

Podcast Series: Holistic Nature of Us

Episode # 61: Meet: Andre Philippe Drapeau-Picard

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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 journey with me into a better understanding of the concepts behind our holistic nature 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 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 helps 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 the Mission Monarch Coordinator, which is a citizen science based program documenting Monarch's reproductive process. It is part of an international research and education effort aimed at saving the migratory populations of this endangered species.

Welcome Andre Philippe, it's a pleasure to have you!

ANDRE PHILIPPE: Hi, thanks for having me.

JUDITH: Oh, you're welcome. Let's dig into this very timely topic today. Tell us first of all about yourself and how you got interested not only in insects but also with this program.

ANDRE PHILIPPE: Yeah. So first of all I'm a biologist so I studied biology because I was interested in plants but as I went further into my

studies I came to realize that the links between plants and insects are very important and the diversity of insects is way higher than that of the plants so there are more things to discover. So, that's how I got into insects. After my master's I got a job at the Insectarium so I'm the HMR Coordinator for two years now. It's a very interesting experience professionally because I do some education, because I had to teach the people about our program and about raising awareness about the Monarch in general and I also do some research. So, there's an interesting equilibrium in my opinion in that position and it gives me the opportunity to collaborate with researchers and other people in all three countries of North America so it's really motivating.

JUDITH: Oh, it sounds exciting, because the Monarchs aren't just limited to their migration, they're all over the place on our continent, correct?

ANDRE PHILIPPE: Yep, so we have two populations of Monarchs; North America, one west of the Rockies and one east of the Rockies. The biggest population is the east migratory population and it migrates between Canada and Mexico. So, if you want to study the Monarch and you want to help it go through the threats it's facing right now you've got to work with people from all three countries to implement efficient conservation actions.

JUDITH: Well that's interesting. So that takes you into different climates. It must take you into different needs of the Monarch, is that correct?

ANDRE PHILIPPE: Yeah. So, they have specific needs along their migratory routes. In the Northern United States and Southern Canada that's where they go to breed and reproduce so they need their host plant. They need milkweed because it's the only plant on which the Monarchs lay their eggs and it's the only plant that the caterpillar eats. So, they need that plant. They need a lot of it. This is what they need in the north and while in the south, in Mexico, they need their forest there with that specific fir tree on which they settle waiting for the winter to pass. And between those forests in Mexico and their fading habitats in Northern United States and Southern Canada, well they need nectar because during the migration they need fuel, right?

JUDITH: Right.

ANDRE PHILIPPE: To get from one place to another. So, all different needs all along their migratory routes.

JUDITH: Do they have favorite plants for the nectar because we always hear about how important milkweed is but they have other plants that are just as important for nectar, for fuel?

ANDRE PHILIPPE: Yeah. So, if you want to create a habitat for the Monarch you need the milkweed, but the thing is milkweed (**5:44 didn't record here**) so it doesn't produce nectar all summer long. So, the idea is to have a mix of plants, ideally native plants, that will bloom during all of summer. You need this diversity. So, I'm thinking for example of goldenrod, which is super important, especially at the end of the summer or at the beginning of the fall when the monarchs are preparing for their migration, for their fall migration, because that plant is flowering at that time. There are several other nectaring plants that are good for them and they vary of course depending on the region in which you are. So, the plants that we have here in Montreal, Quebec are the same that you'll find in some states of the United States. So, depending on your regional context species are varied but wherever you are you need the diversity of plants to have that nectar availability also.

JUDITH: Well that's interesting because we do see them on plants other than milkweed but again I think there might be a little misperception that yes, what I find, and what I'm getting at is, what I find in my travels is that most people don't realize that eggs and the caterpillar need specific plant that is very different from the adult butterfly.

ANDRE PHILIPPE: Yeah, true. So, the caterpillar needs milkweed but the adult is going to drink nectar from whatever plants produce nectar.

JUDITH: Okay, so then what you're saying is a good wildflower, native wildflower diversity is the best choice. For those of us in all the 50 states, southern Canada, I don't know what the Southwest offers but they have their wildflowers too and so the Monarch needs that fuel to make their journey to Mexico.

So, tell us what's happening today with their migratory patterns. Their species have severely declined. If you could talk about that, I think everybody would be interested.

ANDRE PHILIPPE: Yeah sure. So, both North American migratory populations of Monarch have been declining in the past 20-30 years. The western population has declined by over 90%, while the eastern population

declined by approximately 80%. So, in both cases it's a huge decline. It's very alarming and we consider that there are three main reasons for that, three main drivers. So, I'm going to talk about the drivers for the eastern population.

JUDITH: Okay.

ANDRE PHILIPPE: The **first one is wood logging**, tree logging in their over-wintering sites in Mexico. There was an industry for tree logging there until we realized that it was a problem for the Monarchs and then it became illegal, so now consider that it's not a problem anymore. I mean there's no more tree logging there going on but the trees that were cut a few decades ago resulted in a habitat loss that still has some effects right now, even if we don't cut those trees anymore. This is one thing, tree logging in Mexico.

The **second is breeding habitat loss**. There is less milkweed than there used to be, and this is due to the use of some herbicides associated with GMO crops. So, I'm thinking of glyphosates essentially, which are very efficient, and it got wildly used by farmers at the end of the 90s and this is associated to the decline of the milkweeds which do well in open habitats such as agricultural landscapes. So, when you put glyphosates there it kills the milkweed, so less breeding habitats for the Monarchs.

And the third driver, the **third main driver is climate change**. And climate change impacts Monarchs in a variety of ways. One of them is that there are more metrological events than there were before. I'm thinking of tornados or hurricanes or droughts, especially during the migration. So, if there's a drought during the migration, flowers are not going to be producing nectar or at least not as much nectar as they should, so less fuel for the Monarchs. So of course, if Monarchs get into a hurricane or a tornado during their migration lots of them get killed. It's getting more and more difficult to get to Mexico for the winter because of climate change.

JUDITH: Hmm. Let's go back to number two. Again, that seems to be hitting the press more and more these days that our use of herbicides, and in particular of glyphosate type products causing damage to our insects and in particular we're talking about the Monarch butterfly today.

Do you see any easing up of that?

ANDRE PHILIPPE: Well some organizations are working along with farmer's to raise their awareness and invite them to adopt more ecological friendly practices regarding herbicides but also insecticides. There are some insecticides, for example the neonicotinoids that are thought to be causing the big decline in the bee populations. So, some organizations are suggesting, for example, a certification that farmer's can adopt and then be committed to using less of those products in their field, applying them only when needed for example or in specific areas when it's less harmful for populations in the wild. So, it's a long way because those agricultural practices are hard to change because that's how the whole industry is working right now. It's a big machine. So, if you want to change the machine only a little bit you need to put a lot of effort and yes, some organizations are making that effort but it may take...it's taking time.

JUDITH: Is it going to take more time than we have? I mean if these populations have seriously declined, you know, you're talking 80-90%, do we have enough time to save them.

ANDRE PHILIPPE: Yeah that's the big question, right? We're not positive but anyway we still think that there is time, yes, and what we say is we need to work on all the aspects of all the problems of the decline. So farming is one. With Mission Monarch, the program I'm coordinating, we are focusing more on varying habitats. So, monitoring habitats to know where they are and if the Monarch uses them. We are also inviting people to create habitats, so we are confident that if we work on all those aspects of the Monarch issue, we're going to get results. We may not go back to the numbers of Monarchs that we used to have decades ago but we are confident that we still have time to save those migratory populations even if we don't reach those historic numbers.

JUDITH: Well that's interesting. Well you're an insect guy. You study insects. What do see a primary role of the Monarch from your perspective in our environment?

ANDRE PHILIPPE: Yeah so Monarchs, like other butterflies, they are pollinators. This is what they do. Otherwise other than its ecological role, the Monarch is a symbol, a cultural symbol. Lots of people make good memories with Monarchs because it's a big butterfly. You know it's aesthetic so people like it. People think it's a beautiful butterfly, which is what I think too. So, people relate to that insect and it's not all insects that

have that chance to relate with people so easily. We can...it's been used as a conservation tool and as a collaboration tool. You know, as I said earlier, scientists working on the Monarch come from Mexico, the US and in Canada. They work together. So, without that species those collaborations would not be possible so yes it's a pollinator in the wild but it also has an importance for us humans, you know, as social beings.

JUDITH: Hmm. Oh, I think you're right. It evokes poetry and novels and it excites us on some level and I think that's why it hit the air waves so much is because the decline makes us sad. I hope it makes us not just sad but wakes us up to doing something on a more local level. You know anybody who has some kind of land space, a front yard, a back yard can add milkweed to their property as well as wildflowers. I'm a big promoter of turning lawn into more meadowland or a more natural landscape. In fact, I've written a book about it. And that to me is critical to helping some of these insect species survive, because we need them.

ANDRE PHILIPPE: Yep, yep I totally relate with that. So, at the individual scale we can, as you just said, we can create habitats in our yards. We can also help scientists by sharing our observations. So this is what we do with Mission Monarch but there are several projects going on, citizen science projects or programs in which scientists are inviting people to take pictures of what they see and count the number of milkweed they have in their yard, to how many they saw by the bike lane and look for Monarchs there and this is actual data, super relevant data that is being used by scientists to inform the people who do conservation, to inform conservation decisions actually.

JUDITH: Well that interesting. So, you're saying that a Master Gardener Program, for example, could collaborate with you as well as the individual. So I could go out in my yard. I could count the milkweeds that are there and if I happen to catch a Monarch, I can hopefully get a picture of it to send it in. So where would I send all that data in?

ANDRE PHILIPPE: Yeah well we have a website and how it works with our website so it's www.mission-monarch.org and you have lots of things on there. So you have identification, I.D. sheets to help you identify the monarch there, the caterpillar as well and we have guides to identify milkweed plants because there are a couple of, several different species of milkweed and it's all there. And this is also where you want to share your observations. What we need to know is where you saw milkweed and/or

Monarchs, when it was and what did you see. So how many milkweeds? Were there any Monarchs? If yes, how many and what were they? Were they adults, eggs, caterpillars or chrysalis and that's it.

JUDITH: Oh, okay. So that's really not that complicated because if you have a milkweed area in your yard with some milkweed plants that's a great way to take children out and have them help you keep an eye on the weeds and the flowers and see what they can see at the same time that mom or dad is, you know, brining the camera out and trying to take photographs. And I can see young folks getting involved with their science projects too on this level. So it's basically go to your website www.mission-monarch.org and you have identification sheets not only for the butterflies but for the milkweed species and then folks can submit to your site the when, the where and the how many briefly to you. And so, you must be collecting information from all over the continent, right?

ANDRE PHILIPPE: Yeah, exactly and on our website, you can see all the other observations that were made since the program was launched. So there's a big interactive mass there so you can see, for example you can go there to look....if you don't know where to find milkweed you can go there and see if someone did monitor milkweed in your area and how many there were and you have the whole map for the whole continent.

JUDITH: That's interesting. I know I've gone to your website and I think anything that puts things in a 1,2,3 format is easy to follow. If it's easy to follow that means they'll take some action, you know? Because we're busy people so I like the way that's set up and you have a great map for recent missions on there and the locations of where they're at and a satellite map. And then you have a beautiful photo gallery that has the dates on it so you can see the recent photographs as well as when you started the program. So that's really interesting Andre Philippe the way you've got it designed.

ANDRE PHILIPPE: Yeah well, we tried to design it as user friendly as possible so that's it easy for people to use our website while producing data that is still relevant for research. So, we try to reach that equilibrium between simplicity and relevance and we think we have something that works well.

JUDITH: (Agreeing). Good. I'm so glad for your success and you've been three years doing this, correct?

ANDRE PHILIPPE: Yeah. This summer is our third summer of data collection and it's going pretty well. We've been doubling our number of participants each summer and we're looking forward to seeing the results of this summer. The more people who participate the better it is.

JUDITH: Yeah it is, and I can only encourage my listeners to do the same thing. Find some way to look for the monarch. You have a lovely video there about your mission. You have an easy button that says, "submit data". It's very good. And, you also have a newsletter, so people can sign up for that. And I know folks that deeply care about the environment would really enjoy and utilize your resources so all I can say is thank you again.

You've given us several tips. I don't know if you have anything else to add? Not necessarily just from a Monarch point of view but your interest in insects. Are there three tips, or other tips that you'd like to offer our listeners today?

ANDRE PHILIPPE: Well other than creating habitats and sharing observations, we as citizens, we also have the power to influence the people who we elect.

JUDITH: Right.

ANDRE PHILIPPE: So, encourage people to vote following their environmental values. To vote for what's important to them of course and at the municipal scale there is for example that mayor's Monarch pledge so it's a commitment that mayors can take by adapting the way they manage the city in ways. There are over twenty actions that cities can take to help the monarch, of course. It's the Mayor's Monarch Pledge but those actions also have an impact on all the other pollinators that share the same habitats. So yeah helping the Monarch, in other words, is not just helping the Monarch but it's helping all the other species of insects, other animals, plants, whatever you can think of that shares those habitats. It's all helping them too.

JUDITH: Yeah right. It's inclusive. Again, that's our holistic nature. It's inclusive. It's not exclusive. So when we, if we choose on a personal level to take up the mission of the Monarch for example, it has other consequences and hopefully those individual efforts connect into a bigger picture and strengthen a species but it's strengthens other species as well. And as you mentioned it's not just our insects but it's our plants, it's the soil,

it's all the critters that live among the plants and dwell there, have shelter there, have food there, raise their babies there. It's an inclusive environment not an exclusive one. So, thank you. I think that's really helpful.

So again, just before signing off do you have anything else to add? And please give us your contact information one more time.

ANDRE PHILIPPE: Sure, so. It's always time to take part in Mission Monarch. I mean all summer long people can share their observations but if people have to choose one moment to do so, I would recommend, I would suggest that it's during the *International Monarch Monitoring Blitz* which is an upcoming event. It's going to be launched on July 27th and it lasts until August 4th. So, this is ten days during which we invite people to put a special monitoring effort during those ten days. I'm organizing this event with collaborators in the United States so the University of Minnesota with their Monarch larva monitoring program, also the western Xerxes Society on the west coast, the _____ in Mexico and the environment Canada also. And the idea of this event is to get as much data as possible to know what's going on during the summer because the Monarch populations have been estimated based on surveys during the winter when they are in Mexico and for a reason that we don't know yet, it's not always related to what we see in the summer. We need data in the summer, and this is why we're doing that list every year. It's to get a comparable picture of what's going on with the Monarch during the summer. So yeah, I invite people to participate between July 27th and August 4th. If they have any questions regarding this they can contact mission -monarch.org and I can also be reached by e-mail so my e-mail is

xdrapan@ville.montreal.qc.ca

so it may be easier for folks to email me.

JUDITH: Yeah, we'll post the e-mail. I'll post the information again about the Mission-Monarch.org again. And I have your e-mail so I can make sure that that's in there clearly. I usually do a transcript for each podcast for my listeners too. Sometimes it's a lot easier to scan it through and get the invaluable information that way.

Well Andrea Philippe thank you again. This is an exciting protocol. I encourage all my listeners to participate in any way that you can. Please like and share these podcasts too. Let me know what you are doing for the

monarchs in your little or big neck of the woods. I'd appreciate it. So thank you again Andre Philippe for your talk, your practical advice.

This is Judith Dreyer. I'm the author of "At the Garden's Gate", book and blog. My book is available through my website www.judithdreyer.com as well as several distribution arms such as Amazon, Nook, Goodreads and more. And please like and share these podcasts. Let's support each other, especially this Monarch conservation effort and get the word out.

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

Enjoy your day.