S U N Y College of Environmental Science and Forestry Campus Conversations: The Podcast
Episode 5
Stacy McNulty, Associate Director of Research, Adirondack Ecological Center
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Stacy McNulty: I have administrative duties running, helping to co-direct the field station at the Newcomb campus. So, the Adirondack Ecological Center being a research institute that E S F runs, it's actually the biggest single piece of land that E S F operates. It's fifteen thousand acres. It's right in the geographic heart of Adirondack Park. So, in the town of Newcomb and a little tiny bit in the town of Long Lake. So, I had been a grad student, and I had worked at the Newcomb campus as a student. And I quickly became very enamored of that kind of landscape where you have all this data and expertise in the form of people's knowledge of the landscape and how interesting! I got to sort of explore things. Usually, there's a public component, so it's supporting our students, obviously, and our research and our scientists, but also translating that information into some actionable space.

Joanie Mahoney: Hello, it's Joanie Mahoney, and I am very happy to be back again for another installment of my conversations that I get to have with fabulous faculty from E S F. And today, my guest is Stacy McNulty, who's the Associate Director and Research Associate, Roosevelt Adirondacks wildlife conservationist at the Roosevelt Wildlife Station. So that's a mouthful, but you just explained to me that I have some scientific titles in there and some administrative titles. I would rather let you describe what it is you do here at E S F. Welcome, Stacy.

Stacy McNulty: Thank you for having me. I'm very excited. Yeah, so my work at E S F is split largely towards research, which is my ecology background and what I do as a scientist. And then, I have administrative duties running, helping to co-direct the field station at the Newcomb campus. So, the Adirondack Ecological Center being a research institute that E S F runs and being able to facilitate all the work that we do through E S F's campus up in the Adirondacks.

Joanie Mahoney: And that's what we affectionately referred to as the A E C.

Stacy McNulty: Yes.

Joanie Mahoney: So, I have had a couple of guests that are coming from some of the remote parts of the campus. This is an opportunity to tell people about the remote campuses. So,

if you would be willing before we really talk about who's Stacy is, but what is the Newcomb campus like? What comprises the Newcomb campus?

Stacy McNulty: So, it's actually the biggest single piece of land that E S F operates. It's fifteen thousand acres. It's right in the geographic heart of the Adirondack Park. So, in the town of Newcomb and a little tiny bit in the town of Long Lake. The brief history of it is that in 1932, Anna Hyatt Huntington decided that she and her husband, Archer, they had no children, and she had a lot of land holdings in the Adirondacks and elsewhere. And she was looking for sort of something to do in terms of a philanthropic gift. And she had a relationship with Syracuse University because she was a very famous sculptor. And actually, she's the one that did Lincoln on his horse out here on our campus. And so she, they had a campus in Newcomb. That was not a campus at the time. It was their great camp. Actually, they would go up from New York City and use that landscape to recreate and rest and enjoy being an artist, but also a keen observer of nature. She felt that it would be a really great thing to give that landscape, that they were no longer really using to the College of Forestry, which at the time was at Syracuse University. So, the relationship was that E S F did not exist at that time. This was in 1932. So pre-SUNY, the family donated the land, and they hung onto the great camp itself, which was the historic buildings for another several years. So, by the time the 1930s were over, the college had the whole fifteen-thousand-acre campus, and it was expressly designated as a research station. So doing experiments, learning about wildlife and forestry and the kinds of things that the College of Forestry did at that time. And so, since then, E S F has operated it as a research station and a learning lab, an outdoor place to understand the forest and the waters and the landscape. And we've been there for almost 90 years at E S F.

Joanie Mahoney: And what a phenomenal asset to the college. And it is something that makes us unique and is an opportunity for people to come and get that hands-on experience that E S F is known for. So, I will come back to that, but let's start with Stacy. So where was home for you?

Stacy McNulty: So, I grew up south of Ithaca in Horseheads, New York. My mom and dad were high-school teachers in Elmira districts. And so, my brother and I grew up in the Southern Finger Lakes and enjoying being outside and building little dams and creeks near home and playing in the cornfields and all those kinds of things that you do when you live in rural life, and you have a lot of exposure and access to the outdoors. So, I played outside a climbed trees. I was just always I was always outside.

Joanie Mahoney: Yeah. I would say that I would describe my childhood very similar, even though I lived in the city of Syracuse, but we were outdoors all the time and climbing trees, and as an adult, I have developed a healthy fear of heights. And I look at some of the trees that I used to climb, and I can't believe it, but I think that's one of the things a lot of people here have in common, is just as children spending a lot of time outdoors and appreciating nature. So, did you go to the schools where your parents were teachers in Elmira?

Stacy McNulty: Thankfully, no.

Joanie Mahoney: That's tough.

Stacy McNulty: I had my mom as a substitute teacher once or twice, and my friends all said what a hard teacher she was because they wouldn't. They got in trouble when they were talking in class, and she was not having any of that. My mom was not a hard person at home, but she was she was not going to truck with any kind of silliness in class apparently. So, no, they taught in other schools. My brother and I went through a different school district for school.

Joanie Mahoney: And then what was your path here to E S F?

Stacy McNulty: So, I knew that I was really interested in biology. I always was experimenting on things outside. I had a… my dad was a high school biology teacher. He had brought me a microscope and a bunch of science equipment when I was a kid. I was always playing with it and trying things out. You know what if you did this and, you know, what if you like looked really closely at that and I started in that kind of little cellular way that kids, because there's little things that you can mess with. Rocks and small stuff.

Joanie Mahoney: A leaf?

Stacy McNulty: Yeah. Like my cat brought a Cedar waxwing home one time, had killed it unfortunately. I remember very clearly thinking how beautiful it was, but also how interested I wasn't like, how did a waxwing, how does it actually have these little kind of epaulets on its being that are these really interesting colors. This bird synthesizes out of its food. I found out much later once I was trained as a scientist. Like they actually eat berries and things that they get these compounds out of their food. But it's such a neat thing when you look at something in your hand and you kind of start asking questions. So, I always was that questioning kind of kid, and it was pretty clear I was going to go into biology. I actually, I never looked at

E S F for undergrad because, at the time, it was only a two-year transfer school, and I didn't really want to go somewhere for two years and then transfer. So, I very quickly, like looked out elsewhere. I ended up going to another SUNY school with a really strong biology program, which tends to be more cellular and biomedical. But I found the couple of faculty who were more organismal people, and I worked with an ornithology professor named Bob Easton. And that was my first field job. I ran around trying to catch birds in the fields of Western New York, and I learned a lot about how to troubleshoot and be dealing with things in the wild space which is uncontrolled in large part, and trying to just figure out what that meant. It was just a job. And then I remember meeting one of his grad students who was doing a neurobiology project with these birds. And I said, well, how do you know kinda, what to ask? And the students said, well, you kind of read the literature, and you look for places where people haven't done something yet or haven't figured something out. And they were actually, at that time, they were actually studying how birds migrate. And they figured out in his lab and other, other colleagues that, you know, certain birds have these magnetizable particles in their brains, and you can actually magnetize them and sort of scrambled their brains and make the birds think that north or south, we were doing these experiments in this lab.

Joanie Mahoney: Wow, wow. How interesting.

Stacy McNulty: It kinda blew my mind that you could a work on wild spaces but also have these interesting questions you could ask. So that suddenly made me think I better go to grad school. So, I came to E S F. I interviewed in the biology department with several faculty. And I felt a little Imposter Syndrome at that time actually because a couple of professors asked me things like, well, what's the scientific name of the American Robin? I didn't know because my background is a Bachelor of Arts. I have as much humanities as I do science in my undergraduate program. I've always been interested in writing and communicating. And so, for me, I thought, uh oh, maybe I'm not going to do well at a school like this where it's really hard core science. But when I got an invitation to come to E S F through who became my advisor, Dr. Bill Porter. And he was nothing but super supportive of me. And so, I actually ended up going in the inquiry space and working with people who ask questions rather than worrying about the ones who said, like, if you don't know what that species is, I figured out really quickly, you can look that stuff up. I'm not a taxonomist, I am a connection person that's ecology was interesting to me because you can learn things about the system, but you can also sort of watch how it operates and what pieces sort of levers get pulled and which parts have the power or the energy at any given time and how that changes through time and space. So that's where I just sort of followed my passion through being at school at

E S F and then going and working a couple of other places. But in the non-profit world, for a little while, I worked for another academic institution. I, I saw what it was like to be at a high-level research institution and getting to do really cool technological things. And then I came back to E S F. So that's where I've been.

Joanie Mahoney: Wow, what an interesting experience that you've had. I am interested in all of those same things, like I imagine you as a little girl with your microscope, and I remember having microscopes and my father showing me how different it looked when you looked at it at that level, you know, and so what year are we on when you came back here for the most recent time?

Stacy McNulty: So, I came back in the year 2000. So right when Dr. Murphy became president, he came up, and we invited him at that just so I had been a grad student and I had worked at the Newcomb Campus as a student. And I quickly became very enamored of that kind of landscape where you have all this data and expertise in the form of people's knowledge of the landscape and how interesting I got to explore things, obviously being on main campus and taken classes. So, I had already known kinda what the field station sort of life was like in a way. And so, when I came back, I knew what I was getting into, and I had lived in a very urban place, and I tried commuting. I tried that whole kind of lifestyle, and I found that it really just didn't fit me. So, I jumped ship, came back to the Adirondacks to pursue my, my science and my training of other people to do their science.

Joanie Mahoney: And as a result of my role here at E S F, I've been able to come up to the Newcomb campus a few times. And I get there, and I think, wow, what a great decision. A series of decisions that would lead you to be able to having this, have this life where people save their money for an opportunity to come for a week or two a year. It's like the highlight of their year is a little bit of time in the Adirondacks, and you and your husband get to raise your children right there in the center of the Adirondacks. So, along the way, we have this young girl who's got this real interest and this curiosity. And you mentioned that your father was a biology teacher, and so I think that is an obvious mentor or inspiration**.**

Stacy McNulty: Guess he likes to try to take a lot of credit for any career success I might have, but he gets he gets some credit for sure.

Joanie Mahoney: Are there other people that you crossed paths with along the way that in that nudge you in that direction towards science? Because you are a young woman, and I know times have changed, but it really wasn't a common thing for women to

be nudged towards science. So, I'm wondering who you intersected with along the way that encouraged you.

Stacy McNulty: So, I will say right off the bat that I am very lucky that I have never really felt too much impact of who, who my identity might be. I've been lucky to have lots of people open doors for me. I did have a couple of professors who were sort of the old school type who would say things like, well, I don't know why women are in science. That, fortunately, was really rare. I never really felt that. Personally, I always felt like, wow, you're just really limited to think that. Why would you ever think that? But my adviser, Bill Porter, I think, gets a lot of the absolute credit for being wonderful, putting just lots of opportunities in front of all of his students and really making a place for women. When I came to E S F, the whole entire department of biology only had two women faculty.

Joanie Mahoney: And now the chair is a woman. Very interesting. And I, this, this about you. But I would say that there was a long period of time in my life where I answered that question the same way. I kind of felt like the women's movement was successful, and I was a beneficiary. And I had a lot of doors open for me, and I was able to go into a lot of nontraditional areas as a lawyer and a prosecutor, and into politics. But at some point, I did experience kind of that wall or that attitude that you describe, and I haven't seen it here at E S F, thankfully. But I know what you mean where we were able to have people in our lives that didn't limit us based on some identity politics kind of thing. So, I'm sorry for your loss because I know you and Bill were close, and I know he has recently passed, and you had an event up at Newcomb honoring Bill.

Stacy McNulty: We did. We obviously, with the pandemic, we weren't able to have a huge celebration of his legacy and life. He was the longest-serving director of the Adirondack Ecological Center, almost 30 years. He spent a huge amount of his time and career at E S F being a professor and doing a lot of really cool things, and he impacted a lot of us. So, we were lucky to be able to have a couple. His, his wife, and his sons come back and then have some of his grad students come as many as we were able to kind of safely gather outdoors in August, and just have sort of a celebration of life and, and share stories. And it was really fun because people who were earlier grad students who has had somewhat different experiences, and it was interesting to see almost you could, you could see how his growth as a professional and a mentor happened through his career. He cared a lot about that and listening to the most recent grad students before he left E S F and retired and went on to another part of his career. They had a very different experience of him. And I consider that to be really inspiring because it suggests that you can learn

your science, you can learn your discipline, you can learn material and things, and things about American robins or what have you. But as educators, we have to figure out how to mentor the new people and figure out what they need. And so, my, I feel like my point in this career, my lesson from him was, what are the things that we can do to create a space for the next people, the next one's coming and who can that be and how many. How wonderful those people are that are going to do really cool things that we haven't even thought of. So, I'm always excited about having new students because they always have great ideas, better ideas than me, frankly.

Joanie Mahoney: And you know what a what a lesson for you to be able to see that through Bill's career, the trajectory of his career. But I think that's what makes an outstanding faculty member, is that meeting students where they are and understanding that knowledge transfer goes both ways. And you will learn things from students and kind of adapt as you go along. And the communication part of it is so important. I mean, we're here today because E S F has a wonderful team of people that focus on being able to communicate and translate the science, and the world needs what's happening here at E S F. We are a place where solutions are coming from. But if we can't translate that back to policymakers, sure. But also the general public. We need people to be putting pressure on their representatives to be creating the policies and putting the resources behind the things that we know can work to solve some of these issues that we have. So, I think it's really great for us that you have this Bachelor's in arts and that you have this humanities background, and you have this ability to do that translation. I don't know before, but I know that now that I'm here at E S F and have met folks like Tyler Dorholt, who's producing this for us. That is a priority here at E S F, and just sitting here and listening to you, I would imagine if you could get a few minutes in front of some of the policymakers, you could probably do a lot of good. So, I'm glad to hear that. You sound like I describe E S F students generally as very focused. But was there a time that you considered a different path?

Stacy McNulty: There was a time when I was younger that I thought it's going to be a veterinarian like a lot of people who maybe orient towards natural sciences or wildlife, or some of the things that I eventually ended up studying formally, I think. But I realize though is that that kind of work comes with a lot of people kind of emotional baggage because it's the, it's the animal, and you're caring for it. But there's that whole relationship that happens, and I decided that I wasn't interested in that kind of service space. I although I really respect it. So, I thought, well, okay, what else? If I like animals and I kind of like this kind of thing, what else can I go?

Joanie Mahoney: You just wanted the animal part of the job and not the interaction with the people.

Stacy McNulty: Yeah. And I mean, you know, people will obviously we joke about that a lot at E S F, you know, the whole like silliness of I'm interested in working with trees or, or mushrooms or name your species of choice or whatever. But honestly, all of us at some point have to recognize that we get nowhere if we don't still have that human interaction. So, I think one of the really cool things about my job is that I get to be the place. That's the field trip place, right? So, we have students coming from all over the place, E S F and lots of other institutions, other countries coming to learn in that space. And so, what are the things that we can put in front of them that are really interesting, and that really engage all of the senses, right? So, you're there, you're not in a classroom, you're outdoors, you're actually feeling the wind, and you're trying to catch the insect, or you're looking at the plant trying to sort it out and what, what are you doing? And so, it's really fun for us to be able to share what we know, yes, but not sort of in a lecture format of like this is, this is what this is. It's more, let's explore it together. Yeah, I don't always have all the answers. I students asked me questions all the time, and I think like, oh, those are great questions you should work on. That's a great thing for you to work on because we don't know that I used to think that problem-solving was a problem of lack of data. We have, we just don't have enough data to make a right decision. And I've come to realize, I think we're actually swimming and drowning in data in large part, especially now that they're all these amazing sensors out there collecting images and remote sensing and all the really cool technology that we have. You know, we don't lack for data; we lack for ways to interpret it. So, I think your point is exactly right. If we're not training scientists to also be able to communicate what matters, why does this data matter? Why should people care that what I see is winter changing dramatically in a climate that is evolved to have winter as a really important season. It isn't a season when nothing's happening; a lot is happening, it's just a different time. So, what does that mean for the plants, the animals, the different things the people? What does it mean culturally? Then, how is that changing?

Joanie Mahoney: And we had the opportunity recently to talk up at Newcomb and the length of time that you have data, but also journals of people who have come before describing walking across Newcomb Lake or water up there. And now, you know from living there that that is a different time of year. So, you can see that the winter is shortening and the Adirondacks and, and you can overlay the data that you're

seeing with that knowledge and see how things are changing. So, what is the data, what are we gathering? And people when they hear that we've been gathering this data pretty much uninterrupted for 100 years. They, their, their eyes open wide. But what is the data, and then what are we doing with the data?

Stacy McNulty: So, at some point, someone counted how many variables, and there's something like, you know, between 70 or 80 plus variables that we're measuring at any given time. And it can be very simple things. Things like when did the first wood frogs call in the spring. That's a phenological piece of data. It tells your timing. What's, when is something happening? Those are animals that don't leave the area. They just become kind of in stasis over the winter. And so, when they basically wake up out of there, there's winter stake. We mark that down. Those are the kinds of things that we can say over time have been changing. Not only is the way the seasons and the sort of interactions between the species are happening is not considered to be sort of what people sort of know from the last century or so, at least, at least record written records or known oral history. How much variability there is in the system is really what we're noticing. Because this is a landscape that has recovered a lot from a lot of disturbance, right? So, the Adirondacks is a, is a wild intact space, but it is not an untouched space. People have been there for a millennia. People have been using the place and changing it and modifying the plants and the animals that are there. So that's always been happening, but we are seeing the amount of change from dry periods getting drier to wet periods getting wetter. And and the system has a certain amount of physics to it. You know, birds can only have so many eggs for one breeding season. They can only produce so many. And that's an energetic constraint. So, birds are having their babies, but the caterpillars are now hatching out earlier, let's say, and the food that the babies need is not actually at the time that they need it. There's this mismatch happening, and so we like a lot of long-term research stations and folks that have been documenting this. We are able to put that story together. It's not happening necessarily just in my lifetime, but the fact that I can build upon what people did before me, and we have this documentation in a place that's largely otherwise been relatively unimpacted with, the research station is pretty controlled. It's gated. We don't allow the public in the research space, so that the things that we can say, this explains what I see are pretty limited to large change like recovery of the forest from the past century or two of human impact and then pollution and climate change. There's not a lot else that can really explain what we're seeing, and the component piece, the other piece of the data, is experimenting on purpose. Asking the question, what if we cut the forest a certain way, right? E S F having a forestry focus and watershed focus. What if we do a certain thing? So, one of the experiments we have going on right now is to try to kind of rebalance the

forest in a particular spot. So, we have experimental treatments, and we have uncut treatments. And we can compare the plants, we can compare the animals. Look at what's happening in those forests right next to each other and say, Well, this is what we saw before. This is what we saw after. Then here's our control. And how do we explain these different relationships? And then trying to figure out a way to summarize it at a relatively succinct way so that we can help people understand and bringing people to that site, showing it to them that that really is where comes down as I can read a paper and it can be published. And that's great. I need to do that because that's a documentation, and that's the shared part in the science space that we work in academically. But what I like is really having a workshop where we then have landowners or managers or somebody coming to actually come ask us questions and push us. You know, I had a guy say to me one time, well, you're telling me to leave snags in the woods. Normally, I would not do that because they're not valuable to me as a timber manager. But how many do I need to leave in these, these dead trees? How many do woodpeckers need? And I said, I don't really know, but more than 0, if there's none.

Joanie Mahoney: It's just sounds like a fascinating way to be able to spend your time. So, I now know that there is a network of these field stations, and it makes sense to me. I didn't know that before, but you have a big role in one of the networks of field stations. So, what is that?

Stacy McNulty: So, the organization you're talking about is called OBFS, and that stands for Organization of Biological Field Stations. And that's a network of people running just like E S F does. We have these places where it's designed to be for research, outdoor education, engaging people. Usually, there's a public component, so it's supporting our students, obviously, and our research and our scientists, but also translating that information into some actionable space. So, it might be a Nature Center that has a research program. We can define it pretty broadly. They could be urban, they can be rural, mountain to coastal, like all over the place. They're in multiple continents. This group's only been around for not even 60 years. And really, it was an attempt to try to figure out how to leverage the fact that lots of places have this kind of really interesting deep knowledge. You have people, you have data, you have a scientific enterprise in a space that is a wild space in some way. But how do we then share? Because those places can be idiosyncratic. How do I talk to someone in a desert field site in Arizona, for example. Well, it turns out we might have actually similar sensors, and we can look at, we can start to ask bigger questions. We can start to share success stories about how we work. And honestly, a lot of what the group does is help folks figure out how to leverage relationships. So, working with politicians and figuring out how to make sure

people get science into their policy. Figuring out how to get resources, because it can be challenging to run places that maybe are outside of a power grid or in a place that has a lot of storms, you know, that constantly getting battered by hurricanes or something. Those are places we should be studying, and we do, but it requires resources to do that. So how do we joke a lot about being sort of hotels for science, scientists, and students.

Joanie Mahoney: So, there's this whole network all across the world of biological stations like ours?

Stacy McNulty: Yes.

Joanie Mahoney: And then they can come and hear what each other's doing and see how our data helps answer a question maybe that they're seeing in a different climate or a different part of the world. And you have risen to become a recently…?

Stacy McNulty: Yeah, I'm the past I've been a number of roles in the organization, but I'm the most recent past president.

Joanie Mahoney: So that is, that is phenomenal. I mean, people use the phrase a lot that at E S F, we punch above our weight. But the idea that you are the president or were the president of this worldwide organization that has this data that is going to be able to answer so many questions and direct policy mean you're literally in a position where you're changing the world. It happens here at E S F far more often than I knew or than I think people do know. And that took you recently to Africa. I know again because I was in Newcomb not that long ago. We had the opportunity to talk that you have come back from Africa. Everybody's closed for COVID, and then somehow, this group figured out how to get together. And so, what was that experience like for you in Africa?

Stacy McNulty: Yeah, it was amazing. I feel really fortunate because the network of people that run field stations, we do talk a lot, and we try to figure out how to be problem-solvers. So, a colleague asked, we do reviews. You can go to kind of take a group of people, and its sort of like a thing that a lot of scientists do. They'll go and review a program. Somebody's looking to build a new facility or something. So, this group in Kenya, they've been operating for about a quarter-century now and doing a lot of amazing stuff, lots of amazing conservation, wildlife health on the ground. Obviously, being in the, in the African continent, having the diversity of both natural systems and the cultural systems that are there's really interesting and provides an opportunity but also challenges. So, this field station sort of saying,

alright, we've been around for 25 years, like where should we be going now? And so, their organization funded this trip.

Joanie Mahoney: It's like a peer review of a field station in much the same way that people know about it in publication, right?

Stacy McNulty: Like strategic planning was really their goal. Looking ahead, what are, what do we see as our opportunities, challenges, that kind of thing. So, sort of like a SWOT analysis, if you want to call it that. But we were coming in as people who are operating similar types of places. So how do you deal with like I, I've told people, you're basically dealing with students, scientists, and sewers because you always have septics or something. It's like a facility, and you have operational things that you're dealing with, and it's complex. So, you might have relationships with other neighbors around you that are government or just private landowners that, that have some interest in what you're doing. How do you become a good place to do science? How do you bring that science into the classroom in that local area? For example, how do you be a resource things like that?

Joanie Mahoney: And this network must give you an opportunity to learn about what other people are doing and bring some best practices back to our station. So, who are the students that you're working with? Are you working with undergrads, grad students, high school students, all of the above?

Stacy McNulty: So, I only teach one class regularly, and that tends to be an upper-class division. It's a winter class, actually, which is fun because there aren't a lot of those actually. We embrace it. So, when I teach, I actually get the students at, towards the end of their time at E S F. I just was with two different groups last week. One group from the Ranger school that came over to experience how we do applied science. So, we have their students come and get to talk to some grad students and get to really see here's how research is an action. And those students may or may not be going into a research career. But if they understand where it came from and what we're doing and then we also want to put a lot of hands-on. This is how you actually capture an animal. This is what you'd have to think about before you ever do that capture human animal because there's ethical responsibility components to doing work with wildlife. We can show that to them in a very real way. It's not in the class. It's not academic.

Joanie Mahoney: Why and why some of the rules exist for the fields that they're going into. Because there's really smart people that have been studying the best ways to do this in this kind of setting. And this translates to something you will experience in your career

but never really need to do the work to figure out how to get here. So that's our own E S F students then at the Ranger school. And then we get a lot of exposure for E S F because a lot of students come from other places as well.

Stacy McNulty: Yeah. Yes, at E S F, I think we kind of forget sometimes how fortunate we are to have the kinds of wonderful places that our students get to work in our own campus community. We do a lot of work with leadership, sort of teambuilding because a lot of that comes along, and it's the soft... Sometimes people call them soft skills. I don't love that word because I feel like those are really important. Hard skill. Yeah, it's hard to learn. But the idea being that you now are in a space where you don't have all the answers, and that's challenging. And our environmental philosopher, Marianne Patinelli-Dubay, challenges the students? Like, yeah, there isn't necessarily an answer, but let's talk and let's read and let's try some things in a group setting. And then we're going to go out and walk around, and we're going to journal, or we're going to draw, or we're going to think about it. And so, we can bring this different kind of art and science perspectives into that's learning space.

Joanie Mahoney: Well, what I'm imagining is a conversation like this. I mean, these people then go all across the world and somebody asking them like what was the thing that happened in your life that you on the path that you're on. I would imagine for a lot of people, it's an experience like you just described. That is truly a transformative experience to go to a place with the dark sky in the Adirondacks and with these really smart people asking you questions, not necessarily as you said, giving you a list of instructions leading you to what they already know is the answer. It's all about the questions and thinking about what it is you don't know. And how would you go about trying to figure out what the answer to that is? And I am happy for you that you get to spend your life like this. It's gotta be something where every day is different. It's such an interesting subject matter. How about switching gears a little bit? What does it get like for young people living in the Adirondacks? Like is what is school like? Do they have to travel far to do that?

Stacy McNulty: I think it's a heterogeneous environment. So certainly, where we are in the middle of the park, it's rural, and there aren't a ton of children. So demographically, like a lot of places, sort of an aging, aging landscape in terms of people. I think that the positive of, of where we are is that our kids, they aren't just with kids exactly their own age. They have to sort of merge in with younger and older children. And so they don't they don't have any problem talking to adults. They don't have any problem dealing with younger kids. The con, of course, is the exposure. It's not a very diverse cultural environment in some ways. So, one of the things that Paul and I have tried to do really, very explicitly, we travel a tremendous amount. Our

kids have seen lots of parts of the US. They've been to Europe. We were fortunate to have, I have a field station meeting that I co-ran in Belgium. And so, we took our kids with us, and that was just, I was like I'm not going to even think about it. We're just going to figure out how to make this work.

Joanie Mahoney: So, what a childhood,

Stacy McNulty: You'll have to ask them someday. I'm not sure they love it.

Joanie Mahoney: So, there's the school where it's come one come all to the children no matter what age you are, we are all gonna...

Stacy McNulty: Its K - 12, and it's really yeah, at one point, our younger daughter was the only child in her grade.

Joanie Mahoney: Its interesting. That's gotta be some creative teachers.

Stacy McNulty: Yeah, we've had, we've had to interact a lot with the school and try to figure out like what I mean, we're basically trying to individualized learning.

Joanie Mahoney: My sons are older than your daughters, but they absolutely love hiking in the Adirondacks. And a week later, after I was with you up and Newcomb, we went back up, and we climbed owl's Head and the fire tower, and it was nice, the clouds were beneath us. Unfortunately, we weren't able to see the foliage, but it was windy. So if you waited a minute, the clouds would blow away. But it, it's such a great place to be with young people, especially when their lives are so much about technology, the cell phones didn't work, which was great. I imagine it's much to your chagrin sometimes living in the Adirondacks that you don't have the connections. But and we did bring Wi-Fi to the Newcomb campus, which is great. But my kids are of an age where they can say, No, I don't want to go, and they clamored to go, you know. So, it's like one of the family trips that really still has everybody's interest. I just soaked it all in. We were at the top of Owl's Head, and I didn't want to climb back down because it was just listening to the conversations and check that out. And I think that's Blue Mountain over there and just the scene that you could never capture in a photograph because it's so gigantic. And so do your kids play sports teams or clubs or..

Stacy McNulty: Yeah, they play soccer. They ski. They're very excited about going skiing. So, they're anxiously awaiting snow right now.

Joanie Mahoney: Yes. So, they embrace winter.

Stacy McNulty: We have one dancer, and then we have more of a design, more focused. So, they have different things that they pursue. So, we've been trying to make sure that they get connections, and I didn't do as much of those things. One of them is actually interested in kind of governance. She's got into, you think, government that, so they have students come from different schools and they pass bills and they kinda actually do legislative things. It's really cool.

Joanie Mahoney: You are kind of reminding me of, I forgot about it, but when I was in high school, I went to something called Girls State. Boy's State is really popular, no. But I went to Girls State, which was a week of setting up our own government like that. And, you know, to have people like your daughter's raised in an environment where they're asking all these questions and have a deep appreciation for science and learning and knowledge. And then to have them be interested in government. I mean, wow, we would be so lucky if we had people that grew up from that kind of, you know, that I come from a little bit of background in politics and oftentimes, I would say that to people, you know, if more people like you would throw your hat in the ring, this would be a very different place. The people that would never run for office, they just not interested or the exact people that we need to run for office. And I said I always had this impression that people were home with their friends and talking about all the answers like you have a lot of the answers that we need, but you just, there's just this divide between the kind of people that actually run for office. There's exceptions. For sure. I've met some really wonderful people in politics, but people that have an upbringing like you're describing of your daughters and then maybe running for the town board or the county government or state government. I mean, that's again, that's how you change the world.

Stacy McNulty: Well, if it can be said, our goals drive what we do. So, if our goal is to just get elected every couple of years, then that cycle doesn't allow us to ask questions. It's too short.

Joanie Mahoney: I think that we have to give the general public more credit and understand that if you just put people in office that are willing to listen to the science of the moment and the knowledge that we have of the moment, and we make decisions based on that. I do think the general public gets it, and we'll reward people for that. But I'm not sure that people think that's the case. You know, like if you actually explain to people, this is what I'm seeing, and this is why it matters. I do think that the majority of people would vote for a Stacy McNulty because she's telling you why it matters that the robins are having their babies at this time when the caterpillars

aren't coming until this time. Do you tell them I'm following the science and I'm making these decisions because I think they're the best ones for the long-term. I think that the public will be with you.

Stacy McNulty: I think you, you make a good point. And to me, a lot of what we don't talk about and in our societal kind of where we want to go is the trade-offs piece, right? So, we always have decisions. Something's gotta be decided. The trade-off is, do you do it now? Do you wait? What's the pro and con, right? So, like every decision has that trade-off. We don't, we don't necessarily include all those trade-offs when we talk about it, though, because if we talk about the price of something or the policy effect on this other thing, we forget that there are those other trade-offs that are coming in. Some of them might be good ones, right? Some of them might be problems. And so, we're too busy like siloing the issue into one space, agriculture, industry, or whatever. We don't necessarily think. I've always said like one of the things that I find is that most people are actually really quick at picking up what we're talking about. None of the things that I do are that tremendously complicated. It's really just more about seeing and being able to connect.

Joanie Mahoney: And talk about it.

Stacy McNulty: And if I can get people talk about it. A wetland with me in the spring when the salamanders are coming in to lay their eggs in the spring, and it's this really cool little spot. And people have never seen these things before, and they're exposed, and you know, they're there because their kids are interested. So, we're doing a public walk or something, but if we're out there with our flashlights looking in the wetland and the animals are in there, and they're doing their breeding. The adults are the ones who are always actually the most jazzed.

Joanie Mahoney: You know what you're doing that I think really matters is you were talking about the trade-offs, and do we do it now? Do we do it later? We've had decades of people kicking the can down the road about doing things that scientists have been saying is going to lead to these huge weather events and all this damage and loss of life. But we, we talk about it at this incomprehensible level. It's this all-encompassing thing that is really hard to get your head around. But when you talk about the salamanders and the caterpillars and the robin eggs, you bring it down to a level where people can have those light bulb moments. Oh, I do get that. I do get that. That's why this matters. So I'm actually very encouraged when I listen to you, and I know young people will be, I think there's a lot of anxiety among young people because of all of this talk of doom and gloom. But when they realize there's people like you doing the work that you're doing. Asking the questions, teaching

other people how to ask the questions focused on what the solutions can be. I think it can bring a lot of comfort to people. So, I'm happy that I've been able to expose you and your talent to some of the folks here at E S F. So, I really appreciate you taking the time, and for you, it was a lot of time because it's quite a drive to get here. I hope that you have a wonderful day when you're here with us on this campus. And I'll see you again up in Newcomb before too long.

Stacy McNulty: Absolutely. Thanks, Joanie. I feel like I have such a wonderful job to be able to get to work with all of you and the students here. And that's really what this is all about to me, is I can run around in the woods, and we'll at things and document all this stuff. But to me that my job is to make that space for that next person. What do they want to do? So that's what the field station is for. And so that's why it never gets old for me because there's always that new person coming.

Joanie Mahoney: That's perfect. That's a perfect description of the role that you have this just making place for the next person. So, thank you. Nice to see you.

Stacy McNulty: Thanks

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