

## **Podcast Series, Holistic Nature of Us**

### **Episode # 10: Meet Manuel Lizarralde**

**judithdreyer.com**

Hi I'm Judith Dreyer,

Thank you for joining me for this pod cast series "The Holistic Nature of Us".

My intent is to take us, you and I, into a better understanding of the concepts behind our holistic nature and how that ties directly to the holistic nature of the world around us. How can we connect the dots in practical ways that we are nature and nature is in us?

I will be featuring authors and educators, practitioners and others whose passion for this earth helps us create bridges. We'll see what's trending, what's relevant to our world today, not just for land use, but to connect the dots between ourselves and nature. It's time for practical action and profound inner change so our natural world is valued once again.

So today I'm delighted to introduce you to Manuel Lizarralde. He's an Ethno botanist, an associate professor of Ethno botany teaching in the Botany Department and the Environmental Studies Program at Connecticut College.

Hi Manuel. I'm delighted to have you here today.

Manuel: Hi Judith. Thank you very much for having me here. It's a pleasure to be able to share my knowledge.

Judith: Yes. And I would like to start with you introducing us to the topic of Ethno botany. Most people don't understand what that means. And how did you get into it; what inspired you about the field, and so forth?

Manuel: Yes. Ethno botany is a science that combines the field of Anthropology and Botany and it's about the relationship of people with the plant world. Most Ethno botanist work with enthused peoples whose botany has not been studied by Western Science. The knowledge is transmitted orally so it's really an ancient field because it starts really in historical times.

The world was cornered over 100 years ago and the father of modern science of Ethno botany, Richard Van Schultes who was a professor at Harvard. The reason that Ethno botany gained such importance is that the knowledge of plants that are held in mind of experience extensive. Some societies know up to 2 dozen species of plants and their uses. So today it is important because it really leads to a door to use resources that were not available in the past. Although in the past we gained a great privilege to the knowledge of plants from all these people from, for example, the discovery of quinine as a medicine for malaria in Peru to finding the best sources of rubber in the Amazon. They really fueled an industry revolution. It made possible to an industry revolution to happen. In even in recent times, for example, looking at plants that are drought resistant for example. Even this year there was an interesting article in the New York Times about red rice was found in Trinidad that was part of the treasure that African slaves from Ghana brought to Georgia state. In 1812 this rice disappeared and it was recently found in Trinidad. It is really a drought resistant rice and it also can grow on poor soil.

Judith: Those are great qualities, aren't they, because we've created a lot of kind of desert locations on our planet because of our practices. So to have a drought resistant plant that can grow on poor soil is a plus.

Manuel: Yes definitely. Especially today with this climate change of the world. The other question you asked is how I got into that. It was just by accident. I was a grad student at UC Berkley in California in the late 80s and my advisor was Brian Berlin who is still alive and he was an Ethno botanist. I realized that even though I was afraid of science and was not very good in science I ventured because I realized that the study of plants in these people was important for the future. And also the other side of this story is that my father was an anthropologist and he made a first contact with an Indian group in Venezuela in the 60s with the Bari people who live on the border between Venezuela and Columbia. I was planning to study them from demographic aspects but then I realized that no one studied their knowledge of plants. And as a kid I remembered going in the Rain Forest with the Bari people and I could see that they were able to recognize different plants. In fact I was working with them in the forest and they would pick up some shoots of a plant that looked like a ginger and they were eating the young shoots. It was almost like a palm heart flavor. So I was intrigued by the knowledge. So I shifted and started to study the knowledge in the late 80s. And in fact, recently I finished a book chapter on a book I'm

editing on the Ethnoprimateology of the New World. And my chapter is about the Bari people and the knowledge of their trees that provide fruit for monkeys. And when I was writing this chapter I discovered that the monkeys consumed hundreds, two species of trees, almost half the species of trees that I identified. And I also did 12 hectares of forest plotted. I discovered that 2/3<sup>rd</sup> of the trees on those plots are food for monkeys. The monkeys were not just consuming the fruit they were also dispersing it. So not just to show that Ethnobotany really expands not only to the use of plants but also to the plant service to nature, to monkeys and all the aspects. It's a growing field, even today. Here in New England I have been working with a colleague on the knowledge of plants by the local first nation, local tribes. We now have a list of 312 species of plants used by the tribes.

Judith: I'm so glad to hear that that knowledge is not being lost. We've lost so many of our elders in the local tribes. At least the ones that I studied with are gone and they weren't really there to teach me so much about plants as about a way of life, a philosophy of life to remind me about our connection to nature. So I've always been searching for local native folks to extend my knowledge of the plants. And that's so exciting to hear that you're preserving it. That you've done it with the Bari people of Venezuela as well as local here in Connecticut with our tribes. Very, very interesting.

Ethnobotany, as you said, deals with anthropology and botany. How do you relate the research that you do to our everyday life from the place of creating a holistic framework, creating sustainability, having reverence for the plants and trees. What has been your experience on those levels?

Manuel: That's a very good question. How to answer this? One way is that I also got interested in working with indigenous people like the Bari is that I admire the ability to be able to make things, to be producers. Also as a kid I was fascinated by their technology, especially the bows and arrows. So as a teenager I started collecting them. Eventually in 1988 I met a bowyer, one who makes bows and arrows, in Berkeley California. Tim Baker showed me how to make them and I started making them and I discovered a new world of making things out of plants. It's such an empowerment of ourselves in a different relationship to the environment, to nature. Also I was writing my thesis at the time I was learning to make bows and arrows. So it was a great break getting away from writing and shooting arrows. The making of them, to me, was really very engaging. To convert a piece of wood into a bow was really an art. This also requires a little knowledge. I did break many bows

and some failed and I was trying to figure out what was the ultimate bow. What exactly do I need to do? So in the making of them I realized that the art and science of making bows is really very complex. Then when I was making bows I was also learning to make my strings from fibers from hemp, linen, as well as adding wax and braiding them. And then also as I'm making my own arrows. And eventually when I was here in Connecticut teaching at Connecticut College since 1998 my wife said it would be nice to teach the students in Ethno botany all the skills besides learning, what else, learning so she says, why don't you pick-up making baskets? So I started to learn to make baskets. I learned from a basket maker and eventually I was teaching my students and one time in a conference, in 2003, I met an Iroquois man David Richard who showed me how to make baskets out of brown ash, a traditional way that the New England Tribe made baskets. Those are the two skills I got the most. And eventually I started making wine, beer. The also I was looking at the uses of all the plants, like making maple syrup, and also looking at medicine plants. Although I rarely get sick myself so I never mastered the art of making medicine very well. I discovered that in the forest here we have plenty of very good resources and trying to make things I discovered, as I mentioned to you personally that it was empowering in the sense that you transform yourself from being a consumer to a producer. But also when you make things you discover that things that you buy take time and resources to make. So when you make your basket or your bows you start to preserve and conserve resources, not abuse them. And you start being aware of the impact to the environment.

Judith: Well that's a really key point I think to get across. We take so much for granted, don't we, with our products out there. I just saw a You Tube video put out by the BBC. In the Caribbean there's a huge, huge track of water that's just littered with garbage. It's not pretty. It's hurting the coral reefs. If you go underwater and scuba dive you see nothing but plastic bags and we forget that while these inventions seem good in the moment, we haven't really played it forward, you know? My native elders taught me what we do affects the next 7 generations. So making a basket from a natural weed that's a renewable resource and doing it with our own hands and taking the time to do it, we don't have to go shopping at much, right?

Manuel: Right. That's true. You know, one thing I did was a couple of baskets with my kids. Even though I was late for Christmas. I made two baskets, one for my daughter and one for my son. My daughter and I don't buy presents; we make presents and exchange them. I think that they value

that much more and I do value my daughter's work. She likes to spin wool and knit so she makes all my socks. As you mentioned all this trash, it's like there's 17 billion tons of plastic that is just tossed in the oceans is terrible for the environment. I think that in a sense trying to move away from consuming and wasteful, the waste that consumption produces. Because when you're a consumer you're not aware of the impact on the environment, as you're a producer. Because you see where the materials come from and what happened to them. So it's really clear.

Judith: Yes and I bet you get a sense of the ecosystem where you find them too. You know in the world of herbalism, which is one of my passions, we always teach folks to look at the environment where you find a plant and if it's the strongest one there, don't take it. That's the mother plant, the grandmother plants that's trying to keep the plant species going in that particular area. So we don't have that kind of awareness either but I imagine with your work, making baskets, making bows, you're keenly aware of the ecosystem that you're taking from.

Manuel: Yes definitely. And also I'm a bow hunter and spear fisherman so I can see the impact of my actions in nature too. I've been aware that we really need to limit our consumption sometimes.

Judith: I agree with you. Years ago I met, there was a camp near where I had a health food store and the counselors were joking around when they came in on one of their breaks. They were telling me they had a song called "Where is Away?" And it's all relating to garbage. We throw things away but where is away.

Manuel: Yes, definitely.

Judith Which I thought was pretty cool and timely and has a great impact on the children to get them thinking too, you know to increase their awareness and their respect for the environment.

Manuel: Yes especially in our daily living. We put things in the trash. We take our trash outside in the morning and it's gone; we don't see where it goes.

Judith: That's true.

Manuel: You mentioned something about the strongest plant in nature. Some societies have developed a system in which they prevent overuse. One of the Mohegan elders Sharon Maynard told me that they were taught that when you go to nature to look for plants you don't collect the first one. You leave the first one there because if you collect the first one, and if the first one was the last one, than they would be gone.

Judith: Exactly.

Manuel: Some societies would go and just harvest like every third one. So different societies developed sustainable systems of avoiding negative impact to nature. And also they have developed seasonalities like the Bari people wouldn't hunt spider monkeys unless it is in the fruiting season. The appearance of the, what they call the Baron which is a hot plum - \_\_\_\_\_ . It's a \_\_\_\_\_ industry. And that highlights the seasonality of hunting monkeys. So a different side of ways to preserve the resources. Like here in New England one of the fantastic plants I found, I don't know if you know it, is ramp.

Judith: Yes.

Manuel: If you harvest it, in fact it's becoming, I remember here one time on NPR a program about this Japanese American chef from New York who specialized in harvesting wild plants in Northern New York and she mentioned that in New England about 11 million ramps are collected each year. You know they're hard to find. In fact you're supposed to collect less than 10% of what you find. And when I go collecting ramps I don't collect even the tuber. I leave the tuber in the ground so it will continue and I only collect half of the leaves. The patches that I have been harvesting are doing well in that sense. Also, I've been trying to disperse, collecting some of the tubers and replanting in different places. So I'm trying to propagate them.

Judith: Right and they take awhile to propagate don't they? They need to be in the ground for a few years.

Manuel: Yes, definitely. So it's like a little onion the size of a peanut and I noticed that the ones I planted in my garden, just to see how they'd do, they're doing okay but I remember hearing somewhere that you have to collect the seeds, which is another way to prepare it. But the patch that I've been seeing has been doing really well. They're very small and there are a few of them around New London.

Judith: Well the Appalachian region has huge ramp festivals and when I lived down in Virginia for a couple of years I heard that they were very very concerned about the ramp populations because it became a fad for chefs and these festivals were popping up all over the place. They were really destroying some established areas for ramps, almost the point of annihilating it from specific areas. So I know there is a different level of education going on about the ramp, so I appreciate your reminding my listeners to, if they know ramp, to collect it mindfully; follow your suggestions, take only 10%, leave the tubers, don't take all the leaves. Those are things that we need to keep reminding ourselves of so that we can be more sustainable in our wild-crafting practices.

Manuel: Definitely, it's important.

Judith: Well everybody wants to know what your favorite plant is.

Manuel: Oh, my favorite plant? That's a good question. I have so many. Tomatoes, a lot of tomatoes. Sometimes we grow in our garden 7-8 different varieties so I think tomatoes, especially in the summer, they provide a lot of nutrients and vitamin C and they're not hard to grow. And also you can make tomato sauce and preserve it for the year. The other one I like is cabbage. Sometimes we make sauerkraut or kimchi. But I think my favorite plant, now that I'm talking that I overuse sometimes, is leek which combines the flavor of garlic and onions and can be used in grilling. So when I got to Venezuela my mother liked me to cook and she has a little garden and the person tending the garden is always asked to grow a lot of leeks for me because I'm constantly adding it on the food. In Venezuela there's one plant that probably none of your listeners knows is called suchafruto or chachafruto, which is a large bean that was used by indigenous people in Columbia as emergency food when their cornfields failed. And this bean *ingaendules* is the scientific name. It's really about a foot long and the beans themselves are the size of, probably almost the size of a walnut, from an olive to a walnut. They are 17% protein. And it tastes like, it's hard to say, it's almost like maize of gnocchi and eggs. Every time I cook I go to , my sister and my mom and my brother ask me to go to the field. It's a small tree and it doesn't grow more than probably 20 feet, 18 feet tall and the lives probably 10-15 years. It produces a lot of fruit and they grow on the trunk and the branches. This past January I learned that you have to collect the seeds are not fully mature. The ones are halfway mature are very

tender. It's almost like they melt in your mouth. But you can see I don't have a specific plant, there are several plants.

Judith: Well that's great though because you know how to use them. You know how to grow them. You also know when to pick them. This is a new food for me. I've heard of suchafruto.

Manuel: Suchafruto, yeah. Unfortunately it doesn't travel well because the beans ferment and decompose very quickly. It doesn't dry like the typical bean. That's one thing about suchafruto.

Judith: And I'm assuming with your study of ethno botany that these are cultural foods that are in certain areas and that's what the local folks use but it's also something that's been passed down and has lasted for centuries, so it's part of their culture. Am I correct in that?

Manuel: Yeah, yeah definitely. The foods, more coined to the French, you are what you eat, right. No it's the Germans. And the French will say tell me what you eat and I'll tell you who you are. Food is always part of a culture. And food is attached to land and to region so particular plants are suited to particular regions. For example we cannot conceive Mexico without chocolate right, or chili peppers. If you travel to a Chiapas, San Cristobal de Las Casas in Mexico and go to the markets you'll see sellers selling all different types of chipotles, from red to dark brown chipotles. The ground powder of smoked chili pepper with original flavors. We also need to be aware of the international side of that or the visual crime when you buy chocolates that are produced in Africa with child slavery to buy for example quinoa from Bolivia. I learned this recently. I love quinoa, which is an incredible plant. It also has a high percent of protein; I think 17% too. And quinoa is also an important food for indigenous people in Bolivia. The fact that Europe and North America has been buying quinoa from Bolivia has increased the price to 5x what it used to cost for their people so they can not afford it any more in Bolivia, so the sad part of ethno botany. It's like we have fads and we can buy things but we have to be aware not only the ecological impact but also the social impact to other people in the Third World.

Judith: Oh that's a really good point because again we don't see it in our supermarkets, do we? We just see these pretty packages. We get the food. We get to make what we want, at least here in New England. I know it's not



true in some parts of the world but at least we have this abundance here but we forget where they come from and who it does impact culturally, socially and economically; very good point, very good point.

Well Manuel how about, could you give us three practical tips or advice that our listeners can use in every life? You know based on your wisdom from ethno botany. You wisdom via a producer not a consumer.

Manuel: Three tips. Well, as I mentioned before being aware of the impacts of the plants you are consuming or any of the resources. One thing that is important for all of us to practice is to have a garden, plant a garden and try to grow your food locally as well as support local farmers and local resources that are produced in the area. Pick up the art of trying to make things. I think that making things is just very empowering. Pick up basket making or furniture making. There are so many things we can do. So many resources here. Like in New England we have so much wood available and you can make so many things. Like make spoons or wood bowls, which you can also make out of black walnut. So trying to make things and trying to reduce your consumption of goods. And if your consuming something trying to make that what you're consuming is organic and fair trade or know the producers. Those are my recommendations.

Judith: Well those are good ones for all of us to remember. And again folks, we'll have this in the transcript for your review.

Manuel it's been a pleasure to speak with you today. I think ethno botany gives all of us an understanding that society and plants have always been connected, you know? We need food and we need to make things from nature and that tells us something about our culture, where we come from and also keeps us connected to the land. So I want to thank you for reminding us about all the beautiful things that you do and the teaching that you do and I'm sure your students are just as inspired as I am. Could you give us your contact information before we close off?

Manuel: Yes Judith. The best way to contact me is through e-mail. And my e-mail is [mliz@conncoll.edu](mailto:mliz@conncoll.edu)

Judith: That's great. And I want our listeners to know that you've written many papers; you're working on a book; you're working on a chapter of this book that you just mentioned at the beginning of the podcast so you have lots of resources out there.

Manuel: Yes, I will be able to share some of this material. The book I'm not sharing yet because it's not finished. I'm hoping to get a Sabbatical so I won't be teaching after the next academic year and trying to finish this book with Jason Mancini who's the co-author.

Judith: That's wonderful. Well I want to say thank you again for joining us at The Holistic Nature of Us and I hope you folks feel as inspired as I do by Manuel Lizarralda's talk and practical advice, and I can't thank you enough for your time. I know you're a busy man and I want to thank you for joining us today.

So this is Judith Dreyer, author of At The Garden's Gate book and blog. For more information go to my website [judithdreyer.com](http://judithdreyer.com) and you will find information for this podcast as well as the transcript. You will also find information for my book, blog and class schedules.

I like to end The Holistic Nature of Us with a quote from Paul Hawkins. He's an environmentalist and author, who reminds us "Sustainability, insuring the future life on earth is an infinite game, the endless expression on behalf of all."

Enjoy everyone and have a great day.