

Podcast Series: Holistic Nature of Us

Episode # 58 : Meet: Vicki Wojcik

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Hi I'm Judith Dreyer,

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

I invite you to a journey with me into a better understanding of the concepts behind our holistic and how that ties us directly to the natural world around us. My intention is to be your guide for this half hour as we begin seeing our world with fresh eyes, gaining more understanding and learning how we can connect the dots in practical ways that we are nature and nature is in us.

I feature a broad range of guests deeply concerned about the environmental issues of our time and more; authors and educators, practitioners and others whose passion for this earth and for all species help us create sustainable bridges of understanding. These folks are innovators, action oriented, creating solutions in a variety of ways that honors us and the planet's holistic nature. I am honored to share their stories, their projects, and their passion with all of you.

Today I'm delighted to introduce you to Vicki Wojcik. Vicki is currently the research director at Pollinator Partnership where she oversees the research program keeping on top of new and emerging pollinator issues. Vicki's interest in pollinators was sparked during her undergraduate days, where she had the opportunity to travel to Brazil to participate in a field course in pollinator ecology. Her graduate research focused on understanding how native bees use habitats in cities. This focus on pollinators in human dominated landscapes has continued throughout her career and has grown to include agricultural land, industrial lands and the impacts of climate change.

Welcome Vicki, I'm so happy to have you here today.

VICKI: Well thanks so much for having me.

JUDITH: Well first of all what I should have said is to introduce Pollinator Partnership first. So why don't you tell us something about your journey with pollinators and how you got involved with the Pollinator Partnership?

VICKI: Perfect. I, as you mentioned in my bio, got a start in the pollinator world through wanting to see ecosystems and landscapes. I was a conservation biology undergraduate and I just really took every excuse I had to do a field course here, see a new ecosystem. When I came across this course offering to do pollinators ecology in Brazil, I wasn't really cluing in on the pollinator ecology side, I was like well Brazil sounds like a wonderful place to go. And when I went there and completed the course, I realized that actually the thing called pollination ecology was really interesting and really important. And going forward from there I started looking at opportunities to continue to study plant pollinator ecosystems. And on a personal note, I was always interested in the impact that humans had on the environment and how you could make human landscape, specifically cities, better greener places. So, I put together these two concepts of pollination and urban ecology and pursued some graduate studies. And I think it was, again, a series of coincidences that I did my graduate studies at U.C. Berkley and just across the bay in San Francisco is the headquarters of Pollinator Partnership. When I graduated and went on that famed journey that everyone does to look for work, the first place I looked was across the bay. I inquired if there was any growth opportunities and serendipity, it was a time where they were really vamping up their research and outreach. So, we found a nice fit. That's how I ended up engaging with Pollinator Partnership. And I can tell you more about the history of the organization, because I do think it's helpful to understanding just how complex and diverse the issue of pollination is.

JUDITH: I would love you to do that. I know many of my listeners are avid gardeners. Anything you tell us about your organization and its history makes us better caretakers of the land, so to speak, so yes please. I'd love to hear more.

VICKI: Absolutely. So actually, POLINATOR PARTNERSHIP started out being called the Collabalution Institute and it was very focused on outreach and education, primarily in the K-12 system, about the unique nature of plant pollinator relationships, how they coevolved and the importance of them in ecosystems. Going down that path it became really, really evident that not only were pollinators unfortunately threatened by many factors but

the solution to supporting pollinators and ensuring that their systems are resilient and lasting didn't lie with one individual. It really was everyone's job. No matter who you were, there was really likely a way that you could participate in supporting pollinators. And the mission of the organization developed and grew to recognize this partnership that we all have with supporting pollinators.

A transition in name, an expansion of mission, now POLINATOR PARTNERSHIP is the largest not for profit organization focusing on pollinator issues. The way we focus our work is to work with an extremely broad, diverse set of partners and stakeholders and help them do what they can do in their activities to support pollinators. And that was a little open-ended and it is absolutely on purpose I'd say. I often present this concept that if I somehow hit the Powerball or was endowed with all the funding possible, could I as an individual somehow solve the problems that are facing? Could I, you know, buy up landscape and create a nature preserve, and that's how we'll help pollinators. Could I do any of these singular actions? And the answer is, no because we are integrated into absolutely every ecosystem, stressful ecosystem out there and one group or one individual can't solve the problem. We all have to work together and do our own little thing and make our habitat better, improve the way we interact with the environment and that will help. So that mission really is retained by Pollinator Partnership and the work that we do. One of our signature initiatives is providing habitat planting guides to gardeners, to other landowners so that all landowners, municipal landowners even industrial landowners helping them manage the landscape to support pollinators.

JUDITH: They're excellent by the way. I happened to look in my neck of the woods. I'm in the eastern broadleaf forest of New England and the brochure is excellent. It's well designed. It's easy to track or find different types of plants that are great in our area.

I had another guest on my show, Mark Shepard, who's into forest and agricultural restoration and he's reminded me that if we look in our backyards and see what's naturally present in terms of the forest, we can also find out a lot about the plants that work together. Then the next step, from what you're saying, is we can understand the diversity of pollinators that are attracted to those settings but also how we can help support them and increase their numbers. Doug Tallamy, "Bringing Nature Home", tells

us that we're in serious danger of losing a lot of bugs and many of those are specialists as well.

Vicki, thank you for that. Could you tell us more about local concerns and local ecosystem services that the pollinators provide?

VICKI: Oh absolutely. The compass of Ecosystem Services includes a whole scope of benefits that we derive from the environment and pollination is just one of many ecosystem services. And if we want to look at our local level, the things that impact us on a daily basis, there's absolutely the food that we eat which, even if it doesn't come entirely locally, there's a large portion of agriculture that occurs almost anywhere that you might live, and pollination is vital for agriculture be it larger scale commercial agriculture or small community gardens. The vast majority of plants, crop plants in particular, are either entirely dependent on pollination or see some significant yield benefits from a pollinator visit. Without pollinators you would lose a very large portion of your diet, specifically in terms of nutritional, high nutritional foods. A lot of the fruits and vegetables that we benefit from are pollinator dependent. And this also extends to the landscape that we see. Our local ecosystems, similar to the point you just made, when you look outside your window, when you go for a walk in a park near-by, the native plants that you see there, that relationship is structured by the pollinators and plants, the relationship that they have. So, without pollinators we wouldn't have our local landscape. They would be very, very different.

JUDITH: Well that's interesting. We all sort of know that about food, right? We know how important our food crops are in terms of pollination, but I think the aspect of pollination that we're not quite familiar with is the number of pollinators that aren't just honeybees. There's a fantastic number of them beyond the honeybee. Could you tell us more about them?

VICKI: Oh, absolutely. We also now talk about the pollinator conservation work that we do. When we talk about pollinator conservation, we include birds, bats, butterflies, beetles, moths, some mammals as well. So, there's a lot more than just the honeybee. The honeybee is quite important, and it's really linked to the way we practice modern agriculture. It's a great species that can be moved around and put where we need that bee to be to pollinate crops that are in bloom. But it's just one of almost 20,000+, and that's not me misspeaking, it's 20,000+ species of bees that are around globally and

that doesn't include flies and butterflies, moths and all the other bird and mammal pollinators. There's a lot of diversity out there. Bees do a lot of the heavy lifting but not necessarily honey bees. That said, there's a lot of really unique pollination systems that don't include insects. Bats for example are quite important in arid ecosystems and in North America we have two...well in the United States in particular, there are two pollinating bat species. And they pollinate cactus and agave. So on a little side note there, you know there's even some unique boutique agricultural products that come from bat pollination, like tequila.

JUDITH: Cool. Well okay, we've got bats. We've got butterflies. We've got beetles. We've got moths. We've got mammals. You specialized in urban landscape. How do we create diversity for these species?

VICKI: I actually think that we're a little lucky with pollinator conservation in that we really are in a system where if you build it, they will come. The majority of pollinators spend their day out in the landscape searching for their food. If you present them with the floral rewards that they're looking for, they'll find them. If they're present nearby enough, they will find them. It's actually relatively straight forward, although it never really is in the end, but creating habitat gardens or areas of habitats within urban landscapes, suburban landscapes, rural landscapes, areas of habitats that represent the local native ecosystem. That is how you can encourage these species to populate urban areas or suburban areas. You know there has been quite a bit of research, some of my own, other colleagues of mine that's really shown that when we start looking there is a large diversity of pollinator species, bee species, fly species, butterfly species using the habitat in urban areas. We plant gardens because we like the way they look and coincidentally they often serve very good habitats for pollinators and if we make slight modifications to our gardening practices the benefits increase.

JUDITH: So, can you give us an example of something we could do that would increase their habitat or increase their food supply?

VICKI: Well one of the key things that you can do is aim to create a habitat garden, or a habitat anywhere that provides food throughout the growing season so that's spring, summer, late summer into early fall. If you design your garden to have continuous bloom that's actually not only an aesthetic benefit to yourself but it is going to then provide food for pollinators throughout the season. And often we see deficits when we try to study the

landscape and quantify how much food is out there for pollinators. We've noted that there are **often deficits early in the season and late in the season**. If you can help out by planning early blooms or a species that blooms much later in the season in your region that's a great effort.

JUDITH: Yeah, you're right. I mean some of us know that dandelions for example, a lot of folks don't like them on their lawn but they're actually a very good food for bees in particular in the fall, so that's something I don't pull out of my garden. I leave them there until they naturally die off. The other thing I learned is to leave the stems of my goldenrod and Joe Pye weed in the little meadow areas that I have, or the more wilder natural landscape that I have and in the spring we'll tie them up and stand them up because they don't actually... the insects don't release until May and again that's something that I don't think most of us are aware of. Yeah there's quite a bit of what we call seasonality in the various species of pollinators that are out there throughout the year. I mentioned this huge diversity of bee species but often their life cycles are quite short and they occur in a discreet time during the year and have a very specific relationship with plants that commonly bloom that time of year. So yeah, you can absolutely have a species that shows up in the spring every year. You'd never see that species in August, you'd only see it in May.

JUDITH: Hmm, that's interesting and that also goes with the pollinators that really like say the squash plant for example. They come around, from what you're saying, is when the squash is starting to bloom and then they're pretty much gone. Is that the right word, when the squash is done?

VICKI: Yeah, well I'd probably say their cycle for that year has completed. They show up. We see them feeding on the squash blooms. Then while they're feeding, what we often don't see, is them going back and forth to their nest, provisioning pollen and then laying their eggs. The natural life span of the adults in that case is over. Those eggs that were laid will then develop into a larva and a pupa and they'll over-winter throughout the rest of the year and the following year will hatch out and emerge as an adult, and the cycle will start over again.

JUDITH: Do you have on your site a good pamphlet or guide for common pollinators in specific areas or do you have a list of them in general?

VICKI: So, for the most part you will see bees and butterflies, hummingbirds, all of the common pollinator groups throughout North America, with the exception of bats they're much more restricted to the desert Southwest. But off of our planting guides provide resources that will attract the local species of each pollinator group to your landscape. And we do have a smaller subset of guides that focus on identifying their local bees.

JUDITH: Okay.

VICKI: And it's available for quite a few states, definitely throughout the Eastern broadleaf forest we have some of that background. And again, it just helps you to know what you're seeing when you go into your garden and have a look at the visitors that are coming and going. You can verify, "oh that's the sweatbee, oh that's a bumblebee, or that's a mining bee."

JUDITH: Yeah that's great. I know we get a little bit of that in the Master Gardener program. Years ago when I converted my backyard, part of my backyard into a meadowland I remember being just in awe of the number of bee species I saw out in my backyard, and I'm not a bug person so I never took a guide out and tried to identify it but today I'm at a different place and I really would like to learn more identification for these different bees so I know who the good guys are.

VICKI: That's great. And isn't it wonderful how powerful an action such as taking out some primarily ornamental or perhaps lawn habitats and transforming it into a meadow is because it really increases the diversity of species that you see.

JUDITH: It does. I wrote my first book on that. It's called "At the Garden's Gate" and I was in awe of the wildlife that was so attracted to my little suburban backyard just because I put in more natural landscapes. That's what I encourage others to do is to find a section of lawn, front yard, back yard, side yard it doesn't matter. It could be six feet. It doesn't have to be 2 acres. Most of us don't have 2 acres of land and convert that into a meadow land or a natural landscape. Up in Vermont, I was there a couple of years ago in the fall and saw the number of rolling hills with meadowlands. They were filled with goldenrod and purple aster and a couple of other wild flowers and it was just breathtaking in the fall. And I was happy to see that the pollinators were well fed, so to speak.

All right, let's go into large agricultural concerns. Those you mentioned that they help yield increases in fruit production. I don't quite understand that. Could you explain?

VICKI: Sure. You know a lot of people are familiar with pollination itself. Pollination being pollen grain moving from the male to the female part of a plant and that's what results in seeds and fruit and pollinators help this happen. Not all plant species, and not all of the crops we eat are dependent on pollinators to actually make the fruit happen. But a lot of those that are not dependent show significant yield increases, bigger fruits that are quality fruit, more fruit, when pollinators are abundant in the ecosystem. And often these yield increases correlate with the more pollinators you have the more yield you get. So, in a large agricultural landscape where you're really looking at maximizing how much yield you're getting, having pollinators present and having substantial functional pollinator ecosystems plays into that quite well.

JUDITH: It does. Again, Mark Shepard up in Wisconsin has a savannah. He's known for his 100 acre property where he has fruit trees for his natural forest and plants. They're all together and he manages this property and he gets great yields at lower labor. So, I think there's a trend happening slowly but surely, farm by farm where instead of being a monocrop we're starting to put other crops in between rows and that attracts more insects. Apparently in some of our almond groves they're sterile. There's like nothing there except almond trees. There's not one other insect there because of the almond trees. And I believe we're starting to see a shift.

Do you get requests in your organization to look into that or to help support that?

VICKI: We have this program called "Bee Friendly Farming" which helps farmers encourage habitats and create a landscape that's more supportive of pollinators. And Bee Friendly Farming has some simple but very practical and very important guidelines including planting a diverse set of habitats that flowers throughout the season to provide food for pollinators, and also eliminating if possible, as well as if not, reducing the use of agri-chemicals that are harmful to pollinators. There we have a program where we're making agricultural landscape better for pollinators.

JUDITH: That's a great project. I mean so many of us are so against this huge application of pesticides and systemic pesticides in our seed pool, so it's wonderful that the pollinator partnership actually has resources to help farmers.

Well Vicki before we go could you give us 3 practical tips? If you could summarize some of the points you've made and some practicality for my listeners.

VICKI: Absolutely. So actually, I think 3 really good take home messages are what you can do for pollinators would be: 1) **Plant a habitat for pollinators.** By habitat we mean that we hope it's local native plants and that the habitat is good and clean, so again free from chemical inputs that could be harmful. 2) **The second point that I would say is do your voting with your wallet and your consumer power.** So, if you can, choose those products in the grocery store that are sustainable, organic or you know that the farmer practices sustainable farming in a such a way to support pollinators such as bee friendly farming. 3) And lastly, **vote again for policy if you can.** So look at local representatives of the municipal state and federal levels that have pollinator policy as part of their interest. Vote for, when you have the power to support pollinators.

JUDITH: I agree. You know we forget that every time we buy something, we cast a vote. It doesn't matter what that product is. There are so many choices that go into creating that product and if we continually purchase something that's detrimental to the environment, we're keeping that system going. We need to be mindful about our use of our personal resources out in the marketplace.

So that's great. So how about giving us your contact information, and how people can find the guides, etc. on your site?

VICKI: Absolutely. So www.pollinator.org will get you to the Pollinator Partnership website. You can always e-mail us at info@pollinator.org All of our other contact information is available there but you'll find a resource base where you can download the Eco regional planting guide for your area by putting in your zip code. It pops you into the right eco region. And you can just go from there. Plant habitats for pollinators, enjoy the pollinators that come to your garden!

JUDITH: Oh, thank you. That's great. All I can say to my listeners; I have gone there. I have done that. I have pulled the guide out for my area, very easy to do but it's packed with information and they're beautifully done and very, not only resourceful but they're very helpful guides for each eco region.

Vicki, I want to thank you again. I'm really grateful for your time in coming here on the Holistic Nature of Us.

VICKI: Oh, thank you so much for having me. I really enjoyed the conversation.

JUDITH: Great. This is Judith Dreyer. I'm the author of "At the Garden's Gate", book and blog. I want to thank Vicki again and all my listeners for tuning in today.

My book is available through my website www.judithdreyer.com as well as several distribution arms such as Amazon, Nook, Goodreads and more.

I'd like to remind all of you that a transcript is available for each podcast, and to please like and share these podcasts. Let's get the word out and support each other.

And remember, **now** is the time for practical action and profound inner change so our world is valued once again.

Enjoy your day.