

General

Pamela Price Oral History

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Interviewer: MS – Maeve Sheehan

Transcriber: NCC

Maeve Sheehan: All right. So, this is Maeve Sheehan, and I'm here with Pammy Price. It's April 16, 2023. We're here for our NOAA Oral History Archive interview. So, Pammy, do you want to get started and tell me a little bit about your interest in environmental science and your background? Let's start with where you're from and maybe one of your first experiences with environmental science.

Pamela Price: Sure. So, I grew up in Buffalo, New York. I now live in the Hudson Valley in Columbia County, New York. I've always loved being out in nature. My parents always took us camping and things like that. So, I've always been interested in nature and science. My first real, like deep dive into environmental science and environmental education was when I moved to the Hudson Valley. I started to do some volunteering with some organizations that did environmental education work. So, that's where I started learning about it. Then I eventually went back to school and got a bachelor's degree in wildlife biology and then a master's degree in education with environmental education focus. So, that's basically like how I got started and where I am now. Yes [laughter].

MS: Okay. Can you give me a little bit more of a sense of what were some of the things that you did when you were growing up that got you interested?

PP: Sure. Yes. So, like I said, my parents, even though we lived in Buffalo, they always tried to get us out in nature. My mom always told me about a teacher that she had that was super interested in birds. So, from a young age, I was interested in birds. My mom brought me some binoculars and some birding books. So, I was always out on the back porch or in the park or something looking for birds. My favorite toy was a stick [laughter]. I'd get all these presents for holidays and birthdays. But if you got me outside, I'd end up putting those things down and playing with a stick. So, when I got the chance to do some volunteer work and do some education, I really loved it. That's what prompted me to do further education in that. I found that when I was teaching and learning about the environment, I was always really happy. I also felt that it was a great way for people to meet each other and connect to each other and also, connect to the world around them.

MS: Okay. So, who were some of your first influences in terms of maybe professors or coworkers?

PP: So, one of my first mentors was Fran Martino. At that point, she was doing an AmeriCorps internship and also working at a land conservancy – the Columbia Land Conservancy, and she kind of took me under her wing. I did a lot of volunteer work with her. She helped me to find a lot of educational opportunities with the DEC, with the New York State Outdoor Education Association. So, I got to go to some week-long summer camp kind of things to learn more about environmental education with people that were in the field and also with people that were newly learning. So, we got to learn together, which was really cool. So, I got to go to the Adirondacks and learn about things there. That was a week-long thing that was really fun. We stayed overnight. Stayed there the whole week, learned all different ways to educate in the woods, on the water, in the field. I've done a lot of urban education in my master's degree. I'm learning how to teach about nature when there's not a lot of nature around and finding the little things, like in cities and urban environments. I also had a really great collaborator. I think of her as a

teacher. I worked with Vanessa Bear. She really helped me to get my feet under me by working with people who are "underserved." Helping me to find ways to get people out in nature when there wasn't transportation and things like that. Helping me to find grants and other ways to bring nature to people. Then another really great mentor was Jennifer Shirk. She's with the Citizen Science Association. She was one of my mentors for my capstone project. She really helped me to learn a lot about community science and the impacts that community science can have on people and communities and how it can be a real way for people to investigate things that are important to them in the environment and do things to make their environment better.

MS: All right. So, I noticed that you mentioned that you had experiences teaching in both urban and more rural environments. That's definitely a question that I want to get back to. But maybe we can just start with your first paid experience teaching environmental science.

PP: Sure.

MS: You can tell me a little bit about that.

PP: Yes. So, I guess my first paid environmental science teaching would be – I did a ton of volunteer work. But the first time I got paid was when I was the education program coordinator at Columbia County Soil and Water Conservation District. Which was a really great experience because I had a lot of leeway to do things that I thought were important for the community as long as it was educating them. So, I kind of went the community science route and tried to go out to the schools and community organizations and learn what was important to the community, and then try to teach about those things. So, I did a lot of things where we would talk about certain problems that were going on. Like harmful algal blooms, like air quality. In the city of Hudson, there are trucks that drive right down the street where people are living. In fact, next to Kite's Nest, which is one place where I did a volunteer kind of stint, it was right next to the sewer plant, and that's where the community garden is. So, like learning about things that were important to the people and how to mitigate the effects of things, like those trucks on the streets. Being right next to the sewer plant and how we could make what we had better, and maybe get things done that would help us to get less trucks on the street in our neighborhoods and things like that, which I'm still working on that. But being in that position, I was able to go out in the schools and do programs. I did public programs. So, I was able to reach people from babies to grandparents. So, that was my first experience in a paid position, doing environmental education.

MS: Do you remember specifically any tools or techniques that you used that helped you get your message across?

PP: Yes. So, one kind of tool that I try to use is asking people what they know before we even get started so that I can meet them where they're at and then go from there. Also, trying to learn when people have had experiences in what I'm talking about, or people might know more about it than I do. Like, giving them the opportunity to share their experiences and share their knowledge with other people in the community, I think is a really great tool. I also like to try to make as most of the experience hands-on as possible rather than standing up at the front of the room and just kind of giving a lecture. I definitely use things like PowerPoint presentations. I

really like to give people as much information as possible without it being overloaded. But I also think it's really important and a really great way to learn if you are engaged with your audience and let your audience be part of the teaching experience. That's another reason why I also try to use community science a lot, just to give them the opportunity to be part of what's going on. Maybe even be part of deciding what we're going to learn about in the coming months or things like that. Like, I would often ask after a program, what kind of things people were interested in so that I could gear my next set of programs to that kind of thing.

MS: When you say community science, can you explain a little bit more? Can you describe what that means to you? What the definition of community science is?

PP: Yes. So, community science to me is when people in the community come together and either rally around something that's important to them or find something that they're interested in and be part of it. Like, either taking data for a scientific research project or going from – starting with a question and figuring out something about what's important to them. Like I did with my master's thesis, where there were two lakes next to each other that were having problems with eutrophication and harmful algal blooms. So, they were looking for a way to protect their lakes. So, I got them to get together instead of working independently so that they could share their resources and share what they already knew. So, then they got together with a scientist and came up with some hypothesis of what they could possibly do to help protect the lakes, how they could figure out what was really going on with it. So, they made their own community science project, where they're monitoring the lakes and are now putting floating treatment wetlands in the lakes to see if they can get some of those nutrients out of the lakes to help to prevent harmful algal blooms in the future. Then some other community science things that I had community members participate in was some school groups participated in some of the Cornell Lab of Ornithology bird related community science and citizen science projects. I also was part of a community science project at Oakdale Lake in Hudson, New York, where we were also looking at water quality with different community members. Then taking what we find and presenting it to the community to both let people know what's going on in the place that they live, also give other people opportunities to become part of the project so that they can be involved and know what's going on in their community and how they can make their environment a better place so that it's something that they can love for a long time to come. I think community science is a really great way to help motivate people to be stewards of the planet. Because they're really involved in what's going on.

MS: Okay. So, what were some of the things that you would say during these programs to get people to participate or to get them interested? How would you relate the topics to them and their lives?

PP: So, most of the time, when I have a program, I ask everyone to briefly introduce themselves at the beginning just to create that sense of community. I ask a question about whatever the topic is. So, for instance, if I was doing a bird program, I would ask if people knew about birds already or if they were birders or if they'd seen anything interesting or if they had any cool bird facts so that we could find out where we all were on the spectrum of birds [laughter] and figure out what we knew or what we want to know. Like, a lot of times, when I would do a program in the schools, particularly, I would ask them, "What's your biggest question about birds?" So that

they would have time to think about what we were talking about and think about what was important to them. Or what they were interested in before we even got started and then feed off of that. If somebody had some sort of expertise in something, then I could ask them questions as I was going through the lesson plan or out on the trail. Or answer those questions that people had asked in the beginning as we go along, things like that. I think it's really important to get to know the people that you are going to be talking to at least a little bit before you get started. Because that rapport can make it a lot more fun and a lot more interactive and make people go home with a sense that they really were part of what was going on at that program. I hope that makes sense.

MS: Yes. So, can you give me another example of one of your early job experiences?

PP: Yes. So, another thing I did was, for one of my internships in my master's thesis, I did a virtual internship with the Missouri River Bird Observatory, where I helped to create virtual birding lessons for sixth to eighth graders on adaptation. So, that was one instance where I got to use all of my, kind of, skills from my art degree and my wildlife degree and my environmental education degree. I put it all together to make these virtual programs that talked about all kinds of bird adaptations. So, that was a really fun experience, being able to learn from experienced birders, learn about branding. Learn about how to get a message out to people that you weren't really going to see face to face, how to really make something in writing. Something that someone could take out and make it hands on. So, that was a really cool experience that I had with my birding work. I also did a lot of hands-on work when I was in my undergraduate program. We did a lot of field trips where we went out and did things. Like our waterfowl research project where we went out, we stayed out for a weekend. We did bird counts. Then we came back and wrote about it. Then we made a little presentation to the Wildlife Society Student Chapter about what we learned and about the different waterfowl that we saw on our trip.

MS: Then can you describe some of the challenges in communicating these ideas to sixth or eighth grade student audience?

PP: Sure. So, I think the biggest challenge was not being able to be there to ask and answer those questions in the beginning. So, that was one of the things that we decided to add to all of the lessons; were some guiding questions in the beginning. Then some questions at the end that would help to see if they students – help them focus in the beginning on what we wanted them to learn. Then at the end, help them to figure out if they had learned the things that we were hoping that they would learn since we wouldn't be there to actually do the lessons. I think that was a very helpful thing. Another thing that we added to those was we tried to have a video component to each of them where they could go either to a video on the Cornell Lab of Ornithology website or a video that we had made up. So that it would be kind of like they were in person even when they weren't able to be. So, those were some of the things that we did to try to overcome the challenges of not being in person and still getting those more personal question answer kind of things done.

MS: So, is there anything that you want to tell me about some of your earlier experiences working in environmental science that you might have left out before we get onto your more current jobs?

PP: I think my earlier environmental education experiences really shaped the way that I teach now. One of my first experiences was a really sweet experience, where I was working with some preschoolers. We were just going on a kind of a discovery hike. It was the first time some of them had ever been in a park or anywhere that had anything besides sidewalk. One of the little girls in the group was kind of quiet and kind of hanging back in the back. I went up to her, and I said, "Is there something that you're interested in? Can I help you look at something?" She just said to me, "Can I hold your hand?" So, I said, "Of course." As we walked along, I started to show her little things. Like, we saw a little butterfly. We saw a clover. I gave her a magnifying glass to look at the clover and look at all the little intricate pieces. At the end of the hike, as they were getting back on the bus, one of the teachers said to me, "You are a miracle worker." I looked at her and said, "What do you mean?" She said, "This girl has never spoken to anyone in the whole year that she's been here." So, she had been there since September. This was in like the end of March, beginning of April that we went on this walk. When we got back to the bus, she was just telling everybody about, we saw this butterfly. There's all these little parts to look over and so many things. It made me feel really good to have been able to bring her out of her shell so that she could have that experience to talk to her classmates and her teachers. I often would check back to see how she was doing. It really made her a different student. She was happier to be in the classroom. It gave her a way to talk to the other students that she, for some reason, didn't have before. Maybe it was just that little bridge that she could talk to them about something that was a new experience for everyone, for a lot of them. So, that's one thing that really made me feel like getting people out in nature was really important and a reason that I pursued my education in the field. So, like those kinds of experiences I think are so rewarding both to the teacher and to the person that you're teaching who gets that experience. Those are the things that I try to look for and make happen in most of my programs. If I could have one person have an experience like that once a year even, that would be awesome. But if I could have someone have an experience like that on every program, that would be super.

MS: What are your observations about how students learn at different ages or how they learn as individuals? What are some specific learning preferences that you've seen?

PP: Yes. So, I would say everyone is different. But I also would say that depending on age, some students are more free to learn. Like, they aren't intimidated by other students. Like, some students, as they get older, they don't want to say the wrong thing. Or maybe when they're teenagers, they want to look a certain way or don't want to get their sneakers dirty. Like, there's a sneaker culture at some schools that everybody's sneakers can't get dirty. So, when they go out in nature, they're like, "Oh, my gosh. I'm going to get my sneakers dirty." So, trying to overcome those kinds of things and make it fun for everyone. I think those are things that you really have to think about. The other things you have to think about are just like the words that you use, making sure that you – I don't know how to explain it. Making sure that you use words that are familiar to the people that you're educating rather than using super scientific terms, bringing it to meeting them where they're at. Learning the words that they use and then connecting the scientific words with their words. Things like that are super important. Trying to make people feel comfortable outside is a big thing because some people aren't. Some people have not been out in nature before or have had bad experiences. So, turning that around and trying to teach people about how nature can help their health. Physical health, mental health, and

things like that are really important. I try to use that kind of stuff to get my science and environment information out while still making it enjoyable and fun for the students. I think the most important part is letting them be part of the teaching. If there's a way that I can get them involved in either doing something hands on, asking questions, and answering questions. I think that that's one of the biggest things; is having them be part of it instead of just standing around and listening to what I'm saying. Have them be part of it at any age. I think that's a really important part.

MS: Okay. So, let's move on to your more current work with soil. Is there any particular way that you want to introduce that type of work? Maybe just by explaining the importance of soil conditions or just giving us some context for that?

PP: Sure. So, my current work is at the Albany Pine Bush Preserve [laughter] Commission. So, at this position, I'm the preserve naturalist and educator. So, I am trying to teach people about the importance of the Albany Pine Bush itself, which is a globally rare, nationally significant, and locally distinct in the ecosystem. It's an inland scrub oak, pine barrens. It's a super rare ecosystem and one of the best examples in the world that is left. So, I am teaching people about sand and how geology turned a glacier into a lake that receded and turned into sand dunes that were created by winds and how we manage this area to keep that habitat of an open pitch pine-scrub oak barrens. So, the ways that we do that are by talking about the animals that live here. One which is an endangered species called the Karner blue butterfly. We also talk about a lot of the bird research we do here. Because that helps us to determine if the management that we're doing on the land is helping the species that use the pine bush. Because we use both mowing, tree cutting, and prescribed fire, which can all be kind of controversial topics to some people who come in because they think it's a preserve. Why are you cutting down all these trees? Or why are you setting fire [laughter] to this place when it's supposed to be a wildlife preserve and an environment that we're wanting to preserve. People are thinking we're destroying it by doing the mowing and the tree cutting and the prescribed burns. While actually, we're helping to manage it because some of the plants need the fire and need to have the open space. Like the wild blue lupine. That is the only thing that the Karner blue butterfly caterpillar eats. Can't survive if it doesn't have enough open space. So, that's why we want to have the barrens conditions at the Albany Pine Bush. So, teaching people how important management is to both the protection and uniqueness of the natural community as well as the species that use it is one of the most important things that we try to get across in all of our programs here at pine bush.

MS: Okay. So, do you want to talk maybe about some of the stakeholders that you work with?

PP: Sure. So, our stakeholders are our community members. We also have some friends, groups that help us. We're actually part of the environmental conservation law that the commission – so, we work with people to help us to manage the land and also help us to get the word out. So, one of our biggest partners are the Friends of the Pine Bush. They help us to both get the word out and also to get funding for things. We have annual photo contests that we do that the friends takes out to local libraries as well. So, if people can't get to the Discovery Center to see the photographs, they take those out into the community. We have a lot of volunteer opportunities here. So, that's another way that we connect and make partnerships. We work with a lot of the schools to get this information out. Scout groups, homeschool groups, things

like that. Then just the local governments. We have a board that has people from the state, from the Department of Environmental Conservation, from the city of Albany and Schenectady, things like that. So that we have all of the stakeholders at the table when we're making those kinds of decisions.

MS: Okay. So, what is your day-to-day focus, would you say?

PP: So, my day-to-day focus is basically trying to be knowledgeable of what's going on in the preserve as far as what kind of things are happening in a phenology sense. Like, what's blooming, what birds are coming back, things like that. Supervising the volunteer naturalists at the Albany Pine Bush Preserve who walk the trails regularly. We have twelve different trail heads with over twenty miles of trails that they report to me on. Then I disseminate that information, so people know what kind of animal species are around, what kind of plants are blooming or not blooming, things like that. I also help with the education programs. So, I take people out in the field or go to the schools sometimes to do educational programs. I also have a newsletter, which I send out once a month to the volunteer naturalists and anyone else who wants to subscribe, just documenting the things that we have seen the previous month and what's going on in the reserve and what's coming up, science lectures and things like that. That's another thing that I also participate in, is doing some of the science lectures. I did how to identify birds lecture with one of my colleagues in February. He tried to get people ready to see birds in the pine bush this spring. So, my day to day is variable and always interesting. I am always, for at least part of the day, out in the Discovery Center trying to interact with people in the community and help them to learn more about the [inaudible]. How they can be part of protecting it and conserving it and managing it for years and years to come so that it can be recreational and educational asset for the community.

MS: Okay. Is there a certain issue that has come up recently that you might want to describe? Perhaps a question that someone in the public had or a recent lecture that you gave or educational program that you gave?

PP: So, one of the things that we are working on right now is our Health of Habitat program, which is all about the Karner blue butterfly, which is a really cool program that we do where we go out into the schools. We teach the students about the lifecycle of the Karner blue butterfly, about what an endangered species is, about how important a habitat is to wildlife that are specialists. The Karner blue butterfly, like I said before, its caterpillar can only eat the wild blue lupine leaf. So, if we don't have wild blue lupine, the Karner blue butterfly won't survive. So, part of the program is going out to the school, teaching the students about the butterfly. About the unique habitat of the pine bush preserve and how the wild blue lupine helps the butterfly. Then they actually grow lupine seedlings in their classroom. Then we'll be coming out to the preserve in the end of April and May to plant those seedlings at the pine bush so that they'll be there for the butterfly caterpillars. Hopefully, when they come, other lupine will be in bloom so they can actually see the live Karner blue butterflies flying in May and July when they have their two roots. So, I really love that program because it not only teaches them about this rare habitat, which some of them it's right in their backyard. They don't even know it's here. So, getting that word out, teaching them about wildlife species and how important habitat change can be to their survival, helping them to learn about how they can do something to help steward the planet and

certain animals and places that are in their backyard, and giving them the opportunity to get out to the preserve and see what it's all about and be part of keeping those kind of blue butterflies flying. Because when we started this program, there were only a handful of them. Now, we usually count between 10 to 20,000 when we do our counts. During COVID, it even went up to over 50,000 butterflies that we counted in our point count units. So, it's really a great little program and a way to connect the kids to the pine bush. Then they can bring their parents and friends and family members out to learn about it as well. Hopefully, they'll turn into environmental students and stewards as well.

MS: Okay. So, to switch topics, are there any specific advances in your field that you would like to talk about? Or anything that, looking back, you see as an important development that has helped you do your work?

PP: I feel like the biggest thing that has helped me do my work is the ability for me to get more people out in nature through things like funding for bus transportation and through being able to have virtual options. That's not my most favorite way of [laughter] teaching about the environment. But during COVID, being able to learn how to do so many things remotely and being able to bring more of nature to people who can't get out in nature through either video or by making takeaway kits that we could bring out to the different schools or community centers that people could pick up and then do on their own, the lesson that I might have done with them in person. I think that thinking about those different ways to teach about the environment have been really helpful to me. Because a lot of times, I felt like I was missing a huge chunk of the community because they couldn't get to my programs or didn't have a way to engage. COVID really helped [laughter] with that because it made me figure out a way to connect with them when I couldn't be with them in person. That's not to say that I want to do it that way. But to say that it gives another way for people to connect that they might not have had prior to that as much. I think that the, I guess more popularity of the [laughter] outdoors lately with people wanting to get out in the outdoors, with people learning more about the health benefits of being in nature. I think that has helped people to want to come out and learn more. So, it makes it easier to get people to come to programs and take the time to listen about a lot of different topics that maybe they might not have come out to a water quality program previously. But now that they are learning more about how different things that we do can impact the environment and how things that we do can help to mitigate those things, I think that that has really been a catalyst for more people to come out and learn. Also, a catalyst for more people to become more stewardship minded. In the past, like four or five years, I think that that has really come to the forefront a lot. That's one thing that I try to include in all of my programs; is that not only is nature fun to go out in. Are there really cool things that you can see? Is it really important for our life? I mean, like, all the different kinds of pollinators that if we didn't have those, we wouldn't have any food, that kind of thing. I think that it's really great to be able to connect people with the place that they live and the other plants and animals that are around them. So that they know how important it is to their health and their life that we make sure that all of these things work together and are [inaudible].

MS: All right. Is there anything that you want to say that you haven't gotten the chance to say in terms of discussing your job experiences and your observations about environmental science?

PP: I think I've probably said most of it. I mean, I just really feel that environmental science and environmental education are really one of the most important things for us to think about. Especially, at this time in the world with all of the things going on with the climate. I think that when we really think about and connect with ourselves, with nature, and the environment, we realize how much we are all connected together. So, I really think that learning about these things and caring about these things are so important, just for us in general.

MS: Okay. Pammy, so, then let's wrap it up. Thank you for your participation today.

PP: Thank you so much for giving me the opportunity.

MS: Okay.

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