

Jinny Nathans: This is Jinny Nathans and I'm at the Weather and Forecasting/Numerical Weather Prediction Conference, and I am speaking with Bruce Telfeyan, AMS STAC commissioner. We're going to talk a little bit about AMS, and we'll also talk about your career and your favorite article, which you were kind enough to let me know and I was able to bring you a copy. Why don't we start with your becoming a meteorologist and Hurricane Donna, you're not the first person to have experienced Hurricane Donna and become a meteorologist.

BT: No kidding. Growing up on Long Island, about twenty miles east of Manhattan, we were positioned to experience a lot of exciting weather, and I guess when I was 11 years old I really began to get interested in severe kinds of weather. A big blizzard in March of 1960, and then Hurricane Donna right after my birthday in September of 1960, and then that winter, the winter of '60-'61, brought three blizzards to our area. At the end of that spell of severe weather, my interest in meteorology was cemented for the rest of my life. I don't know what so fascinated me with the hurricane or with the blizzards, it might've been just getting days off of school, to be honest. But anyway, I was interested in the science and I pursued it to this very day.

JN: Did you know immediately when you were interested in it that it was a scientific field that you could go into, or did you have to wait and have a mentor tell you that was a direction that you could work in?

BT: Oh, as someone in seventh grade, I guess I was old enough to realize this was science. I didn't realize how complex it was. Back in those days, you know, we're talking about fifty-eight years ago if my math is right, there wasn't the availability of access to weather information that there is today. Basically I'd go to the school library and check out all the books on weather. Oh, and one thing I didn't list was George R. Stewart's book Storm, it had a big influence on me getting a better feel for just the magic that meteorology has. But I knew it was science, and I wasn't the very best student, but I pursued it and things worked out.

JN: And you had an early mentor?

BT: My dad was a physician and one of his patients was Mr. Ranke, who was a pretty high up executive with the now-defunct Eastern Airlines, and he had been a weather officer during World War II. So he had all the books. You know, back in World War II, when we got involved in it, the Army Air Force realized "hey, we need meteorologists," so they took college graduates and sent them for training in meteorology. I know... I'm trying to think what universities participated.

JN: This was the University Meteorology Committee founded by Rossby, and one was MIT, one was Chicago.

BT: Chicago, right.

JN: And I think one was one of the ones in California, I'm not sure.

BT: Probably UCLA, I'm not sure. But I don't know, I think Ranke went to MIT, but he might have gone to Chicago. Anyway he gave me his books. This was eighteen years after he had gone

through the training. They were written at a level that a seventh, eighth grader could understand. I just gave away a couple of them to a high school student who I guess I'm, you could say, mentoring.

JN: That's very nice to pass it on and pay it forward.

BT: Yeah.

JN: So I don't even mind that you didn't give them to me for the library.

BT: I might still have one... I'll have to make a mental note of that, Jinny.

JN: But no, I think that's very interesting, and that program was so significant. I was able, I don't know if you remember the New England dean of TV broadcasting in the '50s and '60s was Don Kent, and I was able to interview him a few years ago, and he had gone through that program. He became a Coast Guard meteorologist.

BT: Oh, no kidding.

JN: And that was absolutely fascinating.

BT: I think one of the very first TV meteorologists, I think out of Hartford Connecticut, was... he was really more of an artist, and his name was Eric Sloane. Beautiful artwork, he's written quite a few books about weather where his illustrations of clouds... S-L-O-A-N-E. It's worth checking out. I mean, he's deceased, I'm sure for many years now, but yeah his books, I think my mom for Christmas would get me one of his books each year. Really wonderful stuff.

But there wasn't Internet, there wasn't much on TV in meteorology or in weather, back...

JN: There were weather girls.

BT: Back in the early '60s there wasn't much, there was maybe a three to five minute broadcast, so I checked out ways that I could get material, and I subscribed to the daily weather maps from the United States Weather Bureau. Every day I got these new weather maps, and then in 1962 I took out a subscription to Weatherwise. With this article, Duncan Blanchard's article, I think when the 50th anniversary of Weatherwise came, they announced that they were going to have a special issue with the best articles, and when that issue came out one of the articles was this article, a little bit condensed. I wrote a letter to the editor saying that I was so glad they picked Duncan Blanchard's article, I thought it was the best of the best, and they printed my letter. I actually got a call from the editor saying "hey, your letter's great, I can almost promise you it's going to be in there," and when the next issue came out, I felt proud. Directly after the widow of Dave Ludlum, the founder of Weatherwise, directly after her letter was my letter, I thought that was really cool.

JN: Oh, that's wonderful.

BT: I ended my subscription maybe a year or two ago, realizing I'm at the point in my life where I need to stop accumulating things.

JN: I completely understand. I don't know if you know this, but I got a call, at this point it must be 12 or 15 years ago, from an author. She was a psychologist, and she wrote a book about college students and suicide, her name was Kay Redfield Jamison. She called me and said she was writing a book about creative people and what they get passionate about, and she was researching [Wilson] Bentley and she wasn't finding anything, so I pulled together the article. I had the preface from the Humphreys book, I photocopied it and sent it to her and a couple of other things, and actually there's a children's book about him.

BT: I have it.

JN: Ah, of course you do. I told her about that as well, and Blanchard's book, and I sent the whole package to her, and he has a chapter in her book. Of course I don't remember the title of the book, but the book has about eight chapters and she's picked eight people who were successful in different ways and saw things in different ways and made other people able to see them, and Bentley was one. It was actually the first, I think it's not quite the only, but the first time I got in the acknowledgments of the book because I had sent her all that material.

BT: Oh, great. Wow.

JN: I think it's wonderful. I mean, here you are, you're the STAC commissioner, and we're talking about Wilson Bentley.

BT: There's more ties I could tell you about. I was in graduate school at Cornell when this article came out, getting my Master's degree, this was the December 1970 issue. I got married in the next month, in January '71, to my first wife, so I didn't really have time to read *Weatherwise* the way I used to, I was not doing well in graduate school. Anyway, one night I'm in bed and I notice that my wife is crying, and she had just finished this article. That got me to take time to read it.

Some seventeen plus years later that marriage failed, and eleven years after that I married Connie, and of course I already said how I gave all the wedding party the book. Then in 2009 the WAF Committee partnered with the Canadian Meteorological and Oceanographic Society, CMOS. We partnered with them for a conference in Montréal. So this conference was partnered with the Canadians. Connie and I preceded that conference by taking a trip in northern New England, one of my Air Force assignments was in Plattsburgh, and then we went across to Vermont and stayed at a bed-and-breakfast not far from Bentley's area.

JN: Oh, from Jericho.

BT: We went to Jericho, and the woman who owned his house then, maybe still does, showed us around the house, showed us how she had made part of the garden shaped like a snowflake, of course then the museum... so, you know. And my office in Omaha has a lot of Bentley snowflake pictures on the wall.

JN: Wonderful.

BT: Anyway, yeah.

JN: That's wonderful. I don't know if you know Jean Phillips who used to be the librarian at Madison. One of the things that she did, again maybe about ten years ago, was she did a concordance. There are some other editions of his books, and she did a concordance of all the snowflake pictures, so that you could look up one and then you could see where it was in the other editions of the book, and it's on the web, I think it's still on the web with the library, and you can find particular images.

BT: Oh, neat. Well, gosh, I'm just thinking of some other connections I have with Bentley. So I bought the reprint through the AMS of his book with... is it Hammond?

JN: Humphreys?

BT: Humphreys, yeah, yeah. Then I joined Facebook and I see there's this group on Facebook of Bentley fans.

JN: Oh, no kidding.

BT: Yes, I think I sent out friend invitations to some people and this one woman accepts my friend request, we start corresponding through Facebook and she mentions that she has the original edition...

JN: As do we.

BT: Okay. I thought wow, that's neat. So I picked up that she was not doing well financially, and I made an offer to her that almost seems insane, but I said hey, look, Audre, if you would let me borrow that book for five years, I will give you a loan of \$1500 that at the end of five years, you reimburse me and I'll send the book back to you. It seemed crazy, but, you know, I had the money, and she sent me the book and periodically would send me \$300 checks.

JN: Oh, my goodness.

BT: Then I got it back to her because her mother also is an Air Force civilian employee in Oklahoma, and she would come to Offutt Air Force Base, Omaha, periodically. I met her mother for lunch one day and gave the book back to her to get to her daughter. End of story.

JN: Wow, that a wonderful story, an absolutely wonderful story. I love how that came out.

BT: So then about me, so I'm getting Weatherwise and I read about the Society, the American Meteorological Society, and I wrote and asked for an application, I'm probably in eighth grade then. I don't think there were such things as student memberships back then, maybe there were, I don't know, but I filled out the application, and I thought, this is not going to go anywhere because I'm just a junior high student. My parents wrote a check. I don't remember what the

dues were. But anyway I became a member, back I think in 1963, or maybe 1964, which makes me think I've been involved in this organization for more than half of its existence, which makes me feel ancient, but I started so young, I'm really not that old. I turned 70 in September, but I guess I have a fair amount of history to hopefully provide some meaningful input.

When I went away to the University of Kentucky as an undergraduate, they didn't have meteorology there, and I let my membership lapse. So my continuous membership really began in 1970 when I started graduate school. I don't know if the records show my earlier membership.

JN: I don't know. There are gaps, shall we say, in our records.

BT: There used to be a membership number.

JN: Yes.

BT: And mine was TELFE-002. I'm assuming it was 002 because my membership in high school was probably 001.

JN: Oh, that makes sense. They used to keep the membership records on cardexes, and we don't have those anymore.

BT: Yeah. Databases are always changing.

JN: Yeah. I kind of, you know, half of me wanted to keep them just to keep them. But I knew that we would never look at them and it didn't make sense and they were all manual and there was no way that those would be automated. We would just be starting again. You lose something when you change over.

BT: Yeah.

JN: But I do think that's absolutely fascinating, and you've given so much back to the Society now as STAC commissioner. I know you work very hard, but what has always impressed me about the Society is how how much of a volunteer Society it is, and how many people do carry things on.

BT: Sure.

JN: It's very impressive, I think that's a wonderful thing. And also Robert Bornstein's article is very interesting. I read the abstract because that was really all I could read, I clicked on the article and I have to email somebody, I got the dreaded error 404, I didn't get all the way through to the article, so something's wrong somewhere. And you have BAMS as well from your membership.

BT: Sure.

JN: I hope you don't have it all the way back to 1963.

BT: I have a lot of them. When I got to graduate school... I don't know, we're maybe skipping around, but I when got to college of course it was during Vietnam and I guess I was mentored by my brother who was in Air Force ROTC. He said the Air Force really needs meteorologists, and I thought I might as well take Air Force ROTC, so I did that at Kentucky. There wasn't a meteorology major, as I mentioned. So I graduated with a bachelors in mathematics and I thought wow, the Air Force could assign me to any number of career fields, or they're called specialty codes, Air Force Specialty Codes. I want to get meteorology. The only way, I said to myself, I can guarantee that will happen is if I get an educational delay from going on active duty and go to graduate school and get a Master's degree. That's the path I followed. I accepted the offer from Cornell and two years later left with a Master's degree and an assignment as a weather officer. They weren't going to take someone with a Master's degree and not make them a meteorologist in the Air Force.

So that put me on active duty in September 1972, which is about the time, maybe four months before, we disengaged from Vietnam, and so it probably kept me from going into the war. But in retrospect, I realize that I kept myself from getting a decent income from two years. Although I had an assistantship at Cornell we were basically broke, and I probably would have been made a weather officer with the math degree, and then the Air Force sends you to school for the training, while you're getting your full salary. Anyway, life worked out, and I'm not sure where I was leading with that story, but there's some information.

JN: Well, it's interesting thinking about that particular period in time and listening to people talk about how they got from one thing to the other. It seems so much more complicated today than it did then. Not that it was haphazard, but you knew you would land somewhere, and I think today with all of the cost of education and things being so complicated, that's easier said than done.

BT: Yes, and the job market for new graduates is tough these days in meteorology.

JN: Yeah.

BT: Not as tough as ten years ago, but still very competitive.

JN: Yeah. I would not want be that age and just starting out.

BT: Yeah. So, my involvement with AMS... or maybe I should just let you ask questions.

JN: No, well, that would've been my next question, so...

BT: When I became a second lieutenant in the Air Force, they told us "hey, if you want to get promoted you need to join the officers' club, you need to enroll in squadron officer school," which is the first level of professional military education, "And you need to join the local AMS chapter." And I thought, oh, there's a local AMS chapter, of course I'll join it. So I began my many years of involvement with local chapters. The Omaha Offutt Air Force Base chapter was at times the largest chapter in the nation.

JN: Really? Wow.

BT: The Air Force Global Weather Central, with hundreds of weather people, was there. We competed annually with the Washington DC Chapter to be the largest. And we had memorable speakers. Ted Fujita came and gave a talk that I'll never forget, Prof. Gray from Colorado State, I think, came and gave his talk about his annual number of hurricane predictions when it was in its infancy. Back then, you know, I was a younger guy, and the chapter officers were all more senior people, but after I retired from active duty in 1993 I was lucky enough to get hired out of the blue to be a civil servant in meteorology back at Offutt Air Force Base. I was a divorced parent paying a lot of child support, so I really needed a job and I was so thankful to get one. I moved back to Omaha and joined the local chapter there, and I ran for chapter vice president and won, and then served two years as chapter president. The second year my vice president was someone we all know, Ken Carey.

JN: Oh, for heaven's sakes.

BT: And Ken, bless his soul, was already active in the AMS as a volunteer. He was on the Board for Operational Government Meteorologists, and I said Ken, I'd really like to get on one of these boards or committees. He sponsored me to be on BOGM and about that time he retired and moved to the Board for Private Sector Meteorologists. Anyway, he got me started. I guess I showed enough interest and initiative that after two years on BOGM they needed someone to be the chair, and I stepped up and started chairing that board. I said I want to serve a second year, I have stuff I want to do, and it got to happen. Then when that service was done, through my job at work I'd gotten... at that time I was in a great job at work and I was supervising newly graduated PhD's who the Air Force had sent to school, and one of them I managed to get on the Weather Analysis and Forecasting Committee. When her term was done she said hey, I need to find a successor. By the way she's Jennifer Alexander, who was a candidate for president a few years ago. She worked for me back then. She said "would you like to be on WAF?" and yeah, I said, that would be so neat. And then, let's see. Mary Carnes was the WAF chair back then, and she was leaving, but they had decided the next WAF/NWP conferences were going to be in Omaha, and she said okay, he can come on our committee if he agrees to be the program chair. Peter Neilley was transitioning to be the chair...

JN: He is my next interview.

BT: Oh, great. So Peter, you could throw this at him, Peter wanted to meet with me, and I could not make the WAF committee meeting in New Orleans because it was the same time as the BOGM meeting and as outgoing BOGM chair I felt a greater obligation to turn over the reins of leadership to my successor. I met Peter for breakfast so he could tell me, okay, you need to be the program chair for the 2009 WAF/NWP conferences in Omaha. And I don't know if Peter had partied too much the night before, but he was sick, I thought he was going to throw up as we ate breakfast. So you don't want to mention this to Peter, but you know, he'll laugh if you do, because when I mentioned it to him he just started laughing. Anyway I was on the WAF Committee and suddenly I was really in the thick of it, planning a conference, working with Brenda Ward, she came to Omaha and we went to four or five different different locations. I really wanted one venue which I don't think was the best cost option. She said "you're trying to

run this show and I'm supposed to be the person deciding these things." But she went with the hotel I wanted and it was a great conference. I shouldn't say that because I'm bragging, but a lot of people attending came up and said, wow, who are you, this is really the best conference ever. And I thought wow, this is too cool.

Then Peter's tenure was over and Carolyn Reynolds, who's just great, she had done the next WAF/NWP conference, eighteen months later, which coincided with the annual meeting in... I forget where that meeting was, so I'm thinking, oh, Carolyn did such a great job, she'll probably be who Peter asks to be the next chair, but no, he asked me. So I succeeded Peter, and from I think January 2012 to January 2015 I chaired the WAF Committee, and that was really a special time, I didn't want it to end, in fact I went to the STAC commissioner Ward Seguin and said I really like doing this, can I serve as chair another year. He went to Rick Rosen, and Rick said no, he has to leave after three years. As it was through some fluke I'd served seven years total on the committee, which is a year more than you're supposed to do without a break. But they asked me to be chair after four years and it was a three-year tour. They don't look at things that closely, so I snuck in for a seventh year. Then it happened that they needed a new incoming STAC commissioner, because Dave Stensrud was moving out. My name got pulled, in January 2015 I became the incoming STAC commissioner, in January '17 the STAC Commissioner, for another seven or eight months, I guess. Eight or nine months.

JN: That's fascinating, and again, what a contribution.

BT: I'm lucky that I have a boss at Offutt Air Force Base who seems to think I'm benefiting the Air Force as well as the AMS, and he lets me put in some hours at work, and then I have a wife who doesn't grumble too much when I disappear to our computer room at home and don't watch TV with her at night. Because, you know, overseeing 36 boards and committees, you can easily put 20 hours a week into it.

JN: Oh, absolutely.

BT: I could be doing so many other things, but I do this because of a sense of commitment and I guess because I love doing it. Otherwise I would, you know, I wouldn't be gardening, but I'd be doing something different.

JN: Well, you know, we make choices, and I think it's very exciting to have you doing it.

BT: I remembered where I was headed earlier in our discussion. I got to Cornell and I realized I had to pick a thesis topic. I really wanted to do something with East Coast blizzards, but between the tough academics and exactly what they expected from a thesis, and my advisor who was not really a synoptic meteorology type, that didn't seem like it was going to work, so then I thought well something else that interests me, I read this article I think in a 1964 Weatherwise issue, about the urban heat island and how basically cities tend to be warmer than surrounding countryside because of several reasons, but basically because the concrete absorbs so much heat compared to grassy or forested areas, that cities are warmer. I thought wow, that might be an interesting thesis topic.

So that's what I pursued, and searching the literature I came across Bornstein's article. Fast forward to when I became the incoming STAC Commissioner, at the annual meeting, whatever boards and committees have meetings we as the commissioners go to. It's a great chance to interact with all the volunteers and you get a meal, too. [laughter] So, the Board on Urban Environment, a smaller group of really dedicated people, when I go to their dinner meeting, maybe eight people are there, and they want to have a named session to honor a man named Bornstein, and I thought, oh, I think that's one of the people I cited in my thesis, and I said did he write about New York City heat islands? And they said yeah, yeah, and he's retiring now, and we want to honor him. So some 50 years later, it all came together, or 40 years later.

JN: I love that, it's a very small world.

BT: Yeah.