

Jinny Nathans: This is Jinny Nathans, AMS archivist, and I'm here with Daniel Gilford at the Hurricanes and Tropical Meteorology conference. It's Tuesday, April 17th, 2018, and I'm going to turn this over to Daniel, who's going to tell a story.

Daniel Gilford: I am frozen. I'm standing in the back of the home that I grew up in and staring out at a tree as it splits in half vertically, and comes crashing down towards me. My mom and my family are behind me. My mom yells, duck, but I can't duck because I'm frozen. I'm staring out at this tree, and all I can think is, wow, that's crazy. Here comes this tree right towards me, and this storm is so powerful.

I'm going to step back and tell you about the hurricane season of 2004, where we had four hurricanes in just a few weeks come through central Florida. I grew up in Tampa/St. Petersburg area and that 2004 season I was 15 years old. There was some relief work that me and my family did just following Hurricane Charlie, which missed our home by just 50 or 100 miles or so, and the damage in that area was really dramatic. I was 15 years old, so I was really impressionable. I remember seeing that damage. We helped out moving supplies from one building to another in a local church. That was just a really interesting moment in my life because here I was helping these people and they had just lost so much from the damage of this hurricane. I didn't know what to think about that, I hadn't had any personal experience with it. I had been several miles away, many miles away from that particular storm's damage, but Charlie really destroyed Punta Gorda and many other cities and towns in its path. I just remember as I was loading those boxes from one building to the next, wow, these storms are powerful.

Just a couple of weeks later I would have my own experience with a powerful storm. We had Hurricane Francis first come through. It was a very large storm, basically covered the entire state of Florida. I remember watching the radar as it just sort of sat over my state, very large, very imposing. Not very strong, as far as wind speeds were concerned, but I remember going out in the middle of it – I probably shouldn't have, my mom probably didn't like that very much – but I went out in the middle of it and I just stood in the winds. I remember just feeling the winds and the rain on my face and just being just struck by the power of the storm.

So I had that experience with Charlie and its damage. I had the experience with Francis and its wind on my face. And then just a week or two later was Hurricane Jean. And that's where I found myself frozen, staring out at this tree that came hurtling towards the home that I lived in. Many homes in Florida have pools, and my home was no different. We had a screened in pool area, so there was a screen, and just on the other side of that screen, there was this tree. This tree was a great friend of mine, I used to go and play around this tree, just like many kids growing up in their back yard, would just play games and hide and seek and things like that. I remember enjoying the shade of that tree in the hot summer days of Florida. But then eventually this tree came crashing down, and that was during Hurricane Jean, late September 2004. As it came crashing down in the middle of this very intense hurricane, I just remember being frozen and staring at it.

In that moment I realized how these powerful storms could affect me. They'd affect communities around me, but these storms had now done damage – this storm had done damage in the home that I had grown up in.

Now the tree didn't make its way all the way into the building where I was standing. It actually got caught by that screen and just sort of hung there – didn't destroy the room that I was standing in, thank the Lord. But I should've probably listened to my mom when she said duck, and I probably will next time. But I was just frozen by the power of this storm, and that really captured me.

Just a few years later I became a meteorologist. I actually enrolled at Florida State University and got my bachelor's degree after four years in meteorology. I didn't study hurricanes, per se, in that moment. I studied climatology, I went on to Massachusetts Institute of Technology where I worked with Susan Solomon studying chemistry in the lower stratosphere.

But then something about that storm sort of bugged me, and then one day I got the opportunity to talk with Professor Kerry Emanuel. Kerry is now a great colleague of mine, and he got me interested in this idea of lower stratosphere being able to interact with tropical cyclones through their outflow temperatures. He has this idea called potential intensity which calculates the speed limit of tropical cyclones. The fact that the lower stratosphere could affect the intensity of these storms was really intriguing to me. So just like that, almost 15 years later, there I was, studying tropical cyclones, bringing me back to the roots of what got me interested in the first place.

Now I have a real passion for thinking about hurricanes, and I want to continue to work on these problems. I'm really interested in communicating with communities that are really vulnerable, in particular, to these risks associated with hurricanes. That's something that I want to be doing in my future career, is talking with communities about these risks. It is brought back to me by the moment of the power of these storms. It's something that everyone should – I would like to have a firsthand experience with, but also it's very dangerous, so maybe not. But it's really quite impressive to think about these storms, and it's really what drew my passion to meteorology and wanting to think about how hurricanes can affect people's lives.

Thank you.

JN: Thank you, Daniel. I'm going to ask you another question. How long have you been a member of AMS, and what are your impressions of AMS from the time you joined to now?

DG: Yes, of course. So I became a member of AMS in my sophomore year of college. My first year I was doing general classes, so I wasn't very involved in meteorology. But as soon as I heard about the AMS and got the opportunity to join, I did. I attended my first annual meeting, I think, in my junior year, and I was doing some research on El Niño at the time, and reporting it there. I was heavily involved with AMS through Melissa Griffin, who is the assistant state climatologist for the State of Florida at the time. She was a great mentor to me, and was passionate about education and the AMS. So that's something that I picked up from her.

AMS has been really good to me. They provided me with my first fellowship opportunity, actually. I was a AMS graduate fellow for my first year at MIT. That was a really great experience. I got to go to Washington, and actually talk with policymakers through the AMS Policy Colloquium. I don't think I actually attended the colloquium itself, I attended the Congressional visit day. But all these experiences have been really wonderful and have

contributed greatly to my professional development. Now as an atmospheric scientist, as a doctor now, and I am excited to continue working with AMS to talk with people about the risks posed by weather and climate in their lives, and the wonderful power of these storms, which I think is really awe-inspiring and can connect us with something a little bit greater than ourselves.

JN: Are you planning on coming to Boston in 2020 for the centennial?

DG: I hope so. So I just actually graduated from MIT, so I'm moving away from Boston, unfortunately, in just the next couple of months, but I'm hoping to come back for the centennial. It's something that's really important to me, and assuming that I have the opportunity, I will certainly do so.

JN: Well, I hope you do, and thank you very, very much for sharing your story with us.

DG: Thank you, Jinny, I appreciate it.