Chestnut Memories

Oral History Transcript

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Interviewer:  Bethany Baxter (and Jim Pfitzer)
Interviewee:  Bill McDonald
Interview Location:  The American Chestnut Foundation (TACF) 2008 annual meeting
Chattanooga, TN
Transcriber:  Iliza Myers
BB: The first thing I have to do is give this statement so you know what we’re doing: The key objective of this interview is to serve as a research tool to document memories of the American chestnut. Information obtained in these interviews will be retained and made available for further use in efforts to promote a better understanding of the role of the American chestnut.

Have you signed the participant identification and release agreements?

BM: I have.

BB: Okay, great. Now we’re ready to roll. Maybe just start telling us who you are, where you’re from, just back ground information.

BM: I’m Bill McDonald. I’m from Morgantown, West Virginia, and I’m a faculty member at West Virginia University, basically a microbiologist who works with diseases of trees.

BB: Sounds good. So, how long have you been involved with the Chestnut Foundation and how did you get involved?

BM: Well, I’ve actually been involved with chestnut longer than with the foundation, but I was kind of drawn kicking and screaming into the chestnut issue as a result of some discoveries that were made in France, and believe it or not our legislature in West Virginia has a forest management review commission, and they had seen some science articles relative to recovering chestnuts in Italy. They called a meeting of the committee, and they invited people from West Virginia to testify, and the first question I was asked was being from the university is ‘what’s West Virginia University doing about the chestnut problem?’ and a colleague of mine the only answer we could give was ‘nothing,’ and they immediately wanted to know why. They were very generous in providing ten thousand dollars to us back in the late 1970s to begin a research program.

It wasn’t long thereafter that our associate provost for research called me and he said, “Bill, I’ve been getting more phone calls about chestnut then I care to answer.” He says, “If this is such a great topic, why don’t you have a symposium and see who comes.” So, he said, “I will provide
money for the university.” And we talked the forest service out of money, too. We had a symposium in Morgantown in 1978, which attracted almost two hundred people from the United States, Canada, and we invited two speakers from Europe.

And the rest, we can say, is history. I’ve been pretty intimately involved ever since.

BB: Okay, cool. Well, do you have any sort of--I guess since you’ve been involved with this whole chestnut issue for so long, is there any stories that stick out in your mind through the years?

BM: Well, I think these stories aren’t ancient stories like a lot of people have who grew up with living chestnut, but I can recall the first two weeks I spent as a new faculty member at West Virginia. My predecessor who had retired said, “Bill, maybe you’d be willing to spend a week or so out with me, and I’ll show you some of the tree problems we have in the state.”

And we traveled and spent a good bit of time in West Virginia looking at a variety of things, and I can still remember, his name was Phil True. We’re driving down a small country road, that I never would have found again had the circumstances come to it, and we stopped and I said, “What’s going on.” He says, “I want you to see there’s some American chestnuts.” He pointed them out, and it was only the second time in my life I’d ever seen chestnut even though I grew up in Ohio. There were a couple trees on the Iowa State University campus, but anyway Phil said, “Here’s a tree used to be a prominent part of West Virginia’s history.”

I wasn’t hired at West Virginia University to work on chestnut, but I thought, “Well, okay that’s a curiosity” and everyone had pretty much given up on chestnut. It wasn’t really on the research screen of anybody, and low and behold it wasn’t that many years later that we kind of got pulled kicking and screaming into the issue.

Now, the irony of this story was that this very road, and it’s a little town on the West Virginia, Virginia border the little road I drove down where he showed me those trees we now have fairly significant research plots along that road. And that is where there had been a good bit of cutting by the forest service, and there were remarkable populations of American chestnut. So, that kind of was what goes around comes around. Anyway that was kind of an unbelievable coincidence for me.
BB: So, did you know what to do with the whole fungus that infected the chestnut blight. Is that what you were talking about with the trees trying to recover in Italy?

BM: Yes, most of our research at West Virginia University, and a lot of other intuitions, deals with the virus diseases that affect the fungus, so our interest stems primarily from biological control, and in that regard, obviously the chestnut foundation emphasizes breeding; we’re looking at a different angle. Not that the two different approaches aren’t certainly compatible. In fact, I think as we get further along with the breeding program and the work with hypovirulence as this biocontrol is called, there may be ultimately a marriage of the two technologies.

BB: That’s another thing I wanted to ask. So, here we are at this 25th anniversary meeting and looking into the future. So, are there any concerns you have particularly or hopes or fears about the work that’s going on?

BM: I really don’t have any fears about the work. I think one of the problems that we have faced, and I’ve faced almost weekly is people think the whole process of restoration and the availability of chestnuts is here now, and I think we don’t want to paint a picture that’s less than optimistic, but we’re probably decades away from really serious restoration efforts, and you hate for people to lose interest in the topic because there’s not an immediate product. Biology just doesn’t operate that way.

BB: Is there any remedy to that?

BM: No, I think we’ve made great progress, and I say that relative to the breeding program, which I’m very familiar with. I think it’s remarkable how far we’ve come, but there’s still a long way to go, and it’s not going to happen overnight.

BB: So, you’ve been a member of the Chestnut Foundation since the beginnings?

BM: Uh, no. I basically was asked, invited to go to Minnesota about a year after the Foundation was formed, and the foundation was formed in Minnesota and the group there was very interested in the backcross breeding program, but they asked me to come out and talk to them about what was going on with biological control using this phenomenon of hypovirulence. I went to the meeting, I remember it well, it was at the Minnesota Arboretum and spent and hour
describing what we knew about hypovirulence at the time, and at that meeting they asked if I would be willing to join the board, because I think most of the folks who have been involved with the science of this whole issue know that they need to embrace as many technologies as possible, so by inviting me I suppose they brought another approach on board, and I’ve been with the foundation ever since.

BB: So, you’ve been with the foundation for a long time. Are there any, through the years, any stories or memories you have about TACF particularly?

BM: Well, in the early years, yes. We didn’t have an executive director. We really didn’t have any staff. It was strictly volunteer, and many of our early meetings were held in peoples’ homes. They were very interactive meetings. We did a lot of planning. We had a number of people, mostly Minnesotans who really, as I was told by several people when I asked why Minnesota, they said that Minnesotans are do people, and many of those early meetings we did a lot of planning, which we figured this was an easy issue to sell and we could attract people to the chestnut topic, because we had a real story to tell and a very critically important environmental issue.

So, we had plans within our first three or four years to have a 1.5 million dollar budget and be off and running and be able to hire some professional people to help us. Well, that didn’t happen. It took time, and we’re probably now after twenty-five years where we figured we’d be in three years. It’s a great message, but a lot of people have forgotten the chestnut as an issue, and they simply no longer have that contact. And we’ve seen interest kind of come and go. It depends a little bit on what the attitude of the nation is, and we’re getting back a little bit more to the greening of America. So, we see an increased interest in topics like this.

BB: Well, that’s kind of all the questions I have. Just keeping it loose, but is there any other things you want to throw in there to have on the record?

BM: Um, I think perhaps the one thing that had impressed me the most is we have the American Chestnut Foundation, but we also have an independent group of researchers that functions under the offices of USDA that represent about eight different universities in the U.S.--land grant universities. And that research working group has been extremely interactive, very successful. We’ve won two national awards for our cooperative efforts to try to understand and exploit
hypovirulence. That’s been one of the more rewarding parts of my career is to be able to work with colleagues from other universities toward a common goal, and that’s what the foundation is doing too. It’s just this group is more directed toward biological control.

JP: So, the work that you’ve done directly related to this biological control of that particular fungus--have ya’ll have breakthroughs that have allowed, for instance success with other problems as a result? I mean, obviously you haven’t solved the chestnut problem and obviously you’re working towards that, but I know quite often research on one thing ends up benefiting a bunch of others. Has any of your research been breakthroughs for other folks?

BM: That’s a great question, and you know, this system of hypovirulence which is actually virus diseases that affect the chestnut blight fungus as a result of it--it’s a very unique system, and as a result it’s a very sophisticated molecular work, and understanding how these viruses operate and why they’ve been successful biological control. There’s been a great effort to look for similar agents in other fungi and, in fact, some of these viruses have been transferred in the laboratory to other organisms with the thought that maybe they would provide the same level of biological control.

I think that’s on the horizon, but like so much science--for many organisms nobody even thought about there being viruses in them and using viruses to control them just hasn’t been on the radar screen. Where now I think it’s brought an awareness that hey, there’s something here and maybe there are other systems that are very similar that can be used to control plant pathogens.

JP: What makes it so particularly difficult with this fungus? Or is it just always that hard to find a viral remedy?

BM: Well, I don’t think we’ve really had too many opportunities known to us that are available to try to make something like this work. So we know it works. It’s worked very successfully in Europe. We know the viruses have been successful there. Some areas of Michigan there’s remarkable levels of recovery among American chestnuts. Again with the virus disease and the problem has been how do we exploit those viruses and make them work in the Appalachians? And that’s what we’re trying to understand. We have a lot of ideas and I think we’re probably on track to understand that.
JP: So, a virus that works in the Midwest doesn’t function the same way in Appalachia?

BM: Exactly, exactly. Probably one of the major reasons we feel, and I think there’s pretty good evidence for it is the fungus where it occurs in Michigan has been introduced to small locals where chestnut is not native, and the strains of the fungus that infect chestnut in small, isolated pockets have very little genetic diversity. It’s like introducing a new population of something anywhere. So the lack of genetic diversity has allowed those viruses to spread pretty rapidly through what is almost a clone population of the fungus. Where in the Appalachians we have a pretty diverse population of the fungus, and most organisms have natural barriers to diseases like viruses, so we find that it’s often times difficult to get the virus to transmit from one--

JP: So, there’s a healthier system down here, which--

BM: Exactly. The fungus has its natural barriers to letting these viruses spread freely. So, yeah.

BB: Well, that’s all I’ve got. If there’s anything else you want to add and throw in there?

BM: No.

JP: Well, thanks.