

Zoom: PSC Virtual Training 2026: HHFS-0760 - info@pollinator.org

Participant: Wordly [W] English (US)

[>> W] You can click the blue open button that should have just appeared at the top of your screen.

[W] If you join any PSC webinar late, you can also use the link that we sent you by email.

[W] The link in the chat, or you can scan this QR code to open worldly transcriptions in a separate browser or on your mobile phone.

[W] And just a note that recorded webinars will also be transcribed in English, Spanish and in French.

[W] Okay.

[W] As always, I'd like to acknowledge that the land where I live and work is located in Yellowknife, Northwest Territories, Canada.

[W] Located on Chief Drive East territory, traditional land of the Yellowknives Dene First Nation.

[W] And with this land acknowledgment, I also encourage all of you to learn more about the land that you live and work on.

[W] There is a great site called Native-land.ca, and here you can learn more about the indigenous territories, languages, lands and ways of life where you are living.

[W] And before we get to tonight's presentation, I just wanted to go over quickly the steps to certification again.

[W] Since I've been getting some emails asking about them.

[W] So let's just go through them quickly right now.

[W] So there are two steps to complete your certification.

[W] Step one is watching the virtual training modules live or recorded.

[W] And once this is complete, a short learning form must be filled out to share training.

[W] Takeaways.

[W] Step two is then completing one habitat creation action or one and one outreach or education action.

[W] A similar short form must be filled out by the following year.

[W] So let's just dive into this in a bit more detail.

[W] So after all modules are complete in April, the step one form will be emailed to you to share your training takeaways.

[W] So again in April we'll be sending an email to you with that step one form.

[W] We suggest that you write down in point form or 1 to 2 sentences the key takeaways from each training.

[W] While you are attending live, and this will make it easier to fill out the step one form at the end of when all the live modules are complete.

[W] So after you've watched the modules live or recorded, you can transfer your answers into the step one form and that is due on December 31st of 2026.

[W] So lots of time to get that form submitted.

[W] And another note is that you're only expected to watch and share training.

[W] Takeaways from one of the habitat creation modules.

[W] And these are modules five A, B or C.

[W] So looking at our schedule here, the habitat creation modules again are the five.

[W] So five A, B and C and whichever one is most relevant to your pollinator journey or your work is the one that you can attend.

[W] But we suggest that you or we recommend that you attend all three because they are all really interesting with amazing guest speakers.

[W] But you only need to attend one of those.

[W] So one of five A, B or C.

[W] So moving on.

[W] So at this point, once that first form is submitted your step one is complete and you are now on to step two.

[W] So you're going to complete your habitat and outreach actions.

[W] And then you can fill out the step two form describing your work which you need to submit by September 30th of 2027.

[W] So lots and lots of time to get those activities done.

[W] It's not due until next year.

[W] Once both step one and step two forms have been submitted and approved, you'll receive a certificate of completion and the authority to use that pollinator steward stamp.

[W] So that great stamp with the the green sweat bee in the middle.

[W] So I hope that clarifies some things for you all.

[W] And if you still have some questions, definitely feel free to reach out at stewards, at Pollinators.

[W] And we're happy to to answer your questions.

[W] And I'll put this up here again for today.

[W] So this is the information on the course info page.

[W] So the course information page will be your home base for module recordings updates and program resources.

[W] And you can log in to this page using those credentials on the screen.

[W] So again the recordings will be posted to this page.

[W] And as well as all the resources that are mentioned throughout each of the talks to make it really easy for you to access everything.

[W] And my final housekeeping slide.

[W] So again, the recording for this session will be available on the course info page by the end of the week.

[W] Recordings will be available until December 31st of 2026.

[W] So you have all year to watch those recordings.

[W] Closed captioning is available, which you can enable in your controls.

[W] Please put all questions in the Q&A box and questions for speakers will be answered at the end of the session.

[W] You can contact us at Stewards at Pollinator for registration issues or any questions that you have for us about the program.

[W] As always, please engage in respect and kindness with each other in the chat.

[W] And I know we're all excited to be talking with each other here tonight.

[W] But please only post about relevant topics in the chat and try to move full conversations to email if possible.

[W] And similar to last week, we'll be doing something fun again tonight, so we will be doing the Speakers Choice Award for favorite question.

[W] So Brad at the end of the session will choose his favorite question and that person will be getting a fun pollinator themed prize later this year.

[W] All right.

[W] So now let's get to know our guest speaker a bit better.

[W] So Brad Howie is a proud member of Nipissing First Nation.

[W] He is a trained chemist and an environmental scientist.

[W] However, his true passions and gifts lie as an educator.

[W] As an educator, he is the owner and operator of Manoomin learning, which we will hear more about later tonight.

[W] Brad is joining us as a guest speaker for PSC for the fifth year in a row.

[W] He will be introducing himself more during his presentation, but for now, let's give him a warm welcome.

[W] And thanks so much for being here, Brad.

[>> W] All right.

[W] Lovely.

[W] Thank you very much.

[W] I'll share my screen here and then now just look for some thumbs up from Anthony.

[W] All good.

[>> W] Looks great.

[>> W] All right.

[W] Beautiful I'm just going to move this over here okay.

[W] So hello and welcome to my presentation on seeing insects in a whole new light, which is all about our relationship with insects and the plants they pollinate.

[W] And I'm really excited to be here today because, like Anthony was saying, I actually thought it was a six year.

[W] But either way, fifth year, sixth year, who knows?

[W] But the thing is, is that this is such a special and amazing program because out of all the programs they get to do and I've done, you know, probably over 100 in the past 3 or 4 years, this is the program that I get to reach such a wide audience.

[W] And I think that's just so incredible.

[W] And the information that you learn in this session, it's not only applicable to where I'm calling from, which is Saint Catharines, Ontario, but it's also applicable to anywhere in the world.

[W] Right.

[W] So in terms of our path of learning today, you know, we're going to be talking about how we see insects.

[W] You know, how do we how do we interact with insects.

[W] What's our relationship with insects.

[W] Similarly, you know, how do we see plants and how can we support pollinators.

[W] And then we're going to be telling this through, you know, an indigenous perspective.

[W] But before you can really gain an appreciation of the indigenous perspective and gain an appreciation of looking at insects and plants through an indigenous lens, it's really important to first kind of build a foundational understanding and appreciation of indigenous peoples.

[W] Now, keep in mind this is going to be like a really, really short introduction because, you know, that could be the topic of, you know, an entire course or an entire degree or, you know, books that fill a library, right?

[W] So if you're interested in any of this information, I'd encourage you to keep learning.

[W] So starting off learning about indigenous people, it's important to kind of situate ourselves, right.

[W] You know, indigenous peoples have where because, you know, everyone is indigenous to somewhere.

[W] So in this case, we're talking about, you know, North America.

[W] And it's important to kind of get an idea of the term indigenous because whether you're calling from Canada or the United States or Mexico or even Australia or South America, there's different terminologies that are used to describe basically the original peoples of North America.

[W] And in terms of the word indigenous, that's like the most commonly used term in Canadian culture, which I happen to be Canadian, to describe the original peoples of North America.

[W] And within this broader term of indigenous, there's three groups.

[W] There's the Inuit.

[W] The First Nations and the Métis.

[>> W] However, it's it's really, really important to keep in mind that, you know, not all indigenous peoples are the.

[>> W] Same because quite often, you know, indigenous peoples are talked about or lumped into this kind of broad brush of indigenous, you know, whether you're talking about North America, excuse me, whether you're talking about like, the Arctic or you're in Colorado or you're in the Great Lakes region or you're in Nova Scotia, you know, all indigenous people kind of become this homogenous indigenous.

[W] But just as the climate, the geography, the ecosystems and the non-human beings of North America are incredibly diverse, so too are indigenous peoples and nations and communities within North America.

[W] And that's kind of the foundational understanding I want to kind of build today.

[W] Right.

[W] The shared foundations amongst indigenous peoples, as well as the diversity amongst indigenous peoples.

[W] And we're going to be starting off with with that diversity.

[W] And in terms of that diversity, I always like to use, you know, an image like this.

[W] Right.

[W] So here on the left we have like a jar of marbles.

[W] Right.

[W] They're all the same size.

[W] They're all the same color.

[W] And this is how I think most people engage with indigenous peoples.

[W] You know, they kind of think of them all as the same as homogeneous, right?

[W] I mean, they're all living in one place.

[W] They're all contained within that one jar, which is North America, but they're all the same.

[W] But what is more truthful and what is more closer to reality is that indigenous peoples are incredibly diverse.

[W] Yeah, they do share that one jar, right?

[W] That one universal culture and that they all come from North America, but they're all different colors.

[W] And I really want to say shapes and sizes.

[W] But, you know, it's a marble metaphor.

[W] So they're all the same shape and size in this case.

[W] And you know, speaking of diversity, it's important to kind of introduce myself a little more because although Anthony introduced me, if you ever have the chance to go to an indigenous community event or gathering or anything like that, it is really important that the speaker kind of introduce where they come from, because at this point, you might be kind of wondering, you know, again, who is this guy?

[W] Where does he come from?

[W] Why is he here today?

[W] Right.

[W] So, can we noncoding Indigo, Bradley how indigenous Dowden, the bee sting and Benedict and Anishinaabe in Dao.

[W] So what I just spoke was anishinaabemowin, which is the language of the Anishinaabe people and the Anishinaabe are one pretty large group of individual First Nations, but they're all common.

[W] They all kind of are joined together by the language that they speak, which is Anishinaabemowin.

[W] And some of the Anishinaabe nations that you might have heard of are like the Odawa or the Ottawa, the Mississaugas, the Algonquin, and the Nipissing, as well.

[W] And specifically for me, my family, at least, the indigenous heritage of my family comes from Nipissing First Nation, and I always like to recognize, too, that, you know, although you can only see kind of the top half of my body, that I am indeed a full human being.

[W] And so I don't only like to recognize my indigenous heritage on my mother's side, but I also like to recognize my heritage on my father's side.

[W] And he is Polish and Scottish.

[W] I also said that my my Anishinaabe name is an encoding, and because I want to recognize both those sides of my heritage, I go by Nimc Brad, you know my anishinaabemowin name and my given name at birth.

[W] And a little bit about my story too.

[W] You know, my mother is a survivor of the 60s Scoop.

[W] And basically, for those of you who don't know what that is, kind of after the residential school system was sort of being faded out, although residential schools, at least in Canada, didn't close, the last one didn't close until 1997.

[W] They were beginning to be phased out after World War two, and a new policy was kind of enacted in which indigenous children would be essentially just kind of stolen away from their families and adopted into euro-canadian or white families.

[W] And that's what happened to my mother.

[W] And because of that, she didn't get to grow up in her culture.

[W] And I didn't get to grow up in this culture.

[W] And, you know, it's been a pretty transformative experience for me to learn and engage with more of my heritage.

[W] But one thing that I like about my story is that I kind of can understand both of those worlds and walk in both of those worlds and teach about both of those worlds, and to teach about both of those worlds.

[W] You know, I have my own business, which is called Manoomin learning.

[W] And this isn't really just a shameless plug.

[W] There is a good purpose for me telling you this, and that's because what Manoomin actually means.

[W] So just like there's a rice that's native to Southeast Asia and was eaten all over Asia and is today eaten all over the world, there is a rice that's native to the Great Lakes region, and many people might know this as wild rice or black rice.

[W] But in Anishinaabemowin this is known as manoomin.

[W] And manoomin doesn't really mean wild rice or black rice in English.

[W] What it truly translates to is the good seed, you know?

[W] And that's what my business is all about.

[W] It's about planting and nurturing those good seeds of understanding indigenous peoples perspectives, ways of knowing and science.

[W] And it's important for me to tell you as well that, you know, although I'm one individual and I'm representing not only, you know, my community as an Anishinaabe, but the broader indigenous community of North America that, you know, I don't speak for all indigenous peoples and I don't speak for all First Nations peoples, and I don't speak for all Anishinaabe peoples.

[W] You know, truly, I can only speak with Debruin, which is one of the Anishinaabe grandfather teachings.

[W] And what that would mean in English is basically truth.

[W] And we all know what truth means in English.

[W] But truth means a little something different in Anishinaabemowin it means to speak only to the extent we have lived or experienced.

[W] And so the perspectives I'm sharing today, they come from my lived experience.

[W] They come from my understanding of how we see insects, how we see plants, how I used to see insects growing up versus how I see insects.

[W] Now that I know a little bit more about my indigenous heritage, as well as Anishinaabe M1.

[W] So we just talked about kind of the diversity amongst indigenous nations of North America.

[W] And now we're going to explore some of these shared foundations, because although there is that incredible diversity, we all do come from one mother and live on one mother, which is North America.

[W] And so even though there is this vast geographical region, it's incredible to see that there are these shared commonalities and these shared foundational understandings.

[W] And the best way I can do this and explain this is with maps, which might sound boring to some people, but it's actually quite interesting.

[W] So as I said, when I was learning more about my indigenous heritage, you know, I was not only learning about Anishinaabe people and some other nations that live in what is now called Ontario.

[W] So like Haudenosaunee people or Wendat people, I was learning about all indigenous peoples of North America, and I often came across a map that looked pretty similar to this.

[W] So this is the major classes of indigenous peoples.

[W] And what you can see is that so say in the Northeastern Woodlands, right.

[W] Although there are distinct nations within the Northeastern Woodlands, a lot of these nations are more culturally and linguistically related to each other than, say, nations in the Arctic or nations in the California peninsula.

[W] And that makes intuitive sense right now.

[W] At the same time, I was coming across these maps for the first time.

[W] I was also in school training to be an environmental scientist.

[W] I was in my master's and we were looking at a map like this one day, and this is the major biogeographic regions or major kind of forest regions within North America.

[W] And I don't know if people see it right away right now, but I remember being in class and just thinking, wow, you know, I think there's some kind of connection here, you know?

[W] And so when I went home, I looked at the major classes of indigenous peoples map and then the North American biomes map.

[W] And what's absolutely incredible is that when you superimpose these two maps, what you see is that those major geographical regions, right?

[W] They overlap with those major classes of cultural regions for indigenous peoples.

[W] So although there is an incredible diversity of indigenous cultures, nations, languages, etc., they're all informed, influenced and impacted by the land on which they live on.

[W] And that was important language that I just said.

[W] Land on which they live on, not the land that they own.

[W] You know, because in our cultures and other shared foundation is that you can't own the land because the land is a being.

[W] It's like owning another being, right?

[W] Another good example or I'm not sure exactly how it even phonetically pronounce that mistake there.

[W] My apologies.

[W] Is looking at these spring ephemerals here, right?

[W] So spring ephemerals are some of the first flowers that pop up after, you know, a long winter.

[W] And these are spring ephemerals that are common throughout the Northeastern Woodlands.

[W] And what we have here is a red trillium in the back.

[W] There we have trout lily and we have bloodroot.

[W] Now, all of these three beings, all of these three species, they're all living on, you know, one mother, they all are living on one shared land.

[W] They also have a shared culture in that they share this ecological niche, and they have this ancestral origin amongst them.

[W] They all photosynthesize.

[W] They all play a similar role and responsibility within the greater community of the forest in which they live.

[W] But what we can also see is that there is diversity as well.

[W] There's three separate communities here, right?

[W] And even within a community, there's individuality.

[W] And we can see this with the with the trout lily here.

[W] This trout lily has red anthers.

[W] And this trout lily doesn't have red anthers.

[W] And this is a fantastic metaphor for indigenous peoples because just like these plants, or just like any pollinators or any animals that swim in the water, they have all of these shared foundations and also diversity.

[W] And the beauty of this and this beautiful story being told is that.

[W] Excuse me, is that what makes indigenous peoples so diverse from one another is also the same thing that gives them shared foundations.

[W] And that, of course, is the land.

[W] Now this slide here I always put in, no matter what I'm teaching, whether it's sustainability, it's chemistry, its indigenous physics, it's indigenous science, it's talking about indigenous treaties, you know, the history of colonization.

[W] I always put this slide in, you know, because oftentimes when it comes to indigenous education, or at least the way I interacted with it growing up, or probably many of you interacted with it growing up, is that indigenous people were always talked about in the past, you know, so it was never really about the present.

[W] But indigenous peoples have always been here, and we will always be here.

[W] And what I really like to say is that we are not a people of the past, but we are people with a past.

[W] And that's an important distinction.

[W] Right?

[W] And so we're still here today, and we continue to advocate for our people, but not only our people, but all people, indigenous, non-Indigenous, as well as the land and all the non-human beings of the land.

[W] Because every non-human being, whether it's a pollinator, it's a plant, it's a fish, it's a tree, it's the land itself or herself.

[W] All of those beings have personhood and deserve just as much dignity that we would give to our fellow human beings.

[W] And so now, going back to that indigenous perspective, kind of where we started off ten or so minutes ago, the indigenous perspective comes from the land herself and all the beings of the land, and they all inform, influence and impact that breath.

[W] The depth and the lens through which indigenous peoples view and walk through the world.

[W] So now we can get back to that very introductory slide, because I'm not really telling the story from the indigenous perspective.

[W] I'm more telling this story from the Anishinaabe perspective or from my perspective.

[W] And so we can get to that kind of first question now of, you know, how do we see how do we view insects?

[W] What is our relationship with these beings?

[W] So I really want you to ask yourself and continue to ask yourself throughout this presentation, how do you see insects and to categorize what I believe most people in societies, their thoughts and reactions would be towards insects.

[W] I'm going to use this very scientific spectrum that I learned in graduate school, which is called the Jim Carrey Emotional spectrum.

[W] Okay, so if I could categorize some extremes of this spectrum when viewing or discussing insects, there's there's generally discussed fear and excitement and pure joy.

[W] And I would be in that last category of excitement and pure joy.

[W] You know, I've always really adored and loved insects ever since I was very, very young to pretty young here to to where I am now.

[W] But I recognize that not all people enjoy insects.

[W] But maybe, you know, throughout the rest of this presentation I can kind of change your perspective on that.

[W] Although I imagine most of the audience engaging within the Pollinator Steward Certification course.

[W] You guys probably like insects in some sort of facet.

[W] So insects are quite often overlooked in Western society.

[W] You know, in Western influenced society.

[W] But in Anishinaabe cultures and many other indigenous cultures, insects, they contain important stories, and they themselves are an important piece of the greater web of life and the greater interconnected web of life.

[W] And we can learn a lot about how a culture views a certain species, or any sort of being by what they call them in their language.

[W] So insect in anishinaabemowin is Minidoka, but it doesn't really translate to insect like we would say in English.

[W] What mana quite literally means is little spirit.

[W] And that kind of displays that power of perspective when it comes to the language, because that's how we believe these beings are.

[W] That's how we see these beings.

[W] You know, they're have spirit, just little ones.

[W] Now what another word that's kind of important to the story and conversation we're having here is the word omni.

[W] So some of you might have heard that omni is like a greeting that is used by Anishinaabe people to pretty much say, you know, hello to one another, but Omni doesn't actually truly translate to hello.

[W] What it really actually means is kind of I see your light, you know, and this isn't just a greeting from one human to another human.

[W] I'm not just going to say on NE to Anthony, you know, I'll say omni to a tree.

[W] I'll say omni to a fish, I'll say omni to an insect.

[W] So the next couple of slides here, I had an incredible opportunity during my master's research to actually look at insects through macro photography.

[W] And this was a totally different experience for me because throughout my entire kind of time studying insects, whether it was academically or professionally or immaturely just kind of in my room or out in the field.

[W] I mean, I'd either see the insects when I was, you know, trying to catch them in, in a forest or something, or I would pin dead insects.

[W] Right.

[W] But when you pin a dead insects insect, of course, that insect loses a lot of life.

[W] It loses a lot of character, and you don't really see it as you would see in the natural world.

[W] But through the gift of macro photography, you can really start to do that.

[W] So this here is a juvenile stinkbug who who lost one of his arms, but I'm sure it grew back.

[W] Hopefully this is a this is a fly a very kind of important fly called the hoverfly that I'm sure you guys will learn more about throughout this course or have learned about.

[W] This is a native pollinator bee species.

[W] And what I really liked about this picture is if you can see it, you can see the extra eyes that they have on top.

[W] You know, in most insects actually have those extra eyes.

[W] It's pretty cool.

[W] This is another juvenile kind of cricket or grasshopper.

[W] You know, my poison was kind of like beetles, moths, butterflies.

[W] It wasn't too into the the grasshoppers and stuff like that.

[W] And this is a juvenile stink bug.

[W] I don't know why I got so many great pictures of juvenile insects, but hey, that was the luck of the draw.

[W] But the most, the greatest picture that I took was was of this.

[W] Now, if I was in a live kind of audience situation and I could see all of you people right now, I would love to ask like, hey, do you guys know what this is?

[W] Because it kind of looks like Zoidberg from Futurama.

[W] If anyone's familiar with that.

[W] But this is actually a firefly, right?

[W] Which is pretty amazing because most people, I don't think, would expect a firefly to kind of look like that.

[W] But one thing I noticed when I kind of finally got home and I downloaded these pictures and I was looking through all of them, it was kind of a pretty profound experience for me, because what I really realized in that every single one of these pictures, the insects were

always looking at me, but I couldn't see that with my naked eye, and I certainly couldn't see that pinning a dead insect.

[W] So what I really began to realize and recognize is that insects, they see our light.

[W] But do we see theirs?

[W] You know, they say our need to us, but we don't always say our need to them.

[W] So then it really became a question of me, of of perception.

[W] Right?

[W] Because for me, I was just, I guess, born with that perception that insects were cool and insects were awesome.

[W] And I loved insects and I couldn't understand as a young child why everyone else didn't.

[W] And even as an adult, when I would tell people, you know, hey, I like insects, their immediate opinion was like, oh, why?

[W] Or, you know, insects are disgusting.

[W] But then sometimes I'd flip the question.

[W] I'd ask them, you know, well, what about what about butterflies?

[W] And oh, I love butterflies, you know.

[W] Well, what about honeybees?

[W] You know, and that was always a resounding yes.

[W] Right.

[W] And that's so weird because we value some insects over other insects.

[W] And I think the story that's being told in this picture might kind of illuminate this, this perception of insects.

[W] So I also took this picture.

[W] So here we have, you know, a beautiful butterfly, you know, sipping on some summer nectar.

[W] It was a beautiful day when I took this picture.

[W] And by me telling you this is a butterfly, maybe you have a certain feeling towards this insect, right?

[W] But what if I told you that this butterfly was doing its absolute best job to mimic a wasp?

[W] That might change your perception of this butterfly.

[W] Because wasps are kind of gross.

[W] They're scary.

[W] You don't want to be around wasps right now.

[W] What if I told you as well that this isn't actually a butterfly, but it's actually a day flying moth?

[W] And what if I even told you that all butterflies are actually just day flying moths, right?

[W] Oftentimes, moths are seen as these gross little dingy things that hang out in your closet. Right?

[W] So I wonder if it's more of like a cultural perception that influences how we view, interact and see these insects.

[W] So I want you to ask that question again right to yourself.

[W] Right.

[W] How do you see insects?

[W] Right.

[W] Do you see the good insects, the culturally relevant insects, the beautiful insects?

[W] Or do you see all insects?

[W] Now, one thing I learned while I was studying insects as well is that if you like insects, you're going.

[W] You're going to have to learn about plants, because there's many insects that really only associate with one plant or one particular part of a plant.

[W] And if you really want to get into like finding, you know, all the kinds of butterflies, then you have to learn.

[W] Where do those butterflies lay their eggs?

[W] Where do the what are the caterpillars eating?

[W] What are those butterflies like in terms of nectar?

[W] And like I said, when I was more into insects and studying them actively, I quite enjoyed beetles.

[W] And, you know, not Paul, Ringo, John.

[W] I'm talking about real beetles.

[W] And particularly I wanted to find a a milkweed beetle. Right.

[W] And once I did find them, you know, I find these guys, you know, they they got a lot of personality and character.

[W] I mean, you know, look at this guy's little spirit right there.

[W] Pretty cool.

[W] And also when you do find them, if you pick them up gently, they kind of make this really, really high pitched kind of squealing noise, almost like a, like an insect version of a pig.

[W] But before I found this beetle.

[W] I had to find out, you know, where do they like to hang out?

[W] And unsurprisingly, the milkweed beetle likes to hang out on milkweed.

[W] And at the time, I had absolutely no idea what milkweed was.

[W] So I did my research and eventually I became able to identify milkweed.

[W] And I do remember the day fondly.

[W] I was in Wasaga Beach, which is a popular beach in Ontario, and I was walking along and I found some milkweed.

[W] I'm like, no way.

[W] And then I went and looked.

[W] There was a milkweed beetle.

[W] And that was a pretty awesome experience for me.

[W] But also, as I reflected on that a little more, it was a very confusing experience to me.

[W] Because when I first heard the term milkweed, you know, you can kind of break that down into milk and weed.

[W] And I understood the milk part, because if you break any part of the plant and the venous tissue of that plant, kind of that plant's blood, this milky latex substance comes out.

[W] So that explained the milk.

[W] But what about the weed?

[W] I totally didn't understand the weed part because like in my mind, I'm like, isn't this a good plant?

[W] Why is this a weed?

[W] Because I had always been taught weed means bad plant, pretty much.

[W] And I only ever seen milkweed as a good plant because as I began to interact and know this plant more, I saw all kinds of different insects on this plant.

[W] You know, butterflies, bees, beetles, ants.

[W] Even within this picture you can see that's a ladybug larvae right there.

[W] Right.

[W] And so I was just utterly confused by this.

[W] And so I looked into it more.

[W] And at one point milkweed was in fact deemed in our culture as a weed.

[W] And people actively tried to eradicate it, either by spraying pesticides on it or removing it.

[W] And this was because of a couple things.

[W] One is that it was generally believed by farmers that milkweed could kill your cows if they ate it.

[W] But in terms of my research, at least, you know the cow would have to eat a lot of milkweed to actually get sick.

[W] And the other thing is, milkweed is amazing ability to grow very fast and spread very quickly.

[W] But there was a major kind of cultural shift right as the time I was growing up.

[W] And that's because of this species here.

[W] The monarch.

[W] Right.

[W] So the monarch uses every single, every single stage life stage of the monarch utilizes the milkweed.

[W] So the monarch lays its eggs on the milkweed, the caterpillar of the monarch eats the milkweed.

[W] And then the caterpillar will spin its cocoon on milkweed.

[W] And then, as a monarch, makes its annual migration from where I live all the way down to what's now Mexico, which is a pretty incredible migration.

[W] They like to drink milkweed nectar all the way, and so the monarch population was declining.

[W] Right.

[W] And so what did people say?

[W] We have to plant more milkweed.

[W] And I've done programs with grade three students and they know what milkweed was. Right.

[W] So there is this major, major cultural shift now that the monarch was being affected.

[W] Milkweed now became an important plant. Right.

[W] And you might kind of be wondering or thinking, you know, well, I mean, what is the milkweed kind of get out of this relationship?

[W] The monarch seems to utilize the milkweed and it utilizes it in every single stage of its life, so that monarch is taking a gift from that milkweed.

[W] But what is the milkweed?

[W] Give back.

[W] Well, excuse me, what does the milkweed get back?

[W] It gets the gift of of pollination.

[W] And so this is another shared foundation amongst indigenous peoples of North America.

[W] This this concept of reciprocity, which you'll find all over the natural world.

[W] And when I talk about reciprocity, I often find people are either unfamiliar with the term as it never heard it or don't totally understand its meaning.

[W] So what reciprocity is all about is it's essentially, you know, I give you a high five, you give me a high five back, I give you a hug, you give me a hug back.

[W] I share a gift with you.

[W] You share a gift with me, and like I said, this is a shared foundation across indigenous nations all over North America.

[W] They have this cultural understanding of reciprocity.

[W] Whenever you take a gift, you must give a gift back.

[W] And I truly believe that where reciprocity came from was understanding the land and all the beings of the land, because reciprocal relationships are not only found between insects and plants like the monarch and the milkweed, but they're abundant within every single part and facet of the natural world.

[W] And so when it comes to reciprocal relationships, we kind of understand that reciprocity side.

[W] But what about the relationship side?

[W] Right.

[W] Let's focus on that part.

[W] More specifically.

[W] What does our relationship have to do with it.

[W] Because when it comes to milkweed, when we changed our perception with milkweed, when we changed our relationship with milkweed, it totally changed how we interact with milkweed.

[W] Right?

[W] And sometimes people have asked me during presentations like this, you know, should we change the name of milkweed, you know, to represent what it's actually doing in the environment?

[W] And I think I think no, because it's a really amazing kind of teachable moment.

[W] Now, this plant doesn't happen to have that same kind of name where it can have a teachable moment.

[W] But there is a beautiful story that can be told with this plant as well, which I'm sure most everybody would recognize within this audience.

[W] This is the dandelion, right?

[W] So I'll tell you a story about when I was growing up, and still to this day, you know, my dad would always say, you know, Brad, go, go get those dandelions.

[W] He liked to keep a really nice green lawn.

[W] Right, Brad, go get those dandelions, you know, and I'd have to pull them out, or I'd have to spray some sort of pesticide on it.

[W] And it was like a never ending battle that I was constantly losing because the the dandelions were always coming back.

[W] They were always popping up.

[W] But, you know, as I kept looking at the dandelions and me being someone who was more naturally inclined to insects, I would see all kinds of insects on dandelions, you know, I would see beetles, bees, ants, butterflies, bumblebees, honeybees, again, all those kinds of pollinators that you'd see on a milkweed.

[W] And this was kind of confusing to me as a kid, once again, because I was confused.

[W] I didn't understand, like, you know, why is this a weed?

[W] Why is it a bad, bad plant when all of these other beings utilize this plant?

[W] And kind of think about where, you know, dandelions exist.

[W] I've never seen a dandelion in the forest.

[W] I've seen similar species to dandelions and forests like Coltsfoot.

[W] Never in an actual forest.

[W] You know, they live in basically residential ecosystems, which are ecological deserts, right?

[W] These places where there's a lot of ornamental plants and there's a lot of grass and glass.

[W] Oh my God, glass.

[W] Grass is actually a flowering plant, but it doesn't need pollination.

[W] Right.

[W] And so if you don't need any pollination and you have this one kind of monoculture of grass, there's we're not inviting any other beings really into our neighborhood.

[W] But when you do start to see dandelions growing in your neighborhood or in your backyard, what do you see more of?

[W] You see more bees.

[W] You see more butterflies.

[W] You see more pollinators in general, those bring in birds who like to eat those pollinators.

[W] Right.

[W] And so I'm not recommending everybody, you know, just let the dandelions go wild in your backyard, you know, do what's best for you.

[W] But I would maybe challenge your idea of whether or not this is a bad plant, because is it a bad plant for humans who want to keep their garden and their grass nice and clean and proper?

[W] Yes.

[W] Is it a bad plan to all the other beings that this, you know, this one kind of flower that can exist within these ecological deserts, residential ecosystem areas?

[W] No.

[W] You know, that's a good kind of plan for them.

[W] So again, when it comes to milkweed, when it comes to dandelions, you know, ask yourself, you know, what is our perception of weeds.

[W] Because we kind of in our culture, at least the way I grew up, we kind of demonize and villainize weeds.

[W] But a lot of them, they're really not that bad.

[W] When you take a step back and you look at them for what they are now, of course, don't get me wrong, there are, of course, some noxious invasive species that can cause a lot of problems.

[W] Both, you know, economic, human as well as environmental health problems.

[W] But many of the plants that we would classify as weeds within our culture are only weeds because.

[W] They they affect some sort of facet of, of our life.

[W] And one thing interesting is that I've heard a lot of people calling poison ivy a weed.

[W] Right.

[W] And poison ivy is quite incredible for a lot of reasons, but one of them has to do with the fact that one of my elders told me, wherever you see poison ivy growing, you don't grow.

[W] You don't go and walk.

[W] You know, poison ivy might be bad for human beings, but there's only one species on the planet that poison ivy actually affects, and that is human beings.

[W] If you ever get a chance to look at one patch of poison ivy over the seasons, you'll see that the poison ivy has flowers.

[W] Those flowers attract pollinators.

[W] Those flowers develop into berries that birds and squirrels like to eat.

[W] You know, it's only humans who have who have an adverse reaction to touching poison ivy.

[W] And so certainly to us, perhaps it's a weed.

[W] But to all the other non-human beings that poison ivy supports, it's certainly not a weed.

[W] And in our language, in Anishinaabemowin, there is no actual word for weed, you know, because there's not good plants or bad plants.

[W] We just have kind of plants.

[W] So again, I kind of wonder if it is more of a cultural perception that influences how we see certain plants or weeds, and perception is so important, right?

[W] Because this aren't you know, he says there's four beams and this gentleman says there's three.

[W] But when we take a step back, we can see that they're both right.

[W] But it's just what their perception is, what they're seeing.

[W] And when we reframe our perspective, our relationship often changes.

[W] And whether we realize it or not, so much of the interactions we have with the environment or the beings within, it has to do with our relationships and our perspectives of those beings.

[W] So let's regroup our thoughts and think about what is our relationship with the plants that pollinate, with the plants that insects pollinate?

[W] You know, do we see the good plants?

[W] Do we just respect the bad plants or disrespect them?

[W] Or do we just respect all plants?

[W] So once again, much like how I asked you to see, how do you see weeds, you know, how do you see plants?

[W] How do you see all plants?

[W] And I'd like to share with you how we as indigenous people, we see plants, we see weeds, we see insects, how we view and see all every non-human being.

[W] And for this, I'd like to tell you about our first treaty.

[W] So when I talk about treaties, some people might be familiar with those.

[W] Those are basically agreements for something, whether it's land or friendship, anything.

[W] And most people, when they hear the word treaty, they might think of the treaties made between European nations and indigenous nations.

[W] But then when you hear the term the first treaty, you might think, oh, okay, it's between, you know, indigenous nations to indigenous nation.

[W] But long before that, there was the first treaty between all of the human beings and all of the non-human beings.

[W] And what this treaty essentially was is that all of the non-human beings, they recognize that we as human beings are the weakest of all of creation.

[W] You know, we need a fire to cook our food.

[W] We need to wear other beings as our clothes to keep us warm.

[W] We need to build our own buildings, to create our own environment so that we can survive.

[W] We can't drink clean water, right?

[W] So all of the beings recognized that, and they said that they would give their lives for all of their lives to help support our lives, but in return, we have to give them that gift of respect.

[W] That was the reciprocal relationship between us.

[W] But in many ways, we've kind of lost that respect today.

[W] We've lost how we view all beings.

[W] And so essentially from that indigenous perspective, there is unity and equality between all beings.

[W] You know, we as humans are no better than anything else.

[W] And all plants are seen as equal.

[W] All insects are seen as equal.

[W] So in this last part of that, of this presentation, we're going to be talking about, you know, what can we do to help pollinators.

[W] Because if I had a stage of pollinators here, you know, and, and, and they're all talking about what are, what are some threats to us and if we even broaden this to, to our native species, they would say things like diseases and pests, you know, pesticides, climate change, extreme weather events, habitat loss.

[W] One thing that might be surprising to some people in this crowd is honeybees, although that is a certainly a nuanced topic and will be discussed throughout the during some point of the Pollinator Partnership program, as well as invasive species.

[W] But one thing I'd really like to add to this is our relationship.

[W] So what can we do to help pollinators?

[W] And that will be discussed a lot during pollinator partnership.

[W] But what I'm adding to this is that relationship piece.

[W] And also maybe some, you know, usable advice.

[W] And to help pollinators to help all native species.

[W] We can mimic creator's garden and what is creator's Garden?

[W] Creator's garden is essentially the force, the wetlands, the prairies.

[W] It's any natural space that was just kind of created, you know, and we can mimic Creator's Garden by creating what I like to call community garden.

[W] Emphasis on the unity.

[W] So what is a community garden?

[W] Well, this is a kind of a term that I've come up with.

[W] So I'll explain it to you a little more.

[W] So a community garden is essentially a nursery for diversity, and it's a home for all beings.

[W] So if you're a gardener and you're really focusing on planting, you know, plants that support pollinators, well, you can do that.

[W] But you can also have a community garden where you not only support those pollinators that you're looking to help, but you support all beings.

[W] And how you do that is basically kind of hacking in to the local flora and fauna.

[W] And what you're really doing is you're hacking into those interconnected, strong relationships and the community that exists there.

[W] Because when you create a community garden, you're basically mimicking what you see in nature, and you never see a monoculture in nature.

[W] Right?

[W] You never see a perfectly groomed place in nature.

[W] But what you do see in nature is this kind of orchestrated chaos.

[W] And what you do see is all kinds of different beings with different roles and responsibilities, all kind of living together and each having their own role within that broader community.

[W] And what you also see is those reciprocal relationships.

[W] And so when you mimic a creator's garden by creating a community garden, you also recreate those reciprocal relationships.

[W] And so all beings are just being supported pretty much simultaneously.

[W] And one aspect of, you know, building a community garden and really thinking with this mindset is understanding that we as human beings are part of that community.

[W] We're part of, you know, Creator's Garden, whether that would be a forest, a prairie, a wetland, a bog, it doesn't matter, you know, because through that indigenous lens, you know, we're equal to all the other beings and we're part of this system, you know, not above it.

[W] We're not the masters of it, but, you know, beings who have a role in responsibility to help the other beings.

[W] And also, if we take from them to give a gift back.

[W] Right.

[W] And so, you know, what is not a community garden, it's essentially something like this.

[W] And this might be some people's cup of tea, you know, and I wouldn't knock you for it at all.

[W] Some people absolutely love is their hobby to have a really nice, beautiful green lawn.

[W] But there are small things you can do even in this space, right?

[W] You can plant native grass species and you can also instead of having, you know, ornamental plants that are not native to the region, you can have some other plants that will kind of tap into those ancient relationships with other insects and birds.

[W] So we're going to very briefly go over how we can go from this to this.

[W] Okay.

[W] So we're going to be introducing our community partners, right?

[W] Which our first community partner of course is plants because plants are really the base of your garden.

[W] They're the base of really any terrestrial ecosystem and plants, you know, they're they're harvesting energy from the sun and that energy that they harvest from the sun is the cup through which every other being drinks from.

[W] Right.

[W] And plants aren't the most important being right.

[W] Because when we're just talking about that indigenous perspective, it's circular, right.

[W] But plants are an integral part of the ecosystem.

[W] And, you know, kind of an example of another kind of aspect of that community within the community garden is, is sun.

[W] Oh my God, sun rod, goldenrod.

[W] Right.

[W] So goldenrod, much like milkweed, likes to grow very, very voraciously.

[W] Right.

[W] And when I was living at another house, I had built a community garden and it was working pretty well.

[W] But at one point the goldenrod had really kind of outgrown its initial space that I had for it.

[W] Right.

[W] And when I pulled it out and I pulled out, you know, a good amount of goldenrod, a couple days later, they started to slump and a couple days even more, they really slumped.

[W] And so those goldenrods, they need help.

[W] They need support from their community members.

[W] So when it comes to a community garden, it's not only understanding the community of insects, the community of of plants, the community of birds.

[W] It's also the community within one species.

[W] Now, when it comes to using native plants, there are so, so many benefits and I'm sure you'll come to understand these benefits throughout the Pollinator Partnership program.

[W] But one of the best benefits to me is that they kind of help you be a lazy gardener, because that's what I am.

[W] You know, I don't really love to go out and weed every day or have to water my plants every day or have to really, really take care of it.

[W] I kind of want to plant it, see where it goes right?

[W] But I'll kind of be sharing the benefits of native plants from, you know, that community garden perspective, right?

[W] And from that kind of perspective of being a lazy gardener.

[W] Right.

[W] So these plants, they're locally adapted, as in they'll do well in our local climate.

[W] And one thing I see during the fall time is I see people, you know, going out and putting burlap sacks over some of their trees or plants.

[W] And I just think, my Lord, I'm so busy in life, I don't got time for that.

[W] But if you plant native plants, you know, shrubs or trees, they don't need to have a burlap sack.

[W] They can survive the winter because they've done that for hundreds of thousands of years, if not millions.

[W] You know, they also grow better in our southern Ontario soil.

[W] When I was a kid, I used to love gardening too.

[W] And I still do love gardening.

[W] But I would go to Home Depot and I would pick basically the plants that kind of called to me, the ones that I thought were prettiest and they always just died.

[W] And now I realize as an adult they mostly died because, you know, gardening is a really hard thing to do.

[W] But they weren't native to where I was planting, right?

[W] They weren't well adapted to that soil type.

[W] They couldn't really survive the winter.

[W] There was not a lot of other beings that were supporting that plant through pollination, pollenization or anything like that.

[W] Right.

[W] And so if you want to have kind of an easier garden to take care of, use those native plants.

[W] Right.

[W] And those native plants will also support and create that biodiversity by tapping into those natural relationships that have existed for thousands or hundreds of thousands of years.

[W] You know, they also provide food for insects, and those insects provide food for birds and some native shrub species.

[W] They provide berries.

[W] And those are food for birds.

[W] Right.

[W] So even if you're just focusing on, like I said, growing a garden for specifically pollinators, when you kind of take that community garden approach, you'll not only support those pollinators, but you'll kind of support all beings.

[W] Now, since this is kind of a talk that's given to pretty cosmopolitan audience, it's important to talk about like what is native to your area, right?

[W] Because if I'm talking about goldenrod or milkweed, I imagine there's some people in the audience that don't even know that plant or have never even heard about it.

[W] Right?

[W] So when determining what a native species is to your area, it's really important to consider the location and the ecosystem because, for example, a plant native to say, Ontario, the province in which I live, may not be native to the capital of Ontario, which is Toronto.

[W] And that being said, to a plant native to a wetland might not be native to a forest.

[W] So it's really important to kind of get to know that plant, understand that plant and understand how it likes to live and support its broader community.

[W] Now, one thing to talk about here is that that kind of term that the term native.

[W] Right.

[W] Because this is kind of an interesting thing.

[W] And for this I like to tell the story of of corn, beans and squash because these three plants corn, beans and squash, they were grown all the way from Mexico, all the way into what is now Ontario by many indigenous nations.

[W] It's called the Three Sisters agriculture.

[W] But the weird thing about corn, beans and squash is that they are totally enigmas to environmental scientists, albeit likely without many of them realizing, and something I didn't realize for a long time to.

[W] And this all has to do with how we define a native species and indigenous species within the Northeastern Woodlands, or anywhere else in North America, or the world for that matter.

[W] Really?

[W] Well, maybe the New World, because in the new World, which is defined as North and South America, because the old world is, you know, Eurasia and Africa and the other continents over there, those are the the old world.

[W] Those were already known to Europeans.

[W] Right.

[W] But the New World is what wasn't really known to Europeans, North and South America.

[W] And that is a piece of kind of colonial science and terminology that that we can kind of remove.

[W] Right.

[W] But in the New world, and I've seen this defined in many textbooks, species are defined as those that were growing there prior to European colonization, which means that corn, beans and squash are actually native species to the Northeastern Woodlands, which they're not, because corn actually comes from what is now Mexico, and squash and beans come all the way from the Amazon forest.

[W] But they're not native species, right?

[W] And what about this awesome little guy?

[W] Again, if I was in a live audience, I'd love to ask people, you know, what is this?

[W] Does anybody know this is a squash bee?

[W] And these bees are incredible.

[W] You know, one they're so cute.

[W] Two, they do an incredible thing, which is pollinate squash.

[W] And they only really like to pollinate squash.

[W] And these bees, they have an amazing history because as humans we're moving squash from, you know, South America all the way up into the northeastern woodlands.

[W] This squash bee followed that trail.

[W] And so this squash bee, by that definition of what a native species is, would once again be native to the Northeastern Woodlands.

[W] But it doesn't come from the Northeastern Woodlands.

[W] So, you know, I think a better and a new definition, maybe for native species could be, you know, a unique being or species with their instead of.

[W] It's because they have that personhood with their own role and responsibility within a broader community or ecosystem that is locally adapted to live within a unique geographical area.

[W] Having built relationships with other beings through evolution over a long time span.

[W] I think that's a that fits better, you know, and this kind of, you know, European or Euro Canadian Western lens or kind of maybe through a colonial lens, if you will.

[W] This exists a lot within our science.

[W] You know, I've read papers where they've talking about, you know, an endangered species and that endangered species was planted by indigenous peoples prior to colonization.

[W] But they don't mention that anywhere in the paper.

[W] And a lot of times, indigenous peoples and their effect on ecosystems within North and South America are quite often totally forgotten about.

[W] But it's a big and important part of the story, right?

[W] Okay, so we've continued to build our our pollinator garden and our community garden.

[W] And now we'll just briefly talk about insects.

[W] Right.

[W] And this could be again the topic of an entire course or lecture.

[W] So how can we really help insects and more specifically insect pollinators.

[W] Well again you're going to learn a lot about that throughout this magnificent course.

[W] That pollinator partnership puts together.

[W] But plant plant species that have been in your area for a very long time, plant those native species, you know, tap into those ancient relationships, tap into those reciprocal relationships, tap into that familiarity like a squash bee would have with the squash.

[W] Right.

[W] And how else can you help pollinators, you know, reframe your relationship, right.

[W] Because once again, our interactions with the environment and the beings within the environment has so much to do with our relationships and our perspective of those beings within the environment.

[W] Okay.

[W] Now, when it comes to community garden, there are some other important community partners that, you know, we just don't exactly have the time for today.

[W] Right there.

[W] There are birds.

[W] There are fungi.

[W] There are these other kind of community partners like ants and moths.

[W] But of course, you know that that's a story for another day, right?

[W] So kind of ending off for now, what I'd really like everybody to do is, is really reflect on your relationship with many of these non-human beings, reflect on your relationship with insects, you know, reflect on your relationship with weeds or different kinds of plants, and ask yourself if your relationship, if your perception of these beings really changes or affects the way in which you interact or really treat these beings, and you know, as I end, as I end this talk, I just really want to say a huge thank you because once again, it's it is truly an honor for me to talk to this many people.

[W] And I just think that's pretty incredible.

[W] And, you know, pollinator partnership is also, you know, I'm also lucky enough that pollinator partnership is allowing me to talk about, you know, another kind of exciting opportunity, which is, of course, that I offer through my business.

[W] Right.

[W] Because, you know, when when I started learning again more about indigenous peoples and ways of knowing, there is so much to learn.

[W] And I just had nowhere, you know, when, no idea where to begin, right?

[W] I mean, it's important to understand terminology like, is it appropriate to ever say Indian, you know, where is it appropriate to say Native American, which is more of an American terms like a United States term.

[W] What does First Nation mean?

[W] You know, I had to learn about indigenous nations, whether that would be Anishinaabe, Haudenosaunee or many of the other indigenous nations.

[W] It was important for me to learn about the indigenous perspective and lens.

[W] We talked about that a lot today.

[W] It's important to build a good idea of the colonization of North America or the Northeastern Woodlands.

[W] You know, it's great to get a grasp on treaties and traditional treaties, which are wampum and reconciliation, like the 94 Calls to action.

[W] But what I also found a lot of the time when I started engaging with indigenous education were some introductory courses to indigenous peoples ways of knowing all those things is that they really told one part of the story.

[W] They focused a lot on the very troublesome events like residential schools, you know, 60s Scoop, colonization, intergenerational trauma, and those are all incredibly important topics, but they're part of the story.

[W] You know, they're not the whole story.

[W] So what I really wanted to do is tell that whole story, you know, design a course that can be taken for, taken by anyone and is designed for everyone who wants to learn more about indigenous peoples perspectives, ways of knowing or science.

[W] And, you know, for this course, I wanted it to be pretty much entry level.

[W] You know, you didn't need any prior knowledge, you know, because I hope to plant those seeds of understanding.

[W] And if you already do know some sort of aspect of this, of this kind of knowledge, then maybe you'll nurture those seeds of understanding.

[W] And this course is, you know, I'm proud to say it's called the Seven Seeds Indigenous Foundations course.

[W] And what I really focused on is, is telling that course through, you know, broader indigenous knowledge in my lived experience.

[W] So if you enjoyed me talking today, you enjoyed my silly kind of jokes.

[W] There's a lot of those in this course, and I really wanted to make it universally accessible, because sometimes I find, you know, when I'm learning that, it's really hard to digest the topic.

[W] But if you make it kind of for everybody, then that topic's a lot easier to understand.

[W] And then also learning can be fun.

[W] It's okay.

[W] And that's why I like to teach, right?

[W] I like to teach fun things.

[W] I like to have informative talks.

[W] And so within this course, there's kind of seven modules that focus on a different kind of key aspect of understanding indigenous peoples.

[W] And throughout this course you're going to learn about all these different aspects of indigenous peoples.

[W] And currently the courses it's 100% online.

[W] It's self-paced, there's downloadable resources, and typically it takes people about 12 to 14 hours to kind of complete the course.

[W] And if anybody in the audience is interested, the the course is now open for open registration.

[W] So you can kind of start any and you can either use this QR code and go on my website and check it out where there's a web page that you can learn more, or you can send me an email.

[W] And I think Anthony will will send that out afterwards.

[W] And if you are interested on that course web page, you'll find kind of a a sign up button as well as more topics about the course and more information.

[W] And you just basically click on the sign up today if you're interested.

[W] And much like Pollinator Partnership, I, I offer kind of a certificate of completion.

[W] And, you know, this isn't saying that you have learned everything about indigenous peoples ways of knowing or science or perspectives.

[W] It's really a certificate honoring the the seeds that you have planted and the seeds that you will continue to nurture and to kind of receive the certificate.

[W] You basically have to watch all of the seven online modules and complete some very late at home course reflection work, and then you'll receive that certificate of completion.

[W] So I hope if anybody enjoyed the way I speak or the way I teach, that you'll love to engage in this course, and I'd love to teach this course with you.

[W] And with that, I always end off with this silly slide here, which is opening up the dance floor for questions and discussion.

[>> W] Great presentation.

[W] Thank you so much, Brad.

[W] I'm going to share one wrap up slide and then we'll get to our Q&A period.

[W] Sure.

[W] Second here okay great.

[W] So just to wrap things up here.

[W] So tonight's recording will be available on the course information page by the end of the week.

[W] So keep an eye out for that.

[W] Our next session will take place on Tuesday, February 24th.

[W] So next week at 4:00 PM Pacific 7 p.m. eastern.

[W] So same time, same place, same zoom link.

[W] And so that will be module three on butterflies, bats and overlooked pollinators.

[W] And that'll be featuring three guest speakers Amanda Smith, Steve Sass and Doctor Kristin Lear.

[W] And yeah I think with that we can open up the floor now for some questions and I'll pass things over to Avery.

[>> W] Hi there.

[W] I would just like to say thank you so much for that incredible presentation.

[W] There's a lot of gratitude and kudos in the chat for you, and we are so grateful that you were here to teach us a little bit about indigenous perspectives in insect conservation today.

[W] So I'm going to start with a question that we've gotten a few times.

[W] And how can people get in touch with you?

[W] What's your contact information?

[W] And are you willing to work with people about specific questions?

[>> W] Yeah, sure.

[W] Well, Anthony, you might put it in the chat or send it in a follow up email, but you can go to Manoomin learning, which is w o m l n and then learning.

[W] I have a website there and there's a contact page.

[W] And like I said, I'm sure Anthony will send out my email as well.

[W] But yeah, I'm happy to answer questions and, you know, chat with people.

[>> W] Awesome.

[>> W] We also had some questions and a very active chat with book suggestions and reading lists, and people were wondering if you had any suggestions about further research or reading that people could do to expand their knowledge on indigenous perspectives.

[W] Yeah, so that's a great question.

[W] And one I get pretty much all the time.

[W] So there's a few answers to this one.

[W] You know, I'd like to think that, you know, Michael Jordan, greatest basketball player ever I don't really watch basketball, but I watched The Last Dance documentary on Netflix.

[W] Right?

[W] I figured, you know, when he was done playing basketball, at the end of the day, he probably went home and didn't play basketball.

[W] You know?

[W] And since I own a business that's all about indigenous education and teaching, I don't really read a lot about it at night, you know what I mean?

[W] So I'm not always the best source for like, great books on it, right?

[W] There are some fantastic websites, like There's Good Minds, it's called, which is an it's a indigenous owned and operated business.

[W] It's located in Six Nations of the Grand River Reserve in Ontario.

[W] But their website, they curate books that are either written by indigenous people or they're written in indigenous allyship.

[W] And that is the best recommendation I could ever give.

[W] Because, you know, Anthony might be more interested in insects.

[W] You know, Avery might be more interested in, I don't know, lacrosse.

[W] I might be more interested in, you know, canoes and things like that or the or the arts.

[W] Right.

[W] And the most important thing is, whatever you're interested in, use what I like to call and other people call authentic indigenous resources, which are books that are either written by indigenous peoples from the from the place where the knowledge is being represented, or by people who wrote those books with indigenous peoples in good relationship and allyship.

[W] Because, as many of you probably know, so, so many books that were written kind of pre 2000 about indigenous peoples and their ways of knowing are really not the best level of information.

[W] Right?

[W] So that's what I'd recommend.

[W] And then I guess, you know, another kind of plug for myself, I, I do have a book that's coming out quite soon as well, and that will be presented on my website as well.

[W] And that that's about indigenous science and ways of knowing.

[W] And more specifically for educators.

[W] But that's that's the best way I can recommend finding books.

[>> W] You know.

[W] Thank you so much.

[W] That was a really helpful answer.

[W] I'm sure people are going to get a lot out of your suggestion.

[W] Moving on to a question from Rich about appreciating all insects, he said, I see a lot of mosquitoes in the summer.

[W] Are they little spirits too tough to find the good in all insects?

[W] Do you have any thoughts on that?

[>> W] Yeah, definitely.

[W] I don't love insects either.

[W] I mean, they love to bite me.

[W] I guess because I'm sweet.

[W] I'm just kidding.

[W] But, you know, I, I don't really love insects either.

[W] You know, when I go up north, I like to go up north during times of the year where there's not a billion mosquitoes or black flies or horseflies, but they are really important, right?

[W] For, for a lot of other beings. Right?

[W] Like bats and birds and other kinds of insects that eat mosquitoes.

[W] But more than that, just because they're, you know, I see this a lot in, in environmental education and environmental science or advocacy.

[W] You know, they'll say that mosquitoes are so important because they feed bats or mosquitoes are so important because they feed birds.

[W] And for me, I always like to say that's true, but mosquitoes are important because they're just a living being, right?

[W] You know, they have just as much right to be here as we do.

[W] Right?

[W] You know, sometimes I really like I like a lot of what people consider weeds.

[W] Right.

[W] And I usually don't really like pulling them out of like, my grass or my garden and my mom, sometimes she would be like, take that goldenrod out.

[W] It looks like crap.

[W] And I'd be like, yeah, but I like that goldenrod.

[W] It's nice.

[W] And she goes, well, what is that goldenrod do for the environment?

[W] I'm like, what do you do for the environment?

[W] Oh, you know what I mean?

[W] So I think it's just important to understand that there are some beings that, you know, can be troublesome or an annoyance to us, but that doesn't make them, you know, less important.

[W] Right?

[W] So I guess when it comes to mosquitoes, just tread, tread wisely and try not to interact with them too much.

[>> W] I will say to first, I love that answer, Brad, but I will be talking briefly about mosquitoes next week as we talk about some of the overlooked pollinators.

[W] So just for everyone that's still out there listening, stay tuned for that next week.

[>> W] Yeah.

[>> W] I think we might have a lot of mosquito haters in the group, so I'm sure everyone will pay close attention.

[>> W] Also, Brad, I just want to remind you to keep keep track of the questions being asked and you got to pick your favorite one at the end.

[>> W] Yes.

[>> W] So another question from Rebecca and she says, what are some thoughts on dealing with invasive insects?

[W] I work on a farm and we have quite a few Chinese mantids and other invasive mantids that kill off native mantids, and also just pollinators in general, she says.

[W] To be fair, they also eat pests for our crops.

[W] But I can't bring myself to smash one.

[W] They didn't choose to come here.

[W] They were brought here by humans.

[W] I get conflicted.

[W] Letting them live causes harm, but killing them doesn't seem right either.

[>> W] That's a great question.

[W] What?

[W] Who was that that asked?

[>> W] This is Rebecca Sheir.

[>> W] Okay, so.

[>> W] Rebecca, I'm not sure where you live, but where I live in Ontario, right?

[W] We do have Chinese mantids and European mantids as well.

[W] And we also have one other species of Mantid that is really, really not common in Ontario.

[W] And it's only common in the very, very most southern regions of Ontario.

[W] So when it comes to Chinese and European mantids, nobody ever calls them that.

[W] Here in Ontario, everyone just calls them praying mantises.

[W] Right.

[W] And these, especially the Chinese mantis, they become what's called naturalized.

[W] Right.

[W] So they're not really classified as invasive because they're not common causing at least in Ontario, economic, environmental or human health issues.

[W] Right.

[W] And so that's kind of a weird thing for me to hear that, you know, people in your area might call them invasive because nobody ever describes them like that in Ontario.

[W] And that just goes to show you once again that, yeah, you know, there is that cultural perception aspect that we should consider.

[W] And I've talked to elders about this too, and every single elder I've ever asked about invasive species has always said the same thing, which is along the same lines of what you said is that, you know, these beings have a role in responsibility within their home community, but they're no longer in their home community, and they're kind of causing, you know, environmental issues or economic issues or human health issues or all of those simultaneously.

[W] So it is important to try to kind of mitigate the damage that they're causing.

[W] But what's most important, too, is not to demonize or villainize them, but still keep in mind that they are living beings and they do deserve a right to kind of do what they're doing.

[W] And they do have a role and responsibility within creation.

[W] They're just in the wrong place.

[W] So I think when it comes to that, like I've known elders who have tried to get rid of buckthorn and, you know, they what they what one of them has done is when they cut down the buckthorn, they gift that firewood to the community for their sacred fires and things like that.

[W] So I think it is just about trying to mitigate their damage.

[W] But also, you know, not demonizing them because I've, I've literally heard some people call like the emerald ash borer, like a bastard or evil or the devil, the emerald ash borer.

[W] Don't know that.

[W] You know what I mean?

[W] They're just doing what they do.

[W] Unfortunately, it causes a tremendous amount of damage and harm, and that's an unfortunate thing.

[W] But ultimately, we were the people who put them there in the first place.

[W] Right?

[W] And I mean, we as a species, not anyone here.

[W] Yeah, exactly.

[W] Vicky just said remove respect.

[W] I have long winded answers that would have been perfect.

[>> W] Thank you.

[W] That answer was very helpful.

[W] And detailed, which means a lot to our audience.

[W] We have another question from Barbara Lowe, and she asks, I'm curious if you found any documented history of indigenous nations studying insects or pollinators, and can share some knowledge or sources?

[>> W] There is a couple papers, like academic journal articles, where.

[W] Well, at least for Anishinaabe understanding of insects. There.

[W] There's a couple academic papers of that, and I'm sure there's academic papers for a lot of different indigenous indigenous nations across the world.

[W] But what I would say is, you know, this is kind of an interesting answer to this, which is that the word for education in anishinaabemowin is, is Kino Margolin.

[W] Okay?

[W] But it doesn't really mean education.

[W] Anishinaabemowin is a verb based language.

[W] What it quite literally translates more to is like teachings from the earth conducted on the earth.

[W] And so as Anishinaabe people, you know, we didn't have to be scientists to learn about creation or about the relationships within creation.

[W] Right?

[W] Excuse me.

[W] As Anishinaabe people, that was our role and responsibility to learn about all of those relationships and learn about all the insects and learn about all the, the, the trees and the fish.

[W] Right.

[W] And so when it comes to actual like academic publications, there might not be a whole lot, but there is a vast amount of that in indigenous communities.

[W] If you go and build those authentic relationships with them and learn from them, right?

[W] Because it doesn't matter what indigenous nation you go to, whether it's in North America or South America or, Africa or Australia, they will have that local knowledge because that was integral to their culture, was understanding all of those beings.

[>> W] A related question leading off of what you just said, Michael Payne asks, are there any stories, traditions or sayings that you know of in your experience that relate to pollinators.

[>> W] Or that relate to pollinators in specific?

[W] No, not that I know of, to be honest.

[W] Everyone in the crowd is like, thank the Lord.

[W] That was the shortest answer.

[>> W] Okay, another question from Sherry.

[W] As a non-Indigenous person, can we teach some of these teachings in our community outreach?

[>> W] You know?

[W] Yeah, because my my business and my teaching practice is really focused around that.

[W] You know, it is really nice when you do have people coming into your workplace or your school and teaching you about these things, but sometimes the teachers are professionals.

[W] Go, well, what can I teach?

[W] Right?

[W] And whatever I share, I always make sure it's like appropriate and authentic and also respectful.

[W] Right?

[W] So as a non-Indigenous person, is it okay to, you know, challenge your students or your coworkers?

[W] And I shouldn't really say challenge, but, you know, ask them to kind of think about the way they feel about certain insects or plants.

[W] No, you know, that's not that's not just an indigenous thought or an indigenous question.

[W] You know, that's a that's a question we can all ask.

[W] Right?

[W] I really feel like anything within this presentation you can share.

[W] But a caveat to that too, is I always tell people, you know.

[W] Don't tell indigenous stories, you know, don't do that kind of thing with storytelling.

[W] Tell your own story, tell your own lived experience.

[W] And that's what I did during this presentation.

[W] So, you know, connect your lived experience with that content and teach that way.

[>> W] So I think we have time for one more question, Avery. Okay.

[W] I'm going to shift gears a little bit.

[W] Madeline Moss asked, what is your favorite plant insect relationship and.

[>> W] Why?

[>> W] Is, you.

[W] Know, it's 830.

[W] It's been a long day for me.

[W] What is my favorite plant insect relationship?

[W] I don't know if this is my favorite, but maybe this is one of the most interesting ones.

[W] I learned that ant species, particularly I believe it was with red trilliums.

[W] They really liked the red trilliums endosperm, which is like basically like a nutrient dense packet around the seed.

[W] And so the ants will take that seed and they'll kind of scurry off and they'll put it underground.

[W] And a lot of them, they eat, and a lot of them also don't go uneaten.

[W] And they sprout into new red trillium or new patch of trilliums.

[W] I can't remember if it was a red trillium, trillium, or just all trilliums, but that I found quite fascinating too, because, you know, in a lot of ways that's an example of pollenization, right?

[W] You know, Pollenization kind of at the heart is really, you know, helping a plant with its fertilization process.

[W] You know, it doesn't always have to be just drinking nectar.

[W] Right?

[W] So I found that really, really interesting because when I would look at a patch of red trillium, just thinking of the history of how it got there was pretty neat.

[>> W] Thank you so much for sharing.

[W] That was a great story.

[>> W] Awesome.

[W] And Brad, did you have a favorite question?

[>> W] They were all really good.

[W] I think, honestly, I liked the, you know, can I teach any of what you just taught during this session?

[W] Because I think that's a really relevant question, you know, and a really good question because there is such an interest nowadays for indigenous knowledge, but there's always not the understanding of how to utilize that knowledge, you know, in a respectful and appropriate way.

[W] Right.

[W] So I think that was a really illuminating question, both for the audience in a way that I can kind of teach my approach to it.

[W] So.

[>> W] Perfect.

[W] And, Avery, do you have the contact for or the name for who that was?

[>> W] Yes.

[W] Congratulations, Sherry.

[>> W] Perfect.

[W] Congrats, Sherry.

[W] All right.

[W] Well, thanks again, Brad, for your great presentation tonight.

[W] Thanks, Avery, for moderating the Q&A period.

[W] And thanks, all of you for joining us tonight.

[W] We'll see you again next week.

[W] Tuesday, February 24th.

[W] Same time, same place.

[W] And we'll learn about butterflies, bats and overlooked pollinators.

[W] Thanks everyone.

[W] Enjoy the rest of your night.

[W] See ya.

[W] Great, thanks.

[W] Thanks again Brad.

[>> W] Thank you for inviting me again.

[>> W] For sure.

[W] That was awesome.

[W] All right.

[W] And I'll see you tomorrow.

[>> W] Yes, I'll shoot you, shoot you a text, make sure everything's all good, and I'll probably just shoot you the slides early kind of morning or late morning and.

[W] Yeah, but thank you again so much.

[>> W] Awesome.

[W] Thanks everyone.

[>> W] Thank you so much, Brad.

[> W] Bye.