoes, depending on what duty it served, or what purpose it served. So you'd have canoes for travelling to potlatches, canoes for gathering foods and medicines and plants, canoes for warring, canoes for whaling, canoes for fishing, and so you had various types of canoes that were carved for a specific purpose, so variations to that canoe existed.

**Narrator – 12:58**

Inland water travel required a different style of boat. Using the same basic vessel, the canoes of Indigenous People living inland were smaller and lighter to accommodate long stretches of river or lake travel. These canoes were typically constructed from the barks of trees. Sturdy enough

to withstand river rapids, birch bark canoes were also light enough to portage, or carry long distances between waterways.

**Dr. James Crippen – 13:32**

People thought nothing of packing up with anything that they could carry and then going off for six months or a year to go travel, to go visit distant, distant relatives, or just to go explore. There's absolutely no question that people would get around all over, all the time.

**Narrator – 14:12**

Manmade earthworks created an artificial topography throughout North America before 1491. These mound structures were built over thousands of years. One of the largest concentrations is located on the Mississippi River near present-day St. Louis. The ancient city of Cahokia had 120 mounds, with the largest-known as "Monk's Mound." This massive earthwork covered five and a half hectares and was 30 meters high. To construct this mound, thousands of workers carried more than a million square meters of earth in woven bags to the site.

**Dr. Dorothy Lippert – 14:54**

From my own tribe, we have a story about a mound site in Mississippi called Nanih Waiya, and we came up from below. We came up out of that mound, according to one story, or we followed two brothers, Chahta and Chickasha, from the west... we travelled east... and finally stopped in a place and built that mound, and we carried the bones of our ancestors with us and built the mound. Either story, it talks about this one place that's very significant in Choctaw tradition, and it places us in Mississippi, so it tells us where... how we came to be in that area, and the stories tell us about our relationship with other tribes, the Chickasaw and the Cherokee, among others. The science actually fits in well with that if you think about people moving from the west into the east, and if you think about mound sites in the southeast that frequently function as burial mounds. So there are mounds that have human remains in them.

**Narrator – 16:04**

Mounds are also part of the creation stories of Indigenous Peoples. A large concentration of ceremonial mounds are located throughout Central and Eastern North America. As family groups formed societies and settled into villages and cities, the practice of burial mounds expanded.

**Dr. Joe Watkins – 16:24**

We can follow the evolution, if you will, of mound construction from 300 A.D. on up. We get small mounds. We get a little bit larger. We get mortuary mounds. We get mounds that have houses on top. So we can see an in situ development.

**Narrator – 16:43**

Around 2,000 years ago, the mound-building tradition intensified throughout the region and resulted in ceremonial centers along rivers and lakes. The mounds were spiritual gathering places where people would travel to make offerings and bury their family members and leaders.

**Dr. Joe Watkins – 17:04**

So we can recognize that at one point in time, there was a large group of people that probably all spoke the same language, all agreed to serve under whatever political structure was in place, and then, after a time of stress, probably during the Little Ice Age in 12-1300s, people started realizing that they could no longer exist within one large area, that they had to pull apart again, but we also get some indications of influence from the south. The first pottery that occurs in North America is in Florida, and then it disappears, and then it comes again from... in the Southwest, and it moves across. I think one of the important things is for North American tribal people to recognize that we... our cultures did develop in place, and whether we had some influence or not, these are North American cultures, and we don't have to rely on someone from... coming from somewhere else to help us move forward.

**Narrator – 18:25**

The steep mountainsides, high altitude, and cold climate of the Andes would seem a most inhospitable environment for humans to thrive, let alone agriculture.

**Dr. Ruben Mendoza – 18:38**

In looking at the American hemisphere, we are looking at a region that is highly mountainous, very fractured, part of what we call the Neovolcanic Axis.

**Narrator – 18:47**

These regions of Bolivia and Peru have been home to successive Indigenous societies over thousands of years, and the vertical topography didn't stop them from developing one of the most productive farming regions in the world. In places like Lake Titicaca and Sacred Valley of Peru, people began to sculpt the landscape into a series of stepped flat plateaus to make the mountainsides more accessible to agriculture.

**Dr. Ruben Mendoza – 19:14**

The same tendency occurred throughout the Americas, but perhaps the best-known such terraces are those of groups like the Inka.

**Dr. Henry Tantaleàn – 19:23**

They have terraces from the formative times. There is probably 1000 years before Christ.

**Narrator – 19:30**

By the time the Inka civilization came into existence 600 years ago, terraces already covered more than one million hectares of mountainous land in the Andean Mountains. As the terraces became larger and more structured, labourers built them with expertly cut stone, sand, gravel, and soil.

**Dr. Ruben Mendoza – 19:51**

In some cases, you have the levelling of the area, the soils are pushed away, and then agaves and other plants are planted along the boundary, and then, through the course of time, these become formal masonry structures.

Those systems were among the most sophisticated, I would contend, given that not only were these terraces often cut from stone that was easily fitted, and entire hillsides were terraced, but in order to prepare the terrace, soils were basically cleared, the area was cut, and then gravel was placed in the basins of these terraced walls.

**Narrator – 21:49**

The terraces' stone walls and multi-layered soil were designed to prevent the leeching of nutrients from the soil, retain heat during the cold mountain nights, and provide a natural, gravity-fed watering system.

**Dr. Ruben Mendoza – 22:02**

This formed a kind of a... like a carbon filtration system in which clays and other soils and enriched soils for agriculture were placed over that, and the entire terrace packed such that it could sustain crop year after year.

**Dr. Henry Tantaleàn - 22:30**

We know that they are cultivating potatoes. And in some islands of the Titicaca lake they grew corn. Also they have quinoa.

**Dr. Ruben Mendoza – 22:45**

Because of the nature of the clay soils in the region, Peru, for instance, those soils were almost impervious to erosion, so this allowed those terraces to be maintained through the course of centuries, and even today, many of the terraces built as much as a thousand years ago are still in use.

**Narrator - 23:04**

By literally moving mountains, the Andean People of South America manipulated their environment to create one of the world's greatest engineering achievements.

**Narrator - 23:04**

During the long winter months, the Arctic Region becomes an endless expanse of snow and ice. Further south in Central North America, the prairie summer landscape is a never-ending sea of grass. With few naturally occurring landmarks to guide travelers and hunters, both environments can be daunting and even dangerous places to travel through. Ancient Peoples have erected stone markers on the landscape for thousands of years. In North America, two of the most prominent stone structures are the inukshuk in the Arctic and sub-Arctic, and the medicine wheel on the Central Plains.

### **Michael Kusugak – 24:04**

A lot of the inukshuks that we have have been there for hundreds, maybe thousands of years.

### **Narrator – 24:14**

The Inuktitut word "inukshuk" means "one that looks like a person." From Alaska to Greenland, these anthropomorphic stone structures have been built for more than 2,000 years. Inukshuks have many purposes, including keeping track of seal caught during hunting expeditions.

### **Michael Kusugak – 24:39**

If you catch a seal sometime in the summer, it sinks, and if you want to retrieve that seal, and you don't have anything to retrieve it with, you go ashore, and you put up a couple of inukshuks to point to exactly where the seal went down, you know, so you can get back in that water and line up, you know, and you'll find your seal. That's, you know... so we made little ones, just to point, you know, where our seal had gone down, or some animal had gone down.

### **Narrator – 25:12**

Another purpose for an inukshuk is to serve as a guiding landmark on the landscape.

### **Michael Kusugak – 25:18**

When you grow up living there, you know, and all these inukshuks are everywhere, you get to recognize them, you know. They help you navigate out on the land. In 1973, we went on a canoe trip down the Ferguson River, and it's about 160 miles long, and at one point, we were completely lost, you know. We have two canoes and four people, and we're paddling around this huge lake that had twice as many islands as there were supposed to be, and by the end of the day, we had gone nowhere, you know, still looking for the way out, and so late in the evening, we decided we'd stop and, you know, spend the night and look for the way out the next day. So we saw an inukshuk way off in the distance, and I said, "Let's go camp there," and so we paddled around all these islands, got up to the inukshuk and put up our camp, and before I turned in, I said, you know, "I'm going to go up there to the inukshuk and take a look around," and... I climbed up and got, you know, stood beside the inukshuk, and there was the river that we had been looking for all day. After that, every time we got lost, we would just find an inukshuk on the horizon, and we'd paddle, paddle there, and it led the way all the way out, and that's the way we navigated the Ferguson River.

### **Narrator – 26:46**

The inukshuk is one of the most enduring symbols in the Arctic of ancient Inuit life. Found in various locations across the Central Plains of North America are low-lying, manmade stone circles known as "medicine wheels."

### **Dr. Eldon Yellowhorn – 27:04**

Medicine wheels are enigmatic. They come in all shapes and sizes. Some of them are effigies of turtles or other animals. Some of them are effigies of humans, but what they all have in common is some relationship to the landscape.

**Narrator – 27:25**

Medicine wheels had many possible purposes, such as ceremonial gathering places, or as a place of cosmological alignment. Medicine wheels may also have had more practical uses.

**Dr. Eldon Yellowhorn – 27:39**

There has been some attempt to try and find calendrical devices that... astronomical alignments from them. Myself, I'm skeptical of that area. In fact, I think the better explanation is that they are geographical markers. Wherever we find medicine wheels, they are usually on a very prominent butte, so that you have a good view of the surrounding landscape, but then also, areas where major rivers are easiest to cross, you know. Like, the Majorville Medicine Wheel is located right near Blackfoot Crossing, which is the best place to cross the Bow River, and when people don't have bridges and you have to wade through the water, this is crucial knowledge. I think, in actual fact, that these... what we call medicine wheels... are not so much calendrical devices as they are mnemonic devices for the cognitive geography on the plains.

**Narrator – 28:44**

One of the oldest stone structures in Central North America is located in Blackfoot Nation Territory in Southern Alberta. At the center of the Majorville Medicine Wheel is a nine-meter central cairn connected by 28 stone spokes to an outer ring.

**Dr. Eldon Yellowhorn – 29:05**

People didn't just build this at one time. It was a slow accretion of the central cairn, and then also creating the outer rings, and sometimes the spokes that joined the cairn and the outer ring.

**Narrator – 29:20**

Besides being a significant geographical marker on the landscape, Indigenous People travelled to Majorville for ceremonies and gatherings.

**Dr. Eldon Yellowhorn - 29:30**

Majorville Medicine Wheel, at the very bottom of the cairn, that the artifacts came from a time that is closer to 5,000 years ago, and they discovered a lot of artifacts like projectile points, but they also found other things like, uh, phalanges, or finger bones of people, you know, and again, that was a very common thing where people would... if somebody is grieving, they would cut off a tip of a finger and then leave that at the medicine wheel. Recently, the University of Calgary wanted to repatriate those artifacts back to the Blackfoot community, but Blackfoot people say, "No, we don't want those," because when somebody left an artifact at the medicine wheel, they were leaving their troubles with that artifact, so if you come along and you take that artifact today, all you're doing is taking somebody else's troubles with you. They have ceremonial functions, in that people go there to leave their troubles and make offerings, but they also serve as geographical markers when people are travelling across the prairies.

**Narrator – 30:40**

As one of the oldest continuously used ceremonial sites in the Americas, Majorville suggests that the Plains cultures were strongly rooted to a traditional homeland and continued to maintain their sacred gathering place for thousands of years.

**Narrator – 31:04**

The Ancestral Pueblo People have lived in Southwest North America for more than 10,000 years. To survive in this semi-arid region, with its seasonally high temperatures, it was crucial to find a way to control the rivers to irrigate land for farming and to provide a year-round supply of water for cooking and drinking.

**Dr. Greg Cajete 31:28**

Given the requirements of living in this kind of landscape, this kind of environment, the essential foundation for developing communities in this area, because it is a desert, was your access to water.

**Narrator – 31:53**

Known for their multiple-story, multi-family adobe apartment complexes, the Ancestral Pueblo were also master engineers when it came to manipulating and controlling the region's limited sources of water. Beginning about 1,400 years ago, the agriculturally based Peoples in the Phoenix Valley designed and built an advanced irrigation system of canals and reservoirs known as the Hohokam Canal. The main sources of water for the canals were rivers that originate in nearby mountain ranges.

**Barnaby Lewis – 32:31**

And the Salt River were the ones that delivered the water, brought the water, and it was through these irrigation canals that they were able to, of course, farm.

**Narrator – 32:42**

The largest canal measured about six meters in depth and more than 20 meters wide. The longest canal was 32 kilometers long. The Hohokam Canal System irrigated more than 40,000 hectares of farmland.

**Barnaby Lewis - 32:59**

A great deal of physical effort, a great deal of planning, cooperation... everybody had a common goal, and that was to achieve that agricultural way of life.

**Dr. Greg Cajete - 33:12**

The Hohokam Canal really represents an application of the communal mind in both the construction of the canals, and also the conceptualization of the canals. The essential way you survive was through the community and through participation in community work. It was a realization on the part of the community as a whole that these structures were necessary, again,

to reach towards that goal of a good life through the production of food in ways that allowed for the people to grow, the communities to grow.

**Narrator – 33:55**

The Hohokam Canal System that flowed from the Salt and Gila rivers transformed the desert landscape and supported a prosperous agriculturally based society. It was as much an engineering achievement as it was a life-giving source of year-round water. Although a long drought likely forced the people in the Phoenix Valley to move, the footprint of this elaborate water system is still visible today. The Hohokam were one of many Indigenous peoples in the Americas who developed sophisticated irrigation systems. In Northern Peru, rivers flowing from the Andean Mountains brought water to the semi-arid Norte Chico Valley, where tens of thousands of people lived in cities between 4,000 and 5,500 years ago. Irrigation canals carried water to fields where cotton and food crops were grown. In Mesoamerica, the Aztec city of Tenochtitlan was built on a manmade island in Lake Texcoco. An intricate system of dikes, canals, and reservoirs were built. This supplied the hundreds of thousands of people in the city with fresh water for drinking, bathing, gardening, and fish farms.

**Cultivated Farmland – Narrator - 35:16**

Throughout the Americas, Indigenous Peoples extensively altered and manipulated the environment, sometimes changing entire ecosystems in the process.

**Dr. Rudy Reimer - 35:28**

What we see in Eastern Woodlands is intensive modification of the landscape over thousands of years. Archaeological research has currently shown that the development of agriculture in that region occurred a lot earlier than previously believed. We are, as archaeologists, as researchers, just coming to realize and acknowledge how the land was shaped and formed, and we tend to call this anthropomorphic shaping of the landscape.

**Dr. Joe Watkins – 36:01**

6,000 years ago, we do find the occurrence of stone tools that have been polished and shaped and have an edge, and we believe that they were used to chop down trees, to clear the land.

**Narrator – 36:15**

The earliest plant cultivation in the Eastern Woodlands of North America began about 4,000 years ago. Among the earliest crops were sunflowers, goosefoot, and squash. Later, maize, beans and nuts were grown widely in Eastern North America.

**Dr. Dorothy Lippert – 36:33**

People in the Southeast ate fairly similar types of things, and then you move across, and people live differently because different cultures, different tribes, different communities.

**Narrator – 36:46**

After the introduction of maize about 1,000 years ago, Eastern North America was transformed into a patchwork of agricultural fields and orchards. This intensive production of crops was the result of a new organizational structure for farming and better tools made from antler, bone, and stone. Throughout the Eastern region, farmers cultivated a variety of nuts, including pecans, acorns, walnuts, and chestnuts. Forests were even designed and modified to attract animals for hunting.

**Dr. Joe Watkins 37:24**

Eventually, they would plant the crops. They would create gardens. The gardens actually brought in animals that they could use for food, and so, as they started creating these gardens, they did cut down the trees. They would open expanses up. They also used the trees for building. They built homes. They also used them for fires in the houses, for heating, for cooking, so they would open up landscapes.

**Fire Technology - Narrator – 38:02**

It was a new balance of nature and farming, completely manufactured by Indigenous Peoples. As communities in North America became larger and more centralized, the need for stable food sources increased. This led to manmade changes to the landscape to open up land for agricultural and hunting purposes. An expedient way to manage the landscape was to carry out controlled burns.

**Dr. Eldon Yellowhorn – 38:38**

Fire is, like, indispensable, and really, you know, I think this goes right back to when our ancient ancestors first discovered fire and how useful it was.

**Dr. Rudy Reimer – 38:50**

In several parts of North America, Indigenous People used fire... one, to clear land to create agricultural plots, and of course, burning of that landscape enhanced the soil for a certain amount of time. On the west side of the continent, people literally burnt parts of the forest, and what this did was encourage other kinds of plants to grow, notably berries, which could also be mass harvested to support large populations.

**Narrator – 39:23**

On the Central Plains, grasslands were cleared with fire to encourage new plant growth in the spring. This in turn attracted large herd animals like buffalo. Fire was also used to drive buffalo to certain hunting locations.

**Dr. Eldon Yellowhorn – 39:41**

When Blackfoot people were preparing a buffalo jump, they knew in advance where they were going to hold their buffalo jump, so they would send somebody there in the fall time to burn the grass in the gathering basin, and by burning the grass, you put the seeds back into the ground, but also, you give a little bit of fertilizer with the ash, so in the springtime, that's where the grass is going to be greenest first, and so that's going to attract grazing animals like bison. A buffalo

jump didn't just happen. It was very purposeful, you know. People created the conditions that would ensure success.

#### **Narrator – 40:22**

Controlled burns generated higher yields for farmers and hunters and brought about significant changes to the natural ecosystem. Indigenous Peoples before 1491 impacted the natural environment through agriculture, earthworks, urban development, water management, controlled burning, and deforestation. These were innovations that were driven by the need to provide food, clothing and shelter for a constantly growing population in the Americas. All of these adaptations created an artificial landscape and had a profound effect on the climate, soil, water, and wildlife in the Americas. Today, we have a powerful tradition of land stewardship that evolved from these ancient technologies.

#### **Credits**

#### **Dr. Dorothy Lippert - 42:06**

I remember watching a TV show about dinosaurs and seeing the excavation of a dinosaur bone. And the paleontologist pointed to a spot that he had just cleared away, and said, 'That spot right there hasn't seen sunlight for, you know, 100 million years.' And I was just amazed that someone could do that. Could be the person to uncover something from so long ago in that way. But I was always more interested in people. You know, dinosaurs are great, but people are more interesting. And then when I was about 12, some family friends took me on a dig that they'd been working on. They were avocational archaeologists, and so they went out on the weekends and worked on a project with the South Texas Archaeological Association. And I got to work on this one site and do that. That exact thing, uncover the past, be the person to uncover it. And it was just fabulous. I was hooked.

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