Transcript of "Alyssa Bates, Research Associate at Cooperative Institute for Severe and High-Impact Weather Research and Operations and NWS Warning Decision Training Division, in Norman, Oklahoma"

Clear Skies Ahead: Conversations about Careers in Meteorology and Beyond

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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 Rex Horner and we'll be your hosts. We're excited to give you the opportunity to step into the shoes of an expert working in weather, water, and climate sciences.

Rex Horner:

We're happy to introduce today's guest, **Alyssa Bates**, who is a **Research Associate** at the **Cooperative Institute for Severe and High-Impact Weather Research and Operations** and **National Weather Service Warning Decision Training Division**, all in Norman, Oklahoma. Welcome, Alyssa. Thanks very much for joining us.

Alyssa Bates:

Thank you for having me.

Kelly:

Alyssa, could you tell us when you became interested in meteorology and how it influenced your educational path?

Alyssa:

Absolutely. So I became interested in meteorology from a very young age. When I was little, I would look up at the sky and wonder how the clouds and rain and thunderstorms were created. And then as I got older, I became fascinated by tornadoes when a nearby town was struck by an F4, just 26 years after being struck by an F5. And then in high school, I researched schools that had meteorology programs from the College Board website. And I applied to three schools that could represent three different career paths, including the one that I thought was closest to me, which was Penn State. I visited their main campus and I fell in love with it. So that is where I got my undergraduate degree. And then I ended up getting my graduate degree from Mississippi State, and how I got there is a whole different story.

Rex:

Tell us that story, Alyssa.

Alyssa:

Sure. I wasn't sure how much time we had.

Rex:

As long as it's not 50 minutes long.

Alyssa:

Oh, no, of course. So I was the first person in my family to want to go to graduate school. So I thought you applied to graduate school the same way that you applied to undergraduate. I thought you just applied through the application process. So I just applied to a couple of well-known meteorology programs. But that's apparently not the case. So I ended up having to miss a year. I just worked an odd job close to home. And during that year, literally every day I was applying for jobs and directly emailing professors across the country. I think I emailed literally every severe weather researcher in the country that year in trying to find an opportunity.

Alyssa:

And I eventually landed upon Mississippi State and I got to visit there and talk with Dr. Andrew Mercer. And I was interested in severe weather and he had gone to OU, the University of Oklahoma, and he still worked with the research group there. So I thought that was a great connection for me to have. And I was able to work with him on researching synoptic aspects of tornado outbreaks, which was something that I was very interested in. And while I was there, I got a taste of operational meteorology, since Penn State had been a lot of the theoretical. So I ended up getting a good mix in my educational career.

Kelly:

That sounds awesome. So that others don't make the same mistake, because it sounds like you were pretty organized, out of high school you knew what to do to research colleges and you thought you were doing the right thing for graduate school. So what was it that you didn't do that you should have?

Alyssa:

So I should have been reaching out to the actual professors. At least this was about a decade ago now, but if you wanted to get into graduate school, then you either needed to get in by teaching, so being a teaching assistant, or by being a research assistant. So you need to directly contact those professors that do research that you're interested in, express your interest to those professors and see if you might be a good fit for their program.

Kelly:

Oh, okay. So it's definitely different than some other graduate schools. I guess in meteorology it's more research-oriented. Well, that's good advice for anybody who's an undergraduate in meteorology who wants to go to graduate school. So thanks for that.

Alyssa:

Mm-hmm.

Rex:

So, Alyssa, my next question was on what opportunities that you pursued that you knew would be beneficial to securing a job in your profession. And you've actually already given us a lot of insight into that question. You mentioned, again as Kelly said, you were extremely organized in thinking of three

different career paths and finding colleges in each of those that you could pursue. And then you even knew that you wanted to get your masters to help you get the job you wanted. But let's back up a little bit. And for the sake of giving some more insight into that early period, let us know what were the three career fields that you identified?

Alyssa:

Sure. So those are kind of funny, and I was definitely naive as a high school student. But one of them was in Georgia so that I could work at The Weather Channel. And then another was actually at the University of North Carolina in Charlotte because I am a NASCAR fan, auto racing. And I thought that I could go to Charlotte and be a meteorologist for NASCAR.

Rex:

Wow. Okay.

Kelly:

That would be very cool.

Alyssa:

Yes. I thought so at the time. But then I actually have a funny story where I went to a local racetrack, a local dirt track, and there was a NASCAR pit crew member there. And he said, "No, actually you don't really want to do that. You just see one hotel room after another and all the tracks start looking the same after a while." So I think he gave me some good advice there.

Rex:

That's great. So you're a great networker too.

Alyssa:

Yeah. I, am.

Rex:

You met people in the professions that you wanted to possibly pursue and got some great insights.

Alyssa:

Yes.

Rex:

Were there any other opportunities you pursued?

Alyssa:

Yes. So as an undergraduate, I pursued a few opportunities. I worked in the Pennsylvania State Climate Office through a work-study program for a while. I also got a summer internship, but with the National Center for Atmospheric Science. But the best opportunity I got was volunteering at the National Weather Service office in Indianapolis, Indiana during graduate school. That opportunity laid the foundation for my current career, even though I couldn't participate in the usual volunteer program due

to logistical constraints. For those of you who don't know, I'm legally blind and cannot drive. None of the weather forecast offices near me were accessible via public transit. So I would not have been able to pursue that opportunity, had it not been for my Mississippi State friend who happened to be from Indy.

Alyssa:

So I would take a Greyhound bus from my home in Ohio to Indy about once every two weeks. And his father would pick me up from the station and let me stay with him, and he would drive me back and forth to the office. And I am forever grateful to him. And thanks to him, I was even able to successfully complete a couple of midnight shifts, and boy was that an experience?

Kelly:

Oh, wow. So that was so nice that they did that for you so that you could pursue that opportunity.

Alyssa:

Absolutely.

Kelly:

So what is interesting about the midnight shifts?

Alyssa:

Well, you're awake and working when nobody else is, or not nobody else, but very few people are. And my body didn't really adjust to it very well in the couple of times that I worked it. But it gave me a real appreciation for the National Weather Service forecasters, who I do my work for, that they work those shifts quite often. And I'm glad I did it. I'm glad I had that experience to give me that newfound appreciation for their shift work.

Kelly:

And so how did you end up where you are now? How many years were you at your first position?

Alyssa:

So my first job is actually where I still am.

Kelly:

Oh, excellent.

Rex:

You must love it.

Kelly:

That's even better.

Alyssa:

But the opportunities that I pursued early on in my job allowed me to jump at the opportunity to create my own unique job while staying within the Warning Decision Training Division, WDTD. So let me

explain. I was hired to create training on a specific product suite, and I enjoyed doing that, but I was also interested in the experiments conducted at the Hazardous Weather Testbed. My federal project manager was involved in one of those. So he introduced me to the group he worked with, and I have been co-facilitating experiments with them ever since. Since the research projects we are working on would have a large impact if they were to become operational within the National Weather Service, I have now been funded to begin familiarizing forecasters with those experimental concepts that could significantly change how they issue warnings. At the same time, I'm now the project manager for the product I was hired to train on. So I enjoy working in both worlds.

Rex:

Alyssa, could you walk us through a typical day on the job as a research associate in your current position? A lot of people find it really helpful to have some concrete examples of what your day might be like.

Alyssa:

Absolutely. And that is a bit difficult to do since my daily tasks are divided between research projects and training deliverables, which are on different timelines. And then there's various meetings scattered throughout. But basically on a typical day, I'm checking and responding to emails and attending a meeting or two. And then I will work on a blog entry or PowerPoint for a training module. And then I'll work on creating materials for or planning for our next experiments or planning or working on our next research proposal.

Rex:

So if we could do a rough average, would you say it's something in the lines of 25% coordinating with others and meetings and maybe 75% pursuing these research projects and training deliverables? Or is it slightly different?

Alyssa:

Yes, I would say that. I don't have that many meetings per se. It's maybe three a week, two to three a week.

Rex:

So pretty typical low end of the scale for a professional industry job.

Alyssa:

Yes.

Rex:

That's great to hear. So a lot of time to really devote towards the subjects you're passionate about and the projects you're passionate about.

Alyssa:

Absolutely.

Rex:

That's great to hear.

Kelly:

So it sounds like it's pretty varied. What do you like the most about the job?

Alyssa:

So as you can imagine, picking one thing that I like is difficult.

Kelly:

It's hard, right.

Alyssa:

I really enjoy my job, because I get to work in severe weather. I get to create fancy PowerPoints for a living. I get to design experiments that are testing an exciting next-generation severe weather warning system. And I get to work with great people from all different aspects of meteorology, from researchers to operational meteorologists. I love working in that nexus between research and operations and toward bridging that gap between them. And I also enjoy, of course, having the freedom to participate in great organizations like the AMS.

Rex:

So maybe this is a harder question, Alyssa, but are there some significant challenges you face in your position or in the industry that you're in?

Alyssa:

Sure. My biggest challenge is actually in communication. As I mentioned, the work I do is for federal employees, but I am a Cooperative Institute employee. Therefore I am unable to participate in federal working groups, or directly reach out to forecasters as a whole, or to post in their newsletter. Yet my job is to familiarize and get feedback from those forecasters on new concepts. So right now I am working with my project managers to determine creative ways to communicate with them.

Rex:

That sounds like a Catch-22.

Alyssa:

Mm-hmm.

Kelly:

Super challenging, exactly, exactly.

Rex:

Your project manager must have their work cut out for them. And I'm sure you will both think of some very creative ways. Is there anything you can share that you've thought of so far?

Alyssa:

We've thought about hosting a limited webinar series, but as you know, people have been inundated with webinars lately, so we're not really sure if we could get the forecaster's time to even watch those webinars. But that's one thing on the table. My project managers are reaching out to their federal counterparts to see if they can think of any ideas.

Kelly:

Yeah. It sounds like you're doing your best to be able to get in touch with these folks who you obviously need to get your job done.

Alyssa:

Yes.

Kelly:

So looking back, is there anything you would have done differently in your career?

Alyssa:

So as I've mentioned, I think multiple times now, I really like my job. So I guess I would say that I really wouldn't change anything, since my past experiences got me to where I am today.

Rex:

That's entirely fine.

Kelly:

Yeah. I was going to ask. So instead of what you had done differently, is there something in particular that you did well that helped you get to the position you're in? Like any tips on, what would be the best way to get a position like the one you have?

Alyssa:

Well, what I did is I discovered what I like to do through trying various things. And then I pursued those opportunities. So I would just, even if they weren't in my chain of command necessarily, I would go and ask, "Hey, could I work with you on this project?" Or, "Could I help design this experiment?" And so once you get your foot in the door with whatever project that you enjoy doing, as long as your workplace allows for that flexibility, then that leads to other opportunities. Like now, I started with working on the one experiment, but now the same group of us has worked on multiple projects. And I was actually even the lead principal investigator for one of them. And I never thought I would be a lead principal investigator for something, because I work in training. So you just never know what opportunities will present themselves, unless you start putting feelers out here and there in whatever you're interested in.

Rex:

I think that's a really inspiring piece of advice. Alyssa, do you think your job allows for a good work-life balance?

Alyssa:

Yes and no. Although the work I do, as I mentioned, is for the federal employees, I am employed by the University of Oklahoma. Our shortened name now is CIWRO. And OU has a generous annual leave package. And WDTD allows for a lot of flexibility, which I am very grateful for. However, in addition to telework blurring the lines between work and home lives, I am chronically ill. And coordinating several doctors and appointments and procedures during business hours and across multiple states, while managing all of my work projects and activities is very challenging. And did I mention that's all while battling chronic fatigue and pain? It's really interesting to juggle sometimes, but I'm grateful for those flexibilities to help me balance that load.

Kelly:

And do you have a set work schedule? I know you had had said previously you worked a midnight shift. Do you have the same shift every day where it's, say, nine to five?

Alyssa:

Yes, I have a typical nine-to-five, which I am also grateful for.

Kelly:

Right. So Alyssa, you're very involved in diversity-related boards and committees. Could you tell us a bit about your involvement with these and why DEI is important to you?

Alyssa:

Sure. I will start with the latter portion of that question. I'm passionate about DEI because I feel that everyone is created equal and therefore deserves equal access to goods, services, and social lives. However, since I was born disabled with my legal blindness, advocating for accessibility for the disabled is where my heart is. Through a mentoring program for blind individuals that was hosted by an organization at Mississippi State, I was connected with [Inca Dura 00:18:12], a blind climatologist at the National Centers for Environmental Information. She was working on accessibility efforts with what was then termed the Board on Women and Minorities, which is now the Board on Representation, Accessibility, Inclusion, and Diversity, or BRAID. And I wanted to help out.

Alyssa:

So now I've been a member of BRAID for five years, and I'm in my sixth and final year this year. And a couple of years ago, former BRAID chair, Aaron Piña, allowed me to work with him to form an accessibility action and planning committee within BRAID. I chair the small committee and we have executed several activities from hosting a successful webinar series to highlight people with various accessibility needs to working with AMS to create accessibility-focused surveys. And all of our efforts are in the hopes of making the AMS more accessible for everyone. And we really appreciate AMS's support of our efforts.

Rex:

Well, we are immensely grateful for everything that you and everyone else in those boards and committees that you've referenced has done and has volunteered their time and energy toward. The webinar series you're talking about, I believe is called The World Through My Eyes.

Alyssa:

Yes.

Rex:

And most of the episodes should be publicly available for anyone to watch on the AMS website in the webinar directory. And you've spoken, I believe, not just as a moderator, but please correct me if I'm wrong, have you also spoken about your experience related to chronic fatigue and chronic illness and blindness on the webinar?

Alyssa:

Yes I have. I was on our very first World Through My Eyes webinar, speaking from my visually-impaired perspective. And then we had a last-minute panelist change for our chronic illness webinar. So I stepped in to be a panelist for that one as well.

Rex:

So I would encourage anyone that wants to connect with that experience and learn from it and learn from your challenges and your achievements to please watch those webinars and hear from Alyssa and the many other people that did participate and also shared their experiences.

Rex:

So this could be either related to DEI or in a different field, but Alyssa, I wanted to ask you what advice you might have for our student listeners and job seekers who are looking to establish careers in a field similar to yours, or in the weather industry in general. What would you look for, for instance, in a resume if you were hiring? Or more broadly, what advice would you have for our younger listeners?

Alyssa:

So I'll start with your latter question. And I would give the advice that I wish I had been given while I was a student, which is basically knowledge of how the real world works. I would like students, especially those from a lower socioeconomic background like mine, to know that you can pursue a successful career, but you have to either find someone to help you figure out how to get where you want to go or know how to find that basic knowledge. As I mentioned before, there's the knowledge of how to get into graduate school that I didn't know. And also that the best way to get a job is to network with professionals, not necessarily to have the best resume. And that goes to what I was speaking about before with finding opportunities within your current job. You can also use that networking mechanism to get a job as well. And most of all, don't take the opportunities that you get for granted. I wouldn't be where I am today without the help of a lot of individuals and organizations.

Rex:

So Alyssa, on that note, you mentioned socioeconomic status. Do you feel that the weather field is money-intensive to enter? Or are there opportunities for entering grad school and undergrad for people that may not have the financial ability to pay in full on their own?

Alyssa:

I was applying for undergrad over a decade ago, so I'm sure that the scholarship landscape has changed, and possibly federal aid as well. But for me, I wouldn't have been able to attend Penn State if it hadn't

been for scholarships. And that's just the long and short of it. It either would've been scholarships or I would've been over a hundred thousand dollars in debt, which I was not willing to do. So I am very grateful that as a blind individual and with my scholarly abilities, I was able to get enough scholarships to sustain me, and some federal aid. As I mentioned, I did the work-study program.

Alyssa:

So it's definitely difficult if you don't know where to find those resources. So I would definitely encourage any of the listeners who work with or know somebody, or know a student from a lower socioeconomic background, to help them find those resources. I was internet savvy, so I was able to find them myself. But some people may not have that ability even. So just getting the word out about those scholarships and federal aid is important.

Kelly:

Everything that you're saying sounds like mentoring is super important.

Alyssa:

Yes.

Kelly:

A mentor will help guide you, will also help you with networking. And it sounds like that should be the path that most people take, because it's a lot easier when you have people in the know who can guide you.

Alyssa:

Absolutely.

Rex:

Because Google can be intimidating, if that's all you have, and it can be a little bit isolating. But I just wanted to touch on, Alyssa, for graduate school, University of Mississippi State. Was it a similar situation with scholarships and financial aid? Or were there other mechanisms that allowed you to attend without having to incur a large amount of debt?

Alyssa:

I was funded through them through their teaching assistant program. However, it wasn't as financially backed as some of the others in the country. So we only got a very small stipend, and we still had to pay a portion of our tuition. I don't remember the exact percentage, but we had to pay a portion of our tuition. And thankfully though I had been receiving federal aid. And so I was able to save that and put that toward my graduate school tuition. So again, it's possible that I would've had to have taken out loans if it hadn't been for the other resources that I had at my disposal.

Kelly:

Thanks so much for explaining all that. It definitely gives our listeners who are interested in applying to school for meteorology and for graduate school some really great advice. Before we end the podcast, we always ask our guests one last fun question, unrelated to meteorology. And I'd like to ask, what is your favorite movie?

Alyssa:

I have to go with the cliche here. My favorite movie is *Twister*. I know that it isn't completely scientifically accurate, but it has the best combination of tornadoes, a dramatic storyline, a love story, great music, and one-liners and clips that I still quote today and that still make me laugh. And there was a recent tornado movie with better graphics and plenty of drama, but it didn't have those comedic breaks. So those really, in my opinion, make a well-rounded movie. And so let's just hope that we don't see any flying cows in Central Oklahoma this spring.

Rex:

Alyssa, can you give us one of your favorite quotes from the movie?

Alyssa:

Well, it's . . . "I got to go. We got cows."

Rex:

That's great. Thank you so much for joining us, Alyssa, and sharing your work experiences with us, especially all of your insight into how to help folks from different backgrounds and, in fact to help everyone equally, regardless of where they come from and their own experience. Thank you so much.

Alyssa:

That's my hope. Thank you for having me.

Kelly:

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

Rex:

Clear Skies Ahead: Conversations about Careers in Meteorology and Beyond is a podcast by the American Meteorological Society. Our show is produced by Brandon Crose and edited by Peter Trepke. Technical direction is provided by Peter Killelea. Our theme music is composed and performed by Steve Savoie. And the show is hosted by Rex Horner and Kelly Savoie. You can learn more about the show online at www.ametsoc.org/clearskies, and can contact us at skypodcast@ametsoc.org if you have any feedback or would like to become a future guest.