

Kelly Savoie ([00:00](#)):

Hello, Clear Skies ahead listeners. This is Kelly Savoie and I'm hoping you can take a moment of your time to rate and review our show wherever you listen to podcasts. We have produced over 100 episodes and you can help us reach even more individuals that will benefit from the diverse experiences shared by our guests. Thanks so much for listening, and I hope you enjoy this new episode.

Kelly Savoie

Welcome to the American Meteorological Society's podcast series, Clear Skies Ahead: Conversations about Careers in Meteorology and Beyond. I'm Kelly Savoie and I'm here with Emma Collins and we'll be your hosts. We are excited to announce the release of our 100th episode. To celebrate this milestone, we have created a special release that includes clips from our most popular shows. Thank you to all our loyal listeners, and we hope you have benefited from hearing about the diverse experiences of our guests.

Emma Collins ([01:02](#)):

To kick things off, we asked Alice DuVivier project scientists at the National Center for Atmospheric Research in Boulder, Colorado, about particular opportunities she pursued that she knew would be beneficial to securing a job. She had this to say,

Alice DuVivier ([01:15](#)):

Yes, I did a number of summer internships in college. I think it's really important to learn what you don't like in addition to what you do. So I tried a bunch of new things and experiences in college. I realized that I did really sort of like the academic path. I enjoy research. I enjoy writing...those sorts of things. I wouldn't say that I necessarily ruled out industry immediately, but since I really liked those things, I kind of just stayed in that lane and wanted to keep pursuing that as long as possible. I also did a lot in terms of trying to develop my communication skills. These are really important I think, in atmospheric sciences, but probably any job you go down, if you can't effectively communicate your work to other scientists or the public in general, then I guess I feel like what's the point in doing it if you're the only one who knows,

Kelly Savoie ([02:04](#)):

Internships are a great way to find out what type of career you want to pursue. You may also find your calling through hobbies and other pursuits like Nick Kavanaugh, founder and CEO of Sensible Weather in Santa Monica, California. He spoke to us about what led to his interest in atmospheric science.

Nick Kavanaugh ([02:22](#)):

So I'm a big skier. First and foremost, I grew up outside of Seattle in Bellevue where folks that are maybe not from Washington state or have much experience there, maybe don't think of Washington as a destination ski area, but indeed it is. There are dozens of mountains in Washington and in British Columbia as well. I grew up through the nineties where some interesting things, well, first of all, I guess living on the outskirts of Seattle, the mountains are low elevation wise, so they always tend to be right on the rain snow line. So when you're thinking about planning your ski trip, you're always looking at forecasts and saying, all right, where is there going to receive the most precipitation? What's the freezing level? What are the winds going to do? Is it going to be clear? Is it not going to be clear? So you're constantly thinking about these things sort of intrinsically through a probabilistic lens, basically trying to plan what fun thing you're going to do this weekend.

(03:14):

So that's where all of this really started. It was just kind of figuring out where I was going to go skiing to get the best snow. And then one of the probably more interesting things that happened while I was growing up in that area was the winter of 98, 99, where Mount Baker, which is one of my home mountains, received almost a hundred feet of snow, currently still the world record snowfall for a season, which was as a kid growing up with an interest in sciences as well as a passion for skiing, seeing one of your home mountains truly receive the world record snowfall in a year and going there to see what that was like. And it was basically the chairlifts were buried and then they dug out three chairlifts so the mountain could open, but you're sitting on the chairlift and your skis are a foot from the snow.

(04:05):

Wow. Yeah, so pretty silly. But yeah, I mean, so those types of childhood experiences kind of anchored my interests in the atmospheric sciences. And then when I went to Penn at that point, I didn't think that I would pursue a career in the atmospheric sciences, climate sciences. So I went into engineering where I was like, okay, I'll pursue something where hypothetically I can kick can down the road and figure out what I actually want to do later. But at the same time, my second semester freshman year, I actually did my semester abroad with the SEA program out of Woods Hole, Massachusetts. So it's like a quarter long oceanography dedicated program where roughly half of it you go to sea doing applied oceanography where it's like, at the time I was more like, oh, I still don't want to necessarily be an oceanographer, but that seems like a really cool thing to do.

(05:04):

So I'm like, okay, I'll go do that. And then while I was at Penn, I was taking environmental science courses, ended up minoring in environmental science mostly because it was like, I don't know if I want to be an oceanographer, but these are cool courses. I'm going to take 'em. And then after my junior year, I was thinking about when I wanted to do that summer and I found the internship at Scripps and I'm like, wow, Scripps San Diego, the beach, that seems like a cool thing to do. I'm going to go do that. But at the end, all these things end up blending where the stuff that you're learning following your passions in the environmental sciences, you realize that there's a whole world of intersection with math and engineering and building things and understanding how things work, which studying the earth is a fantastic medium. So that's really how I got there. And at the end made last minute decision my senior year to take the GREs and apply to grad school and ended up at Scripps, which was my first choice,

Emma Collins (06:02):

Will Turner, a graduate student researcher in atmospheric science at University of California, Davis also shared with us how he got interested in meteorology and what led up to his thesis, The Impact of Droughts on Transatlantic Slave Trade.

Will Turner (06:16):

And so growing up, and I guess this goes back to the story at the beginning that kind of interest me in meteorology, we all have that common story that we experienced a storm or saw a lightning bolt or experienced something severe that really just gravitated us to study more or be more curious about the weather. And in 1998 after I read the Weather Guide book, a tornado came through my hometown in Nashville, Tennessee, April 16th, 1998. And I was like, wow, this is it. I really need to study the weather because it impacted my city, my hometown. It impacted people. And it was just so interesting to see Mother Nature in rare form. And so that was that moment where I say, yes, I need to study this. And then fast forward to an undergrad. So I got the degree Earth System Science and Engineering, and I

minored in Afro-American and African Studies, and I had the opportunity to do research during my fifth year.

(07:32):

And I was really, I remember vividly walking around campus trying to figure out how could I bridge both atmospheric science and African studies into a research project and just walking around. And it dawned on me that, okay, well, during the slave trade, transatlantic slave trade, the boats were not motorized, so they had to depend on the wind and ocean currents to get from continent to continent. And so I was like, oh, okay, so yeah, let's do that research. And I brought it up to a professor and he was like, yeah, go ahead and try to study them more. So that's where the idea originated. And then fast forward to grad school, my current advisor, Terry Nathan, I remember it was either our first or second meeting and he just asked, he was like, all right, so what do you want to do? What do you want to research? And of course, tell me about yourself and all that. And I was like, uhoh, well, I am interested in studying the weather and the transatlantic slave trade, so how the weather impacted the transatlantic slave trade, and he lit up like a Christmas tree. And that made me feel so comfortable that somebody is supporting my idea and wants to see me continue with that research. And he was asking so many questions and I was just like, oh my goodness. I don't know. I don't know. I don't know.

Kelly Savoie (09:09):

It's a very interesting topic that I don't think a lot of people have researched. So how does it impact it? What are some of the things that you've uncovered that showed the impact on the slave trade?

Will Turner (09:24):

So one story, and I put this in quotes, kind of a good story, how the weather directly impacted the transatlantic slave trade. So we had the slave ship enterprise, which was set to set sail from Washington DC to South Carolina in 1835, and they got caught up in a storm and ended up on the island of Bermuda. And Bermuda was a free British colony where the enslaved were set free. And so the slaves then, or the enslaved, they to actually had a choice whether they wanted to stay free on the island of Bermuda or go back to the mainland.

(10:12):

So it's a good story in that the weather forced them to the island of Bermuda and become free. But the other side is this human side. We had people that were forcefully taken away from their families and placed in shackles and just going through all kinds of trauma. And so we don't know what it felt like or what it feels like to be snatched away from your home, just to be relocated again. And so for the couple of enslaved individuals that decided to go back to the mainland, it was probably hope that they could be reunited with their family before. But stories like that throughout the research are I'd say very interesting. It's kind of a tough subject at times, but it's a learning moment.

Kelly Savoie (11:09):

And I think I read a little bit in an article about the research that you did and how certain types of weather droughts, dry weather also decreased the need for individuals to be brought over because it affected the agriculture and obviously the crops and so forth. Am I correct about that?

Will Turner (11:34):

Yes. So what we find, we actually related through this whole research process, the historians have crafted the story that droughts impacted the transatlantic slave trade, but they did this from a qualitative

perspective. And so they in the last ship journals chronicles that recorded series of droughts and then series of droughts and also the number of enslaved individuals that were transported from port to port. And so they made this qualitative assessment that droughts did impact that. And so we were looking at it from a quantitative perspective, but we all know slave trade took place 1500's all the way 1866. And so our instrumental weather data was very limited. So we tried to figure out, well, what else could be operating in the climate system that could influence dry conditions? And we found out that El Nino is linked to dry conditions in our study region, west Africa.

(12:44):

And so what we found that El Nino induced droughts or El Nino induced dry conditions did lead to a decrease in the number of enslaved transported from West Africa to the Americas. And the thing is, the hard question is, well, what in society was going on that could allow for that decrease? Was it that it was more challenging to raid for slaves during dry conditions or could it be that due to dry conditions happening in an area, people were forced to move and then therefore folks that were raiding into these lands, they were already depleted because folks were already relocated. So that's one of the most challenging questions that we do need more social sciences historians trying to tease out that relationship.

Kelly Savoie (13:41):

We can learn so much from the past, and it's so important to bring that knowledge into the present to help plan for the future. And with the weather world being so varied, you really can learn something new even from a typical day on the job. Take Doug Kluck climate services director for the central region at NOAA's National Centers for Environmental Information and Kansas City, Missouri. Working in the climate realm means the needs of the job change all the time.

Doug Kluck (14:08):

I grew up in this position under a woman by the name of Eileen Shea. And her or the description that I kind of like to use for climate services is helping to solve problems at the local and regional scale across timescales. Okay, so we're not just talking about 10, 50, a hundred years from now, we're talking about two weeks from now. We're also talking about the entire past, the climate record, if you will. So there are questions that come to us and anybody in the kind of climate realm and weather for that matter that are place-based questions for people who need to make decisions, they span, like I said, several times already timescales. So you never know exactly what people want and it changes all the time based upon, well, based upon their needs, based upon extremes, based upon lots of different decisions based upon sector for sure.

(15:05):

And that's what we try to help, I'd say inform. We can give you an answer, but it may not be the whole thing. You need to make an informed good keyword, good decision. We can help people make decisions, but all the time, but we want to make them, have them make good decisions based upon the information or I like to say, inform them on what's coming at them. And that's kind of the longer range. And looking back actually at history, and one could say even without climate change, we're not prepared for a lot of the extremes that we're going to face. We could exclude the whole argument on climate change and say, well, are you really ready for 10 years of drought like we've seen in the past? The answer is almost always no. Or the flood of, I don't know, 1935 if that happened again, are we prepared for that? And again, the answer is often no, not really. It doesn't happen very often anyway with climate change, it adds a degree of complication and a lot more discussion and a lot more deliberation to be honest with

you. And it's an iterative process, often working with and handholding, if you will, depending upon the sector or individual that needs the help.

Emma Collins ([16:25](#)):

Careers come in all shapes and sizes, and we've heard about so many diverse positions in weather, water, and climate industries. To go back to Alice DuVivier again, she's a polar meteorologist, which is very cool, literally. Listen to the kind of work she engages in.

Alice DuVivier ([16:40](#)):

Polar meteorologist. Their goal is to really understand the atmosphere in the Arctic or the Antarctic. So the two poles of the earth, these really extreme locations and how the atmosphere interacts with the surfaces below. So that might be sea ice or the ocean or glaciers or maybe land. There's lots of possibilities in the polar regions. There are also interested in how whatever is going on in the Arctic or Antarctic might affect the globe at lower latitudes. So the places where probably most people listening to this live and in turn how those places, the lower latitudes might affect the poles. So the interactions between different parts of the globe, the poles are very extreme places. They're really dark and cold and windy, and they're usually pretty dry. Antarctica is the largest desert in the world. It doesn't get very much precipitation at all. And so polar meteorologists are really working on some of the most extreme types of atmospheric conditions and behavior that can happen around the whole globe. I think that's really exciting. That's kind of what draws me to polar meteorology. And I think from talking to others in this field, that's often what draws them as well.

Kelly Savoie ([17:48](#)):

Speaking of extreme types of atmospheric conditions, we also chatted with Jana Hauser, associate professor at Ohio University in Athens, Ohio and Robin Tanamachi, assistant professor at Purdue University in West Lafayette, Indiana. They had some great advice for aspiring storm chasers.

RobinTanamachi ([18:07](#)):

First and foremost, safety should always be the number one priority. I strongly recommend that people who have never storm chased before, don't do it solo. Always find a more experienced person to chase with, at least for the first couple of times, and they can kind of show you the ropes, show you the perils of driving on wet roads and people being distracted while driving, being distracted by devices while driving. This is another reason why I recommend people don't chase solo just because there's so many devices and so many distractions that can happen. And really humans weren't evolved to look at a cell phone in one hand and have the hand on the steering wheel the other hand on the steering wheel while driving 60 miles an hour down a wet highway that just wasn't in the evolutionary catalog. So we always recommend that people try to go out with more experienced people first so they can find out kind of the rhythm of it, learn to be patient, learn to fill their roles, and be part of a team and work cooperatively together. But yeah, again, safety is always going to be first priority for everything. And that's something that our advisors really drilled into us was just that there is no data set that's worth risking life and limb for.

Jana Houser ([19:19](#)):

There's never been anything catastrophic, I'll say that. I think really the point that I like to hammer home is that doing this for educational purposes is a very different experience than doing it for the purposes of just going out and streaming the video or collecting photographs. And even those two goals are also

different from going out with a scientific objective to collect data. So the different mechanisms involved with chasing are going to require different strategies for success. So my number one priority is like what Robin said, is to keep my students safe and to make sure that I'm not jeopardizing their safety, that I'm not jeopardizing the potential future of my program by making a poor choice, such as driving through a hail core and getting the window smashed out of a van, for example. So while you might have individuals who are going out there to collect footage and sell imagery to network tv, we're not going to chase the same way as those individuals are. And I think students initially sometimes can feel a little bit ripped off from the standpoint that we're being a little bit conservative in our decision making, but in order to justify the risk to our institutions, we need to execute our program in a safe manner.

Emma Collins ([20:36](#)):

Safety is so important for so much of what our guests do and for the public. We've spoken to a lot of experts who work in aspects of the industry dedicated to keeping people safe, and that includes things like mental health, like Becky DePodwin, senior consultant at Guidehouse in central Pennsylvania. Her expertise is in emergency management, and she talked to us about how the mental health and wellness caucus of the International Association of Emergency Managers came about.

Becky DePodwin ([21:02](#)):

I think part of that was driven by the pandemic and the fact that emergency managers as a whole have been incredibly burnt out by the last two years, but even beyond that, the last several years with natural hazards like hurricanes and wildfires, and then you have the pandemic thrown in on top of that. So there's been an increasing awareness of burnout and mental health struggles amongst emergency managers. And I think much like the meteorology community came to start having these conversations several years ago, the emergency management communities are now starting to have these conversations. This also includes first responders obviously of whom did just incredible work during the pandemic dealt with a lot. They see a lot of things that are very difficult to see and take in day after day. And so the caucus is designed, I mean, provide awareness of what's going on, to provide resources, to hold webinars, to have sessions at meetings and conferences, but really just to create an avenue for these very necessary conversations to happen to hopefully lead to meaningful change.

([22:18](#)):

And what that change looks like I think is still a little bit difficult because the profession almost is what it is. You're not going to stop disasters from happening. You're not going to stop bad things in the world from happening. You can't look away. The nature of the job is to run towards the burning building, not away from it. But I think the hope is that by bringing it more out into the open and making sure people have resources, you can limit some of the really negative potential impacts on people and hopefully alleviate some of the burnout and even more serious implications.

Kelly Savoie ([22:52](#)):

Mental health is critical, especially for people working in emergency management. It's great that there are resources out there and that we have people like Becky working to improve communication around the topic. Communication is crucial in a lot of work, especially for meteorologists. We spoke with Gina Eosco, social science program manager at the weather program office within NOAA's office of Oceanic and Atmospheric Research in Silver Spring, Maryland about effectively communicating on aspects of weather and climate. Here's what she had to say about that.

Gina Eosco ([23:27](#)):

So you want to make sure that your audience has a sense of efficacy that they can respond to that risk, that they know how to alleviate it and empower themselves to take protective action. So say what you know, what you don't know, and that includes communicating probabilities. I think we might've talked about that earlier in our conversation a little, but it's worth repeating that the research does show that including probabilistic information does enhance decision-making. I know, I know there are probably some listeners going, but Gina, people don't understand probabilities, and the reality is more people understand them better than you think.

Emma Collins ([24:03](#)):

Justin Sharpe research scientist at the Cooperative Institute for Severe and High impact weather research and operations at the University of Oklahoma in Norman also understands the importance of social science aspects of working with the public. Here are some of the experiences he shared with us.

Justin Sharpe ([24:19](#)):

I still have a thirst for knowledge. I still really want to know about people and how they respond to things because otherwise I think it's that idea that we assume we know. And I think one of the great things that's been over the past few years is that we are moving away from the idea of complacency on path of the public when they actually are faced with different weather hazards to try to understand why they appear that they may be complacent from the outside if you get to the inside and ask them. And so one of the great things we did was we went down after the Kentucky Tennessee tornadoes of December 10 11 last year. Now we waited three months. We didn't go straight away because we were talking about E four and E three to that really tore through communities caused huge amounts of damage, loss of life.

([25:06](#)):

And so that's the other thing about social science is being aware and empathetic to the needs of others at the same time as wanting to collect the data. Data is perishable, but it's not quite as perishable as sometimes it's made out to be. And so we went and we talked with people, and I think one of the hardest conversations I had to have with people apart from with those that were in the candle factory in Mayfield, Kentucky, but the hardest conversation were people sheltering to the best of their ability in their homes, but they had nowhere else to go. They knew this was going to be a big storm, it was worn 90 minutes out. They were not complacent, they just didn't have choices. And this is a really difficult societal problem, what we call a wicked problem in science. And so there's lots of complexity and you don't answer this with a simple answer.

([25:57](#)):

And I think that that's what the Behavioral Insights Unit and social scientists do. We try and find out a little bit more about, okay, if it's not an easy answer, do we need to be asking different questions? Do we need to be going and visiting with the people there and finding out more about that? And also making sure that our research is not extractive in any way. And by extractive, I mean parachuting in communities after a disaster, asking them questions for our scientific edification, but then not giving that back to the community and so they lose trust in us as maybe a science body and tornadoes are going to happen again. I would like those people to be able to feel that they can trust us and trust in what we're doing. So I think that that's really important to say as well. But I think the thing that keeps me going is I learn something new every single day, and it's from my colleagues, it's from the public, and I want to continue to develop that so that I feel that we've really, I don't think we're going to answer all the questions, but we're getting closer to answering all the questions.

([27:00](#)):

And more importantly, providing solution spaces for policymakers to maybe enact.

Kelly Savoie ([27:06](#)):

People like Justin who are on the ground and helping to support communities impacted by extreme weather are doing amazing work, but that work isn't happening just for those events. Ayesha Davis meteorologist at the National Weather Service in Boulder, Colorado talks about the value of engaging with your community every day.

Ayesha Davis ([27:25](#)):

There's probably two parts to this on the high impact weather days, it's valuable when they say for example, CDOT, they're the Colorado Department of Transportation, they tell you, thank you so much for that forecast because we got people out of there. We got our roads cleared, we knew what time that snow was starting, so we knew what time to exactly plow those roads so that that morning rush can get in and out of work. So that feedback is so valuable. And then there's always the old grandma that calls the National Weather Service and she says, man, you guys have been right the whole time this week on those temperatures. I really appreciate that. My garden is flourishing. So it's always nice to hear that from all the way up, that high end user all the way down to someone who's just treating their garden, it's just happy enough to get a forecast that's accurate. So it means a lot to me for that.

Emma Collins ([28:40](#)):

Working in weather, water in the climate fields can be very challenging. It's just the nature of the beast. And I think especially with those jobs we've heard about over the years, there are going to be challenges. Angel Enriquez meteorologists at the National Weather Service Forecast Office in Glasgow, Montana discuss some of his biggest challenges.

Angel Enriquez ([29:00](#)):

I think really what I've seen lately, it's not so much affecting just the National Weather Service, but any entity that provides forecasting material or products is the amount of disinformation that you see online or products that are given way out in advance of a forecast beyond seven, 10 days. And people sort of hype up the scenario and it just brings a lot of mistrust with people who do ingest that information. So being on social media, it gives us a better platform to get to everyday general public, but at the same time, we're competing against people who think that they are doing some service by providing these scary 24 foot snowfall graphics. But I think that's something that we will just always have to combat. There's always going to be those people, and it's just our focus is to better communicate the uncertainties, the probabilities that goes behind forecasting.

Kelly Savoie ([30:22](#)):

Matthew Capucci a meteorologist at my radar, the Washington Post and Fox five DC also touched on a challenge I think a lot of broadcasters face as well.

Matthew Cappucci ([30:33](#)):

I think one of the biggest challenges is that I'm under a microscope always, and I mean that in a couple ways in terms of the public, I used to be a high school then I was a college person. I went from sort of a regular student who no one cares about to sort of a public figure over the course of a year, but it is a very gradual process. So now I sort of have to compose myself as a public figure. And I mean, I'm me on air

and off air and I'm me on social media. I'll tweet about my Waffle House escapades or all these things, but I sort of just have to remember that aspect of it. The other thing too that's been a little bit tricky is that because I'm sort of this weird, I'm all over the map in terms of I post very technical stuff, but I also have to make it accessible.

([31:21](#)):

But I'm also a broadcast meteorologist, but I'm also kind of not. I try to maintain a level of technical but accessible. And there are times when other meteorologists will come after me on social media being like, you over simplified. Are you this? Are you that? And I found there's almost a bit of sort of, I don't know, animosity is not the right word, but within the field of meteorology, there are different lunch tables. And it frustrates me to see that there are different lunch tables who will come after one another and sort of tear folks down rather than build them up. And we see it all the time on social media in general. But interestingly enough, when I get sort of negative tweets, it's never from the public. It's always from a few folks who sort of don't like what it is I do. And that's to be expected across the board. But that's sort of been the biggest challenge in realizing that I can't please everybody. I just got to do things the way I do. It's working so far. I'm beholden to my viewers. Those are the folks who I serve. And it was tough initially. It really was tough to be like, why don't X, Y, Z people like me? And now I'm just like, you know what? I do my best. And to hell with the rest.

Emma Collins ([32:37](#)):

The work we've heard about has been so varied. Sometimes you do have to wonder just how you can get your foot in the door with finding the right job for you. We try to ask all of our guests if they have any advice for students and job seekers. Here's what Angel Enriquez has had to offer.

Angel Enriquez ([32:51](#)):

Yeah, so I'd probably say first of all, have a good sit down, brainstorm. Write down everything that you've done since you've started high school, any volunteer opportunities, assistantships about internships, have that all on a piece of paper because really the way you present your resume is how you're going to stand out among the other applicants for the National Weather Service. It's a different format there. You don't have to be concise or very shortened with your resume. Feel free to elaborate. You have it many pages because the thing with applying for a federal job, there's a very strict criteria that they're looking for in order for a year, your application to even be revised. So definitely print out the job announcement, read it carefully and go from there. Have someone look at your resume. Don't just think that your draft is going to be enough. It's always great to get a second opinion.

Kelly Savoie ([34:07](#)):

Yeah, that's definitely good advice. And Angel, I have a question for you about the National Weather Service. So when you apply for a position there, are you applying for a position at a certain office or do you apply and then they let you know where you're going to be?

Angel Enriquez ([34:26](#)):

Yeah, so it really depends on if there are going to be other openings or announcements for other vacancies in other offices as well. I happened to be applying during an announcement that had I think 20 something other vacancies. So in order for them to, I guess narrow down and not overwhelm them with applications, they give you the opportunity of choosing your top five of preferred locations. And so that's what I did. I listed my top five. If your application gets referred to the hiring manager after its review, it

gets sent to every office that you applied for and those top five preferred. And then from there, the hiring managers will then determine if they would like to have an interview with you.

Kelly Savoie ([35:27](#)):

Becky DePodwin also had some great advice for our listeners in how she feels about the job market.

Becky DePodwin ([35:33](#)):

So I'm pretty optimistic when it comes to jobs that sort of tie weather and risk together. It's pretty known that climate change is exacerbating a lot of disasters. We've seen it in the last several years between hurricane seasons getting more intense and wildfires happening more often. There is very much a need for people to have the knowledge and the background in science of meteorology, but also be able to pair that with some level of risk communication, emergency management, social science, anything that really I think involves the human impact side. And honestly, this can be anything from research to more hands-on and actually working with people. I would encourage students to really think outside the box of the typical internships and jobs. Think beyond just a broadcast internship or even just a straight up operational forecasting internship. Think energy sector, think emergency management. That can be public information officers. Most disasters are weather related, so you're still going to be using that knowledge and that information. You don't necessarily have to have a hybrid degree or even a second degree like I did. I had that six year gap between undergrad and graduate school. But taking courses on communications in undergrad is really, really helpful. If that's an avenue that you want to go. There are some programs that offer some level of an interim, I dunno if it's quite a master's, but something in the realm of emergency management or disaster, disaster management.

Emma Collins ([37:19](#)):

The state of the job market is something I think all job seekers are definitely concerned about. Kevin Petty, vice President of Weather and Earth Intelligence at Spire in Boulder, Colorado gave us some encouraging words on the state of the private sector when we asked if he thought students would be able to find work after graduation.

Kevin Petty ([37:36](#)):

Yes, they will be. The private sector continues to grow in such diverse ways, not just in core aspects of meteorology, but when we think about climatology, when we think about water resources and the nexus of how these things come together to in a way that we can address some of the world's most challenging problems, there's just so many things that can be done. And not only is there opportunity in the private sector, but just through partnerships between the private sector or the public sector and academia. Those are important for us moving forward. But the private sector has grown significantly in the area of meteorology over the last two to three decades. And with that growth, what has occurred is that there are opportunities to do research in the private sector that research can be related to observations, numerical weather prediction to computing, to software development. There's just so much opportunity out there. And what's important is for students and early career professionals to develop those skills that are going to allow them to excel if they're looking at the private sector for future employment.

Kelly Savoie ([39:01](#)):

And in the private sector, there are such a wide range of positions that a typical day is different depending on the role. Like Matthew Cappucci, whose experiences are very diverse. He describes all the things he's involved in.

Matthew Cappucci (39:14):

So my days have evolved so much over the past two years. I feel like this is kind going to be a lengthy story time, but I used to be at the Washington Post full time and I'd write three or four articles per day. It was a hamster wheel, nonstop writing, and Jason was amazing boss, but be nonstop writing. And one thing that helped, and this will sound horrible, but from an employment standpoint, the pandemic helped me sort of redefine my workday, redefine my workflow. Obviously it was horrible for a lot of people. I am sort of extroverted, obviously. I like getting out there. And the post for me was like this giant study hall where 800 people would be sitting there and no one would talk to each other. And it was killing me. And again, I love the people there, but I'm more high energy.

(40:01):

I need to get out and about. And so when the pandemic came and I could work from home, I thought, this is great. If I'm going there to talk to nobody and sit at a desk, I can just do it at home, save the time. But then I started thinking, why am I sitting at home? I can storm chase, I can do whatever. So I'd go out and storm chase. So in the mornings I would write in the afternoons, I would storm chase, and it was awesome. And over the course of two years, between May, 2020 and May, 2021, I made an even more sort of substantial demo reel of me in front of an F three tornado or me in a softball size hailstorm. And this demo reel was really sort of taking shape. And my social media audience grew around the same time. I was doing hits for the local NPR affiliate, WAMU.

(40:45):

And we know that NPR in general has sort of a very flat style, and I don't, was trying to think of a way to sort of bring folks together. The pandemic can be very rough. A lot of folks were isolated. They needed human connection. And so I would start every forecast with Will gang, blah, blah, blah, blah, just to bring folks together like, hey, we're all one gang, we're all one group. And that took off like wildfire. People far and wide across the DMV down here in DC love that. And they responded to it in a very wholesome way. I was getting thousands of nice comments and nice letters from people saying, you have no idea what these 45 seconds each Thursday afternoon or each Monday afternoon mean, it's the only time I sort of stop and look up, or it's the only time I stop focusing on all the cruddy news around me.

(41:35):

And that really helped me grow my following. At the same time too, because Zoom took off, there were these agencies, BBC News, DW News that started reaching out and saying, Hey, could you do the US weather or could you do a hit from your living room on this hurricane? And so then I got a conventional demo reel because I was doing actual news BBC World News. And so in May, 2021, I saw this opening at Fox Five here in dc. And on a whim I applied and I sent in this cobble together demo reel of all my different me in front of the tornado me. This me almost falling into hot spring. And the cover letter was basically, I sent a cover letter and I sent about 1500 kind comments from viewers and listeners from my other engagements. And I basically said, look, I'm not the conventional person.

(42:29):

I I don't have the crisp on air polished format. What I have is passion. That's what we need in 2021. That's what we need in 2022. I've done the weather in front of a tornado, I've done the weather from the eye of a hurricane. I can do it in front of a green screen. First month might not be perfect, but I can do it. Screw my age, let my experience speak for itself. And to my surprise, I got a note back from the news director saying, Hey, would you like to meet? And his name's Paul McGonigal. And instantly, as soon as the camera flipped on for the Zoom interview, I was like, wow, this is not like my Wall Street or my hedge fund interview was like this guy. It was so conversational. And it turns out this boss of mine lived in Sandwich Massachusetts, which as you know is about four miles from where I grew up.

(43:15):

His neighborhood is where I took piano lessons when I was little. His son and I have mutual friends from the Cape. It was such a bizarre connection and without meaning to, as he's asking me these questions about how I approach weather, I slipped into character and I essentially did a real-time forecast or a real-time explainer. And to my surprise, one interview and I got the gig. But then my first day on air was July 1st of last year. Keep in mind, I was 23 at the time. This is the most educated TV market in the country, one of the top TV markets in the country. How with 23 with no experience, can you walk into that and expect it to go well? And I've been joking for weeks. I can't do a typical intro. I can't talk about myself. What we need is a tornado. And I know that sounds horrible, but if there's something for me to talk about, I'll be good. Lo and behold, they're getting ready to introduce me. Tornado warning,

Emma Collins (44:10):

You just never know where your experiences will take you when it comes to the progression of a career and all its ups and downs, Gino Eosco sums it up perfectly.

Gina Eosco (44:18):

And as you go through your career, you start throwing paint at the canvas and well, it's really abstract art because guess what? You're going to have multiple layers of paint on this canvas because life is going to keep going to keep throwing paint. Some of it's going to be brighter days, some of it might be darker days. Some of it might be swirls of mixture of colors that you're not. It's just a rainbow. And that's life. It's going to be that mixture of all that. And so that's really how I look at the lens of my career and how I got to where I am in science communication. It was the same way. It was the negative chemistry advisor. It was this positive person who did not give me a job, but then it was also the Chris Harpers of the world who were like, oh my gosh, you have amazing thoughts. Have you thought about getting a PhD? And I was like, no, I hadn't. And so it's the summation of all of these things that made me who I am.

Kelly Savoie (45:09):

So at the end of each episode, we like to ask our guests one fun question. Today we're going to mix it up and ask each other. So Emma, what is your favorite movie?

Emma Collins (45:20):

Okay, so I think I've talked about this on the pod before, but it's actually a tie. It's between Arrival and Miyazaki Spirited Away, which to me are two very different, but also somewhat related movies, obviously like Arrival is hard science fiction. You've got Amy Adams and Jeremy Renner, and they're linguists and they're trying to decode an alien language. And then in Spirited Away you have this fantastical world. Jiro gets transported to the spirit world after her parents get turned into pigs and she goes on this hero's journey to help turn them back. But to me, that sort of wild difference between fantasy and science and reality, but then still somehow being grounded in reality. You have this amazing setting in spirited a way that still takes place in a traditional Japanese bathhouse that all the spirits participate in, but then in arrival, it's the real world. But we are also in this alien spaceship that's parked on the lawn, so to speak, of the us. I've always loved how movies and writing and stories takes the real makes it fantastical, but then also it's almost like a dream. You're still experiencing those things in the reel. And those two movies in particular, not only was the Fantastical just amazing, and I am a diehard Amy Adams fan, but it's just really nice to sit and watch that and be like, this could happen in my backyard.

Kelly Savoie (46:51):

Yeah, I love Amy Adams too. And I did see Arrival, although that movie confused the heck out of me.

Emma Collins ([46:58](#)):

I think it confuses a lot of people.

Kelly Savoie ([46:59](#)):

Yeah, it's one of those movies where I'm like, what is happening? And I have not seen Spirit Away, but okay, I need to know why and how her parents turned into pigs?

Emma Collins ([47:12](#)):

Well, so they were very greedy and they were eating the food left out for the spirits. So that was the curse that was put on them.

([47:20](#)):

And I could go on such a long rant about this, but Chihiro's journey was learning how to grow up because she's moving to a new town. She's moving away from her friends. She's a young girl and she doesn't want to do this. She wants to go back and be with her friends, but she's learning. I can face the unknown and I can come out and be victorious at the end and protect my family, and I will be strong enough to do this. I will be strong enough to move and be okay at the end. But yeah, that was just because they were being super greedy. So they kind of ended up being the childish figures at the end of the movie because they didn't go through any of the growth that Chihiro went through. But it was more important for her to mature at the end.

Kelly Savoie ([47:58](#)):

Gotcha.

Emma Collins ([48:01](#)):

But what about you, Kelly? What's your favorite movie?

Kelly Savoie ([48:03](#)):

Well, I am a huge movie buff, and I have seen probably every movie, known to man, except for Spirited Away, but my favorite movie, it's just a feel good, happy, funny, sweet movie. It's called Moonstruck and it stars, Cher and Nicholas Cage, big fan of Nicholas Cage. I love all his movies. It's basically about these traditional Italian families. Cher comes from a wealthy family. Her father's a plumber who makes lots of money. They live in a beautiful house in Brooklyn. She's engaged to a man who seems like he's dragging his feet a bit. He asks her to talk to his brother, who he's estranged from to come to the wedding. So to make a long story short, it's a love story. She falls in love with the brother who is Nicholas Cage, who is a very funny character. Her mother is Olympia Dukakis, who's hilarious. I don't remember the father's, the actor's name, but so funny. It's just one of those movies that makes me laugh. It's something you want to see when you've had a bad day, and it's just charming and funny and well done. And I know that a bunch of people got nominated for Oscars for that movie, but it is just wonderful. And I encourage any of the listeners out there who have not seen it to see it, because it will make you smile.

Emma Collins ([49:36](#)):

I feel like that's the movie I should watch with my friends. I don't think I've seen anything with Cher in it, honestly, which I'm definitely missing out on.

Kelly Savoie ([49:42](#)):

Oh, she's fantastic in it. It's so funny. Well, thanks so much for joining us for this special episode. We're so grateful to all our guests for sharing their work experiences with us, and we look forward to the next 100 episodes.

Emma Collins ([49:57](#)):

Well, that's our show for today. Please join us next time. Rain or shine,

Kelly Savoie ([50:01](#)):

Clear skies ahead. Conversations about careers in meteorology and beyond is a podcast by the American Meteorological Society. Our show is edited by Johnny Lay. Technical direction is provided by Peter Klay. Our theme music is composed and performed by Steve Savoy, and the show is hosted by Emma Collins and Kelly Savoy. You can learn more about the show online@www.ametsoc.org/clearskies. And you can contact us at Skypodcast@ametsoc.org. If you have any feedback, I would like to become a future guest.