

**Fields of the Future: Unraveling the Loom**  
**A Podcast by Bard Graduate Center**  
**S2E8: Alejandro de Ávila Blomberg—Ethnobotany**

**Introduction:** This is Fields of the Future, an interview series by Bard Graduate Center. This season highlights the work of scholars, artists, and educators working with Indigenous textiles and textile history of the Southwestern United States and Mexico. Jessie Mordine Young speaks with Alejandro de Avila Blomberg, the founding director of the Ethnobotanical Garden and curator at the Oaxaca Textile Museum in Oaxaca, Mexico. They discuss his career in anthropology, the history of cochineal, and the evolution of biodiversity in the region.

**Jessie Mordine Young:** Hi, I'm Jessie Mordine Young, a recent graduate from the Bard Graduate Center. I am a Brooklyn-based textile scholar, educator, and weaver. Today I'm calling in from Oaxaca City. Oaxaca is the home of Pueblos originarios, originary peoples. It is home to many people of different communities. It has the greatest cultural diversity in the Americas for an area of its size which is an important thing to recognize.

I'm thrilled to be speaking with Dr. Alejandro de Ávila Blomberg. Alejandro is a botanist, anthropologist, and the Founding Director of the Ethnobotanical Garden in Oaxaca City, Mexico. He also curates at the Oaxaca Textile Museum and plays an important role in preserving the culture by sharing its history through a variety of material culture, including textiles, plants, and art. He holds a Bachelor's degree in Anthropology and Physiological Psychology from Tulane University, and then received a Master's degree in Psycho Biology and he holds a Doctorate in Anthropology from UC Berkeley. He has established the first World Wildlife Fund headquarters in the country and continues to be involved in environmental and cultural activism throughout the area. His interest in plants and meso-American cultures goes back to his childhood spent near Chapultepec and also visiting the National Museum of Anthropology. It is a beautiful garden in the city. As a teenager, he did an apprenticeship at a cotton weaving workshop in Oaxaca. Welcome, Alejandro.

**Alejandro de Ávila Blomberg:** Thank you Jessica. It's a pleasure and it's an honor to participate in this podcast. Thank you for inviting me.

**JMY:** So happy to have you. Can you please just first tell me about yourself and your career as a botanist and anthropologist and director of the Ethnobotanical Garden and Museum in Oaxaca?

**AAB:** I grew up in an intercultural setting since day one because my father was Mexican of mixed descent. Our great-grandfather spoke Zapotec as his Mother language. And on his father's side, this was his mother's side. On his father's side, we came from San Luis Potosi which is on the opposite side of Mexico. So on my father's side, I already had like the two cultural extremes. Indigenous Mexico and non-Indigenous Mexico in the family. And then on my mother's side, we are of Finnish descent. So I'm really a cultural hybrid, Jessica. I think this has allowed me to develop a sensitivity in the field of material culture that perhaps somebody with a different background might not have. I learned botany on my own but I don't have a degree in

botany. My journey has been interdisciplinary. So I took courses not only in biology, I was particularly interested in evolutionary theory, but I also took courses in linguistics and explored philosophy and I explored art history and it was wonderful. And I pursued that at Berkeley. And this has allowed me to be active in environmental conservation and in cultural preservation.

The Garden was my proposal thanks to the, eh, protection and the encouragement and the blessing of the foremost artist of the second half of the 20th Century and the first 20 years of this century. And I'm talking of our beloved Francisco Toledo. He felt that I was somebody who could contribute to what he was building together in Oaxaca. He was originally from a Zapotec family. He identified himself with Zapotec people and he became a key figure in not only Oaxaca, but throughout Mexico after returning from Paris. And it's thanks to that relationship that we could propose the Ethnobotanical Garden and later on, we proposed together the Textile Museum.

The Textile Museum, we were fortunate the Harp Foundation backed it and is now the institution that manages the Textile Museum. Whereas, the Ethnobotanical Garden because we proposed it on federal property, it had to be a government project and it's now a state government project.

My background has provided the possibility of communicating with colleagues and, with students, with young people. I feel very fortunate, I am very lucky that both at the Garden and at the Textile Museum I have not been the single person, but I have been part of who has enabled a group of young people to come together and share passion and conviction and share a spirit of working together against all odds. (laughs) Against lack of funding, against people who politically don't like us, against all kinds of logistic problems. But we have prevailed, at least so far we have prevailed with the Garden. We have prevailed at the Textile Museum. Thanks to the will of young people who have seen the example of Francisco Toledo and myself and they have identified with that example. They have said, "Yes, this is something worth following.

**JMY:** Thank you so much. I feel lucky to have been able to visit both institutions. I took the tour at the Garden and also really enjoyed the exhibit on view at the Textile Museum. It was on Indigo And so, I'd just love to hear, specifically first about the Garden and, the biodiversity within the Garden and the importance of its variation. And also just how Ethnobotanical Gardens can serve as a form of cultural preservation and conservation and what your thoughts might be on that.

**AAB:** There is a database that is called the Ethnologue. You can check on it. It's available online and not all the linguists are in agreement because different linguists have different criteria for classifying languages. How many languages are recognized by the Ethnologue in each of those countries and in all other countries of the world? And within those countries, how many languages are spoken in different regions? If you do that, you realize Mexico is number one country in the Americas for languages still spoken today. The Ethnologue recognizes close to 300 languages alive today in Mexico. By the way, the federal government in Mexico has an even

higher number of languages. But we want to compare with other areas of the world so we use the Ethnologue. According to the Ethnologue, there are close to 300.

Of those close to 300, Oaxaca is the only area, the only state of the Republic of Mexico that has over 50% of those languages acknowledged by the Ethnologue. Over 50% are in Oaxaca, still spoken today. No area of Mexico and no country of Central America has close to 150 languages. We don't want to wave the Oaxaca flag here and say, "We're special." It's about understanding what has brought about this great natural diversity, this great cultural diversity, and what are the links between biodiversity and cultural richness. That Oaxaca is so rich in plants and animals and fungi. Oaxaca is the area where we see the confluence of two biogeographical realms.

Actually I should backtrack a little and say that, first of all, Oaxaca's very complex geologically. We have a very rugged landscape. We have mountains all over as you experienced coming here and that, of course, creates diversity. In terms of the life history of plants and animals, the land bridge connecting Southern Mexico with Columbia is relatively recent. It's only in the last three to 10, 11 million years. Geologists are still not sure when the land bridge was completed, but it's very relatively recent. For over 200 million years, Southern Mexico was isolated from other tropical areas and that's what's really crucial because we see today lineages of plants and animals that are tropical and they have their evolutionary history here and some of them provide textile fibers and textile dyestuffs. And once the land bridge connects the two, it's Southern Mexico and especially Oaxaca where the floras and faunas of the North and the South meet and mingle. And that's what makes Oaxaca so diverse in terms of plants and animal life. So, Oaxaca has played a crucial role in natural history. And it accounts for such a diverse list of plants and animals that represent ingredients for your dye bath or for spinning fibers for creating textiles.

Now, what do we make of the fact that we also have the greatest cultural diversity in the Americas? Well, we think it's not a coincidence and that's what we aim to show at his garden. We want to develop the story for visitors that it is not a coincidence, that in the area of greatest natural diversity you also have the greatest cultural diversity. There must be links between the two and we try to show those links with live examples. What we would like to point out is that Oaxaca is the area with the earliest evidence of agriculture in the Americas. Our geologists have found seeds that go back 10,000 years and they were already domesticated. These are squash seeds. Long before mace. These are 10,000 year old squash seeds that so far are the earliest cultivated seeds found anywhere in the Americas. We have contemporary sites that are older. We have the earliest archeological evidence for mace. Mace appears to have been domesticated in Southern Mexico and we also have genetics to back this claim. We have the greatest diversity of mace gene-centered cultivation here in Oaxaca.

We are the cradle of agriculture in the Americas and we think that goes hand-in-hand with cultural diversity because once you start cultivating plants, you have to devote yourself to a patch of land where you're growing your food. You're no longer roaming the landscape freely to gather plants in the wild or to hunt game, but you are devoting your energy, your time to the patch of land that you're cultivating. And that changes cultural dynamics.

The majority, not all, but the majority of the languages spoken today in Oaxaca, and certainly the linguistic family that makes Oaxaca so rich linguistically and culturally, Jessica.

And that goes hand-in-hand with making the case that we are such a complex area with such specific niches because of climate, because of soil, because of the rugged landscape, you develop specific kinds of agriculture for specific landscapes, for specific pockets of the soil and of the competing plants, no? So they became very specialized ecologically to grow food successfully and they started communicating less and less with their neighbors and tending to develop their own languages and their own textiles among other expressions of material culture. That's the story I would like to propose.

**JMY:** I'm thinking specifically of, just one plant in particular that I know has gotten quite a bit of acclaim here in, Oaxaca and that is the nopal, and that is because of the cochineal that lives on the nopal and so I was wondering if you could talk a little bit about how this plant particularly is of great importance here? Is this a plant that you can find in the Ethnobotanical Garden and can you just talk a little bit about its history specifically in the region?

**AAB:** Not only can you find it growing in the Ethnobotanical Garden, but it's the highlight of the garden. We have a nopal growth at the heart of the garden where you have the best view of the grand monastery of Santo Domingo. The Dominicans were the religious order that, eh, converted Indigenous people to Christianity in this part of the Americas. And the Dominicans built a beautiful monastery filled with art, and filled with gold, and filled with learning. This was the place where they were training the young novices to become effective preachers to convey to the Indigenous people of Oaxaca Christianity. So they were training people, but they were wealthy and the source of their wealth was the nopal cactus. The nopal is not native as a genus to this part of the world. Nopales is the local name, not from the original languages of Oaxaca but from Nahuatl. Nahuatl is a language of the ancient people of Tenochtitlan, of Mexico City. The name Oaxaca is from their language, from Nahuatl. So nopales is the local name for what botanists call *Opuntia*. *Opuntia* are the prickly pear cacti. The prickly pear cacti as a genus have their evolutionary origin not here, not in Mexico but in the Andes, in the dry parts of the Andes. From the Andes they spread north to Central America to the Caribbean and into Mexico. And in Mexico they found numerous opportunities to diversify and this is a recurrent pattern that you see in many lineages of plants and of animals. Mexico provides an evolutionary opportunity to diversify. And you see that in the natural history of Mexico. And you see that in the cacti. You see that in the cacti as a family, you see that in the *opuntia* as a genus.

So the *opuntias* diversify here and the *opuntias* are the host plants for relatives of aphids. You know aphids? Aphids are a nightmare for gardeners. and the carnations and all kinds of garden plants and it's hard to get rid of them. The cochineal insect is a distant relative of aphids, but it's a still insect. Unlike aphids who move about, still insects are stationary. They settle down and they live in that part of the plant the rest of their life and they become protected. In the case of the cochineal bug, it protects itself with a layer of wax. That's its defense and the wild cochineal insect is covered with a fluffy stuff that is wax. And there are wild cochineal species all the way from Arizona and, eh, New Mexico to Patagonia. There are at least 11 species of wild cochineal.

There are at least 11 that have been described with scientific names. That means with a Latin, eh, binomial, a genus name, *Dactylopius*, and a specific name. Wild cochineal then is a problem for opuntias because they are very effective parasites and they can kill your plants and they have natural enemies.

In this part of the world, people domesticated both the cactus and the parasite. They domesticated the cactus as food. As you may know, in Mexico we love the fruit which we call tuna and we love the pads of the cactus, the flat pads of the prickly pear cactus are a vegetable. We call them nopalitos. People domesticated a number of species of nopales, not just one, but a number of species, to varying degrees. There's some that are totally domesticated and they're not known in the wild. And others that are partly domesticated and others that are used from the wild. But along with the cactus, people domesticated the insect and the domesticated insect is what we call true cochineal or fine cochineal, guarana, we call it in Spanish. Now guarana is something that I want to point out because when the Europeans invaded Mexico they realized that people are using a wonderful red color which reminds them of guarana from the Mediterranean. But guarana from the Mediterranean is a tiny insect distantly related to cochineal, but it's a parasite, on wild oaks of the dry Mediterranean vegetation. You only find that in Spain, in Southern Italy, around the Mediterranean. In the warmer areas around the Mediterranean you find the host plant which is a wild oak and the insect parasite which is tiny but it was very valuable. Guarana was known to be the source of the best red dye known in Ancient Europe and in Ancient Western Asia. They valued it highly and the name, guarana, comes from Latin from guaranu.

The Europeans invade Mexico and they realize the original people of Mexico have a much better red. They have a much better red because it's much more yielding unlike the tiny red insect that you had to collect from the oaks. In Mexico, people had domesticated the insect along with the host plant and they produced huge quantities. Compared to what the Europeans were gathering from the oaks, the Mexican people were producing huge quantities of this beautiful, rich red and the Europeans coveted it.

Oaxaca became the center of production and this became the most valuable agricultural product in world trade. Not just of the Spanish Empire, but worldwide. If you look at price records, if you look at the shipments of what was going across the Pacific and what was going across the Atlantic, there was nothing that was the result of planting anything and harvesting anything that had been the result of human labor. We're not talking about the silver and gold of the mines. We're talking about agricultural products. Nothing competed with cochineal in terms of how productive it was. It created immense revenue for the Spanish Crown. And it remained number one dyestuff in world trade for over 300 years. And throughout that period, Oaxaca was the center of production. It made Oaxaca wealthy. It made Oaxaca the third largest city in New Spain. It made Oaxaca an area of learning, an area of sophistication, of cultural activity, of cultural liveliness. It made Oaxaca a center of art. It made Oaxaca a center of beauty. You see that today when you visit Oaxaca. It harkens back to that period.

Economists and sociologists have long been bewildered by the fact that a good part of the story is cochineal because the Crown realizes that Oaxaca is special. Oaxaca is producing the most important product for the Crown, for the Empire, after gold and silver from the mines, this is what's making money. So they give entitlement to the land, to the communities, because they realize, they realize very soon that you cannot produce cochineal the same way that they were producing sugar on the plantations or the same way that they were growing tobacco or the same way that they were growing indigo and other dye stuff. It was a native. They realized that you cannot produce cochineal with slave labor like they were producing sugar or tobacco. Why? Because if you were producing cochineal with slaves, all your profits went into keeping your labor force alive. You had to buy food for your slaves and you had to buy clothing for your slaves. You had to keep them alive and that meant all the profits went to keeping your labor force alive because cochineal is very labor intensive.

You have to take care of the plants because they have been domesticated in, eh, under domestication they have lost their natural defenses. They no longer have thorns, they're susceptible to hail storms, they're susceptible to fungus, disease, et cetera, et cetera. You have to keep, you, you have to know what they're, you're doing and you have to spend a lot of time keeping the plants in good condition. And more importantly, you have to protect the insects. The insects have a lot of natural enemies because they're native here. They have other insects that feed upon them. So it's an endless task cleaning the cochineal, weeding it out by hand. This was the specialized work of children, of women in their spare time, and of the elderly people. The men, eh, cultivated the nopal rose but it was the fine handiwork of women and children and elderly peeper to be weeding out the enemies of the cochineal.

So the Empire realizes the profitable way to produce cochineal is to give land rights to the communities. Let them grow their food, let them own the land so that they have firewood and charcoal and water to irrigate their fields. Let them be self-sufficient in food and extract from them the result of their labor in the form of taxes and tithes paid in kind. And they demand cochineal. And that's what they did. The communities were paying, other communities were paying in money or in other goods. People in Oaxaca were paying their obligations to the Empire in cochineal. And today, hundreds of years later, we still have that imprint in the social landscape because the communities own their lands and that makes for a very different dynamic. That's why Oaxaca is so special. People here are sovereign over their lives because they own their property. They own their fields. They own their forests. They own their waters. This creates a very different cultural dynamic from what you experience elsewhere in Latin America, elsewhere in the world where there are originary people remaining. And we believe to bring it back to our project of the Garden and of the cultural scene of Oaxaca, we believe this is part of - what makes Oaxaca so special.

**JMY:** I didn't realize how much it impacted the social and political structures of Oaxaca today in terms of land ownership and social customs. Thank you so much for sharing that. Following up on the comment of Spanish invasion, I also am aware of the fact that the textiles that are created here, many of them, are now on pedal looms, with a, a balancing treadle system I was wondering if you could just briefly talk about the impact of the textile industry. you

have the cochineal being cultivated here. It's being used to dye as well. How is that connection with the weaving that's also happening in the region, a part of this larger, historical moment of Spanish invasion?

**AAB:** I learned to weave first on the treadle loom. And then I taught myself to weave on the backstrap loom later and I prefer the backstrap loom because it gives you more flexibility. The treadle loom was introduced as you mentioned in the 1500s. The Europeans introduced the spinning wheel, they introduced their fibers, wool, silk, although there was a native silk also I should mention. Uh, they introduced the treadle loom as a more efficient, time-wise, way to produce yardage. And people here accepted the treadle loom. But what is so interesting to me, is the fact that the two weaving traditions have coexisted for 500 years. They have mutually influence each other, but both have their place. They have not surpassed each other's space, culturally, artistically, and symbolically.

What do I mean by this? Symbolically, the treadle loom is about gender. It's men who weave on the treadle loom. Recently, women have started weaving on the treadle loom as well. You see that in Teotitlán. You see that in Santa del Valle. You see it less in other communities. In other communities, the treadle loom is men's work and the backstrap loom is women's work, by and large. There's some exception, but by and large, the backstrap loom is women's work as is spinning on the spindle, the manual spindle, and setting up the loom. A backstrap loom is used for textiles that give the message, "I am Zapotec and furthermore, I am from the community of San Bartolo Coyotepec. Admire the beauty of what went into my creation. It is specific to my community." And, there has been some crossover. The wool was the, brought by the Europeans, was adapted to the backstrap loom, it was adapted also to the Indigenous spindle. Cotton was also adapted to the treadle loom, but by and large, the products of the loom tell you what the cultural context is aimed for. The treadle loom is for generic textiles that are specific to Oaxaca but not telling any further cultural information. In many communities that was traditional. Now, sadly, being lost by the many communities there were specific textiles to mark the role that you were the sponsor or the fiesta of the community. Or that you are an Elder, that you are a revered Elder who sits on the Council and takes community decisions and advises the governing, eh, body of the community. That doesn't happen with the treadle loom textiles.

**JMY:** Agriculture, plants, and textiles, and specifically how, larger agricultural industries are changing biodiversity, fast fashion is shifting, traditional textile processes traditional used with quotation marks 'cause what is traditional when we live in a society where things have influenced each other very much over time and I don't want to isolate someone just by using that term. But how textile processes have been passed down from generation to generation and hold specific importance, that is also shifting because of industry, tec- fashion industry, textile industry. And so I'm curious how these two things that are quite closely related in Oaxaca, plant life, textile, processes, how things have been impacted, by these industries, specifically as I think of, you know, Spanish invasion happened 500 years ago or longer, but there's no forms of colonization, or new forms of exploitation. I know a little bit about the history myself, from listening to others in Teotitlán speak about, Western industries coming in and shifting patterns or colors. And so I'm just curious if you could talk a little bit about the impact of other industries on the textile and plant communities of Oaxaca?

**AAB:** First, the context of weavers and food producers in Oaxaca with world trade goes back to the 1500s. It started in the 1500s. Because Oaxaca was producing such a valuable commodity for world trade, Oaxaca was also on the receiving end for wonderful industrial textiles and we have records of that. I mean, industrial in the sense of being produced in specialized workshops, not necessarily machines in the 1500s. But certainly we have records of textiles produced in China and India and Europe coming here and being used Indigenous communities. Why? Because the Indigenous communities could afford it because they were very wealthy. They were even complaints, of poor Spaniards who are writing letters to the authorities and saying, the Indigenous families here are much better off than we are. We have to work for them and this is so unfair. They're (laughs) complaining. Imagine that? I mean, it's the world upside down. But that was happening in Oaxaca. The Indigenous people in many cases, not all, many cases, because of the cochineal bonanza, were in better financial terms and they were able to afford wearing, for example, Chinese fabrics for their skirts. Or European woolen goods for their coats, for what men were wearing, for their jackets and hats. And silk from China that they were using as embroidery thread, and jewelry that was coming also over, from overseas. This is very well attested in the trade records and in the geographical descriptions. We call them the "la relaciones y gráficas" and the best known are of the late 1500s and then we have further relaciones de geográficas, some very detailed, from the late 1700s. And they're fantastic sources of information. All kinds of interesting fascinating tidbits of this interaction.

The people here were not naïve to the designs fashionable in Europe or in Asia because they (laughs) were buying chintzes, you know? The print that, eh, the calico fabrics of India, and the silk, the brocades from, eh, China. And, eh, all kinds of European textiles that were coming here and people were using them. And there was interaction for 500 years. There has been interaction for 500 years. In terms of technology, in terms of design. Now, a lot has been lost in the last century, especially after the Mexican Revolution of 1910 when after a, the warring factions in which my grandfather, by the way, participated, finally came to a period of national policy that was progressive, by and large progressive, with very interesting educational programs. Starting in the 1920s, there was a sense of national identity like there hadn't been before where Indigenous culture was highly valued, especially the pre-Columbian past. And Indigenous aesthetics was highly valued. There had been previous periods even during the Porfirio, the Diaz Regime, who was from Oaxaca by the way, there was some glorification of the Indigenous past. And the textile designs, for example, you see in the monument to Emperor Cuauhtemoc which dates back to those years prior to the Mexican Revolution. You see how the textile design, the stepped fret is valued. It decorates that monument which sits at one of the most important intersections in our capital city, Mexico City.

But it's specially in the 1920s that we reexamine the past and Mexico launches very impactful educational programs and crafts become part of that. There is growing appreciation. And this had an impact on how Mexican society views the work of craftspeople. This changes our social sense of ourselves. But at the same time, Mexico is investing heavily into industrializing itself, especially in the 1940s during the time of the Second World War when there is, confluence of economic factors favoring investment in Mexico. and in the voting of labor to a growing number



of cities, where industry becomes paramount, manufacturing industry. And the steel industry and also based on the fact that Mexico is very rich mining-wise, mineral story of Mexico, no? Anyway, this has had a social impact over the last 80 years. Both the school system, the active ambiguity that we have, it's an active ambiguity where on the one hand, we glorify the pre-Columbian times, but on the other hand, we look down upon Indigenous people because of their economic status, there's this tension, this underlying unresolved tension, contradiction with the one hand acknowledging our Indigenous past, but at the other hand, actively discriminating cultural traditions and Indigenous communities. And the Indigenous people, in many cases, opt to suppress the outward signs of Indigenous affiliation, of community loyalty because they're looked down upon. And Indigenous textiles, in many cases, survived for the market but the people are no longer wearing it. You see that in Oaxaca. You see that elsewhere in Mexico. You see that elsewhere in Latin America.

**JMY:** I just wanted to ask if you could just briefly touch upon the mission of the textile museum and your role there and how it's serving as a place for educating others about these sorts of, topics and this conversation and some of the complexities of this history and the intricacies of it that one might not necessarily know just by visiting Oaxaca City. How does that museum play into bettering people's understanding of this rich textile history?

**AAB:** The textile museum was originally an idea of Francisco Toledo and Francisco Toledo's partner, Trine Ellitsgaard, who is a Danish textile artist, and myself. The three of us had this dream of a place where textiles could be admired and where art of the loom and the art of the spindle and the art of the embroidery needle could be pursued in a city of museums, a city increasingly with a cultural devotion. Increasingly with a cultural vocation, no?

Oaxaca became a city of cultural effervescence, of cultural activity, of artists, and of poets, and of dancers, and of musicians. And that had a lot to do with Francisco because Francisco was a world class artist and he had not only the talents and the recognition, but the social commitment. But it was also thinking of the weavers of Oaxaca and the embroiderers of Oaxaca, textile artists, the dyers, the blanket artists with the Francisco had spent time in the 1960s, and he had lived in Teotitlán in the 1960s.

That was part of what led the three of us to propose the Textile Museum. The Harp Foundation made it family thanks to the personal commitment of Maria Isabel and Alfredo. And so, they saw it as a possibility for not just a museum, not just displaying outstanding pieces of textile art, but specially as a place for workshops, as a place for kids to learn about textile. For urban artists interested in weaving and embroidery and other forms of textile art to experiment in. And as a way especially to provide a dignified venue for the communities of the Oaxaca hinterland, the isolated communities where the tourists don't visit.

They bring their textiles and they have to sell them in very inequitable terms to the gallery owners. Their offer to create the museum was in large measure in response to that. Let's create something where the weavers can also sell, but sell without having to sacrifice major part of the revenue that goes to the middle persons. At the museum, there's only a small overhead to allow

the shop to continue to work, but they, they love it because they get much better prices at the museum shop than they get elsewhere. I've been the instigator for the purchase and putting together of what is now the holdings of the Textile Museum which run close to 10,000 pieces, And it's not just Oaxaca and it's not just Mexico, but it's all over the world. The cochineal went all over the world and cochineal is used, for example, in Turkish . There are beautiful 19th Century and early 20th Century Turkish where the beautiful reds and purples are cochineal from Oaxaca. And cochineal went to silk in China and, and it shaped European art and not just textiles but, oil painting and portraits and, even furniture, no? And it went all over Asia and it went to Africa. African textiles also they are the imprint of Oaxacan cochineal. And we want to show that. we would like to start, we would like to promote a dialog, no? Of parallels that we see and not just in the dye stuffs and the fibers, but also in techniques and also in designs and in symbolism and what designs mean.

They are young people who write to us from the communities and say, " How come our town is not included in the map you published of the textile traditions of Oaxaca? We have our own traditions. This is wonderful for us. This is exactly the kind of feedback people were looking for. A biblioteca is a book library. An elotecha is a thread library. We provide threads and not just Oaxacan threads, but threads from elsewhere in Mexico and threads from elsewhere in the world People come to buy threads and to buy yardage of good quality and to buy indigo and to buy cochineal and to learn how to use it because in many cases they have lost that knowledge although they know historically what's part of their cultural legacy.

**JMY:** Thank you, Alejandro, for joining us for the second season of The Fields of the Future Podcast. It has been such a joy and privilege being able to speak with you today and learn so much and I've learned so much about your own personal work and the histories and the cultures of the region. so thank you.

**AAB:** Most welcome, Jessica.