

The Fire Within: One Woman's Quest to Preserve Natural Areas

A conversation with Joyce Bender, dedicated & recognized leader of the Kentucky State Nature Preserves Commission.

2018 Recipient of the [Carl N. Becker Stewardship Award](#).

NAA Member since 1988.



Joyce Bender (right) accepting the Carl N. Becker award from NAA Executive Director, Lisa Smith (left) at the 2018 Natural Areas Conference

Joyce Bender served the Kentucky State Nature Preserves Commission for 31 years. During her tenure, the number of Kentucky nature preserves increased from 16 to 63, covering 28,000 acres. Joyce helped establish the Kentucky and Southeast Exotic Pest Plant Council, the Kentucky Prescribed Fire Council and conducted prescribed burns as the first certified female burn boss in the state. Upon her retirement in 2017, the Kentucky State Nature Preserves Commission named a 1.35-mile trail at Crooked Creek State Nature Preserve the Joyce Bender Trail in her honor.

In 2018, the Natural Areas Association (NAA) recognized Joyce as the recipient of the [Carl N. Becker Stewardship Award](#) in honor of her extraordinary commitment to advancing natural areas management techniques (including prescribed fire), educating the public regarding the impact of invasive plants, and building the Kentucky state natural areas stewardship program.

Joyce Bender began her career after graduating with a bachelor's degree in biology/geology from Youngstown State University in Ohio in 1981. Following internships in Ohio and Minnesota and then earning a master's degree in pollination ecology from the University of Akron in 1985 she ultimately found her home in Kentucky.

A role model for women in conservation, I was delighted to have the opportunity to talk with Joyce and reflect on her commitment to the preservation of Kentucky biodiversity.

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Moira McGinty Klos: Thank you so much for joining me today. What inspired your interest in nature?

Joyce Bender: I had a teacher in the 10th grade who required us to make a collection of local plants. Of course, I grumbled just like the rest of my classmates, but once outside when I started paying attention to the plants, I found the variety amazing. As a matter of fact, somebody asked me just the other day, to name my favorite spring wildflower. I always answer that question by thinking back to that class assignment because it was during that outing that I first discovered Dutchman's breeches (*Dicentra cucullaria*).

I remember thinking it was just such a funny little flower, so named, because it looks like little Dutch pantaloons waving on the breeze. I was captivated by that flower. The assignment required that I had to press the plant, and I was not real happy doing that, but that teacher inspired my fascination with plants.

Even before that, in the fourth grade, I had a teacher who introduced us to fossils, rocks, and minerals. This teacher and her husband used to take big trips to look for samples, and she would bring them into class and tell us about them. Her stories lit a fire in me and helped me to see that there was so much to discover outside of Youngstown, Ohio.

When I was a student at Youngstown State University, I took an ecology class where our professor would let one of my friends take the first five minutes of class to tell us about important conservation issues. When he was presenting, he would transform from a goofy college kid to this knowledgeable person with a mission. That was so impressive, and I was inspired by his passion.

I was fortunate in that my professors were able to present ecology and botany to us in such a meaningful way. I had one professor who was committed to getting us in the field and showing us places where he used to take classes that were gone because they had been developed. It made me realize that these natural treasures would not always be there without protection. That had an impact on me and opened my mind to the need for conservation.

While an undergraduate, I got an internship with the Ohio Department of Natural Resources (DNR) working for the Natural Heritage Program, which formed in 1978. They had been around for two years at that time, and I worked with Bob McCance, who was a member of the Natural Areas Association (NAA). My job was to map the data. This is when I first became aware of botany as a profession. The botanists were such

interesting people who spent their days in the field looking for all this unique stuff. They would come back with all these stories and plant finds. I was completely fascinated. During this internship, I worked with another young intern at the time, who also ended up being active in NAA, Steve Shelley. Steve and I decided to plan our own adventures so that we could be like the botanists, and we would go out to see the rare species for ourselves. These trips solidified my focus on this as a career I wanted. After graduation, Bob hired me to work for the DNR.

I soon realized that I needed a master's degree, which I pursued at the University of Akron. After graduation I got a contract job in Minnesota under Mark Heitlinger in the Midwest Regional Office of The Nature Conservancy. Mark was involved with stewardship at The Nature Conservancy and was a key figure in developing the fire program for the organization. He invited me to join his team at the regional office. It was a bit of being at the right place at the right time; and yet, once you got the opportunity, you had to prove yourself.

Moira McGinty Klos: What led you to the University of Akron for your Master's program?

Joyce Bender: While I was a student at Youngstown State University, I worked at the herbarium under Carl Chuey. (*Note: The herbarium was dedicated to the memory of Carl F. Chuey, Professor of Biology in 2015, following his death in 2014, at 70 years old.*) Carl was the curator of the herbarium. While I was there, I read about the work of Warren Stoutamire who taught at the University of Akron. I met him at a conference and expressed my interest in graduate school. He encouraged me to pursue my education and said that when I was ready, he would be happy to have me as a student. That is how I ended up at the University of Akron. It is funny how you find your way in life. The University of Akron was not really known for botany; however, through that program I expanded my interest to pollination ecology. I ended up working with Walt Macior who was studying bumblebee pollination and the co-evolution of flowers with their pollinator. This was groundbreaking in the early 1980s. I completed my master's thesis on the pollination of the Small white lady's-slipper orchid (*Cypripedium candidum*). It was through my research, and spending time studying this plant in its native habitat, that I realized that I had access to these rare species because someone cared enough to preserve and care for the land.

It was also about this time that I had my first experience with prescribed fire. The wildlife management area where I studied the orchid was under prescribed burn management. I

did not participate, but I observed and noted that the burned area enhanced the orchids. That began my interest in fire. It is funny how you pick up all these little bits and pieces as you go along.

At that time, the schools in Ohio were not really teaching land preservation management or natural areas management. However, Wisconsin and Illinois were already active in prescribed burns at the time, so it was definitely around, just not in Ohio. My first exposure to natural areas land management came while I was in graduate school in 1985. I attended the Natural Areas Conference at Camp Kern in Oregonia, OH. My mind was blown that there were so many people dedicated to natural areas management. It was just not being taught in Ohio schools even though it was being practiced. I was hooked on NAA from that moment on.

Moira McGinty Klos: Tell us about what you remember about the conservation movement in the 1980s.

Joyce Bender: I was fortunate because many of the leaders of the conservation of natural areas movement were still very active in the 1980s. I met Carl Becker back then, and that added to the thrill of receiving the award that was created in his honor. It was at the NAA conference in 1985 where I listened to a presenter from Kentucky who was describing how to inventory a state's natural areas. Little did I know at the time that I would soon be working with him.

This was still a new field for women. I was one of a very few at the conference in 1985. I was piecing together contract jobs in Ohio and then in Minnesota for The Nature Conservancy at the time. My mother would call and say – when are you going to settle down and get a real job? She only knew what all of her friends' daughters were doing holding traditional jobs with steady hours. My response was, "Mom, this is as real as it gets!" Yes, my car was old, and I did not yet have steady employment, but I was paying my dues by expanding my exposure and my experience. I tell that to young people now. Don't be afraid to get out of your state. Visit new places and expand your perspective. You need to do that while you are young and do not have a lot of attachments.

However, after a year in Minnesota I was ready to go south, and I was 28 and needed more permanent employment, and was hired by the Kentucky State Nature Preserves Commission. I was excited to take the job, but in the back of my mind I kept thinking I would head back to the mid-west in a few years. Obviously, Kentucky was the right place because I am still here.

Moira McGinty Klos: Tell me about your experience in a male-dominated career.

Joyce Bender: As I look back, I was lucky. In those days I don't know that I was really conscious of a "career ladder." And to be truthful, as a woman, we were not really focused on as "career" professionals in it for the long haul. In many instances, I was the only woman in my location or doing the work I was doing. Even beyond that, in the early days, I would be one of the very few, if not the only woman at meetings. I remember at a more recent NAA conference I was in a line for the women's room. Some of the women were grumbling that we were not going to get back to the session in time. I said, hey listen, be glad there is a line. When I attended my first conference, there were no lines because I was one of only a few women in the room. I am so happy to see so many women in the profession now.

When I arrived in Kentucky in 1986, I was the only woman professional biologist working at the Commission. However, I was starting a brand-new position that had just been established, so I just focused on my work. I was a botanist and the stewardship coordinator. Even with only 16 nature preserves that they had at that time, it quickly became apparent that my stewardship role would take up most of my time. This was my entry into the day-to-day management of natural areas.

Pretty soon, the botany aspects of the job fell away, and it just became obvious to my director and me that we needed to focus our resources on the preserves, and the number of preserves continued to grow. And then we started to get more preserves. It was in Kentucky that I discovered how much I truly loved the stewardship work rather than the botanical inventories.

In Kentucky, I was the first woman to lead a prescribed fire, and I developed the first ecological burn program for the state. In the early days it was not as accepted as it is now. The forestry division was not supportive of this method. The fish and wildlife department did some burning at the time, but it was more focused on wildlife management goals rather than ecological objectives or the preservation of a natural community.

Leading a prescribed burn was exhilarating, but it was also daunting because in the beginning we did not have a lot of equipment. One of my responsibilities was outreach to the local division of forestry personnel to assist us on site. One time in the far Western district of the state, I made a call to ask the forester for assistance, or even just to come and observe the process, and his response was to say "Honey, I hope it rains on you," and he hung up.

Sometimes in my job I would forget that I was a woman. I was just another passionate conservationist doing my job for the state. Here I was making a call to a professional colleague, and bang, you are suddenly reminded that you are a woman. That is just the way it was back then. However, over time you got to know your colleagues, and they were embracing the science of burning, so it got better and better over time.

Moira McGinty Klos: Describe your experiences in the field of prescribed fire.

Joyce Bender: When I was a little girl, my dad said, don't play with matches, and we never did. I understood that causing a fire is destructive. Now I was learning that we are going to light a fire outdoors, on purpose, in an open space. I had to change my whole way of thinking, but I got hooked pretty quick.

I attended the first ecological burn workshop ever hosted by The Nature Conservancy in 1985. It was a major undertaking, but it was also fascinating. Our instructors were literally the people who wrote the textbooks and guides we studied.

I was very lucky in that I was a part of the early movement in prescribed fire, and we formed a pretty tight community. I got to meet a lot of different people from the Midwestern and Southeastern states who became close colleagues. We became a network and served as resources to each other. It was a comradery that was just unbeatable.

When I got to Kentucky, Tom O'Daniel from the KY Division of Forestry took me under his wing and helped me grow in my confidence as a burner, which was important. He really knew his stuff. By inviting him to all my burns in his district and learning how he assessed the conditions, I gained confidence in my own abilities. It was important to be careful, and I was conservative. I only had one fire that got away. But the more we learned about fire behaviors, the easier it was to watch the burn rather than worry. We also had to work on the laws around prescribed burning in the state since we were not sure of our liability in the beginning. Now we have fire laws in place that to shield us from being personally liable.

Today there are much higher safety standards as well. When I look back at early photos, everyone was in t-shirts, jeans and boots. There was not much available in the way of personal protective equipment. Now we have safe, fire-resistant Nomex gear and extensive training for staff. When you are on a prairie, and there is this thunderous roar of fire and a lot of smoke, it can be scary, but you also know that a lot of work has been done to prepare for this moment. Hours have been spent making firebreaks and there are trained people throughout the line. I could not have done any of this work without my dedicated staff and colleagues. Working as a team is an amazing feeling

when so much is at stake. The next best thing is watching the vegetation respond afterwards.

Fire is a powerful tool and a necessary one for natural community management, but it takes a lot of work to educate the public and private landowners. People questioned setting fires on purpose at first, but over time we could demonstrate the positive results. Slowly we were able to generate support and overcome the natural fear associated with the flames and smoke. The truth is that prescribed fire does not kill all of the trees or animals. The forests and prairies need this treatment to thrive. One person was just adamant that we should not burn in her area, but after the first spring when she saw how the new vegetation and wildlife came in, she became a total convert. Seeing those transitions was one of my great joys in this work.

We developed some videos for *Kentucky Life* on Kentucky Public Television that explained the need for fire, its outcomes, and included footage of a burn. I was amazed by how many people viewed the program. Before that aired, when I would speak with neighbors in an area where we were planning a burn, it was a long spiel to explain the process and what to expect. I would face a lot of questions and concerns. However, afterwards, people were much more accepting and would tell me that they had seen me on TV and that they understood. It was tremendously successful in winning people over. Once people realize the benefits and the level of safety controls, it makes sense to them.

That said, you can never turn your back on a fire, and you need to respect the power of fire. It can lay you low if you don't.

Moira McGinty Klos: You mentioned stewardship became a focus of your work, beyond your role as a burn boss, can you tell us more about those efforts?

Joyce Bender: Growing up in Ohio, being educated in the state, and working for the Department of Natural Resources (DNR), I was familiar with the various parts of the state. However, going to Minnesota, where there were these broad prairies, it opened my eyes as to how unique and changing the land can be. It was very humbling and exciting. As a botanist, it was great to learn about so many new plants and ecosystems, but it was also interesting to move out of a state agency and into a nonprofit. In Minnesota, working for The Nature Conservancy, I was able to see how complex it can be to protect a piece of property. The one thing I learned is that it takes a lot more than fencing off a property and locking it up to protect a piece of land. That approach does not protect anything.

When I got to Kentucky, there was a whole process to acquire the land, but then it became my job to develop a management plan and nurture it. I was always very aware that I had a responsibility to those who funded the acquisition, whether it was donors or taxpayers. I wanted to make sure those dollars were used well.

Once you started getting into a preserve, you would discover so much that may or may not have been identified before. Not to mention that you are constantly learning and gaining perspective on the immense biodiversity in this country and the many ecosystems and communities that can be found in one piece of land. It is important for us to explore these preserved properties, because we are still finding plants and species that are very, very rare. Then we need to monitor them to be sure that they are not extirpated but allowed to flourish.

There is a plant in Kentucky, Short's goldenrod (*Solidago shortii*), that was only known to be in a two square mile part of the state and nowhere else on the planet. Then some more was found in Indiana about 10 years later. Even then, it is just so rare that you wonder if you are doing enough to ensure its safety. It is humbling when you consider that it is up to you and your colleagues to save something like this from extinction. The reality is that we will never have enough money or time to do all that can be done, but you push and push to do all that you can.

Moira McGinty Klos: When you think back on your career, what are some of the achievements you are most proud of?

Joyce Bender: I am proud of being one of a few women who entered this profession before it was common. I was often the first woman hired to do many of the things I did during my career. It is rewarding to see so many women in conservation today. I also found it rewarding when I was able to work with legislators. There are so many topics that an elected official has to consider and take a position on, but they often have no background or knowledge. I was always glad to share what I could about environmental issues in hopes that they would propose legislation or vote for bills that could make a better future for all of us. It was an honor to be a passionate and knowledgeable voice who could share science-based information.

I am proud of establishing the fire program in Kentucky, and for developing the Kentucky Exotic Pest Plant Council. The Kentucky Exotic Pest Plant Council formed from a sincere desire to educate the general public about the challenges of invasive plants and why it is a problem in Kentucky. I began that work in the early 1990s. Back then, when I would go to a garden club or other event to present the issue, no one knew what I was talking about. It was like being a single candle in the dark.

We have come so far in this work since then. Now I have people coming up to me to tell me about issues related to invasive plants. They have no idea of the role I played in leading the charge on this issue, so it makes me laugh, and it makes me proud to know that I was a part of something that made a difference. It makes me feel as though I really did make a mark.

Moira McGinty Klos: You have mentioned the NAA throughout this interview, and I know that you have been a member since 1988. How has NAA supported you over the years?

Joyce Bender: When I first attended NAA's Natural Areas Conference in 1985, I was just a kid in grad school. I knew of the big players such as George Fell and Carl Becker. When I worked for The Nature Conservancy, I learned about the work of Bob Jenkins, since he was the brilliance behind the heritage program. You could not help but admire the intellect and the vision of these guys. The impact of the inventory system to our country, and the globe, is remarkable. Jenkins created a system of breaking down a vast number of varying species into commonalities that could be organized, understood and measured, particularly when trying to manage finite resources. You could only protect so much, do so much, and this gave us a way to make good, science-based decisions.

In terms of my involvement with NAA, I was lucky enough to have directors at the agency that I worked for all those years ago who were committed and involved in the organization. They tried to send as many of us to the meetings as possible, because back then, there were not as many educational opportunities or career-advancement programs. NAA filled that gap. We always felt we got more than whatever registration cost in value every time. It was an investment that paid dividends.

Another benefit of the attending the Natural Areas Conference every year is that it was held in a different part of the country, so you were exposed to new plants and habitats through workshops and field trips. It was a time to connect with your peers, get to know them, share information and support one another. NAA helped me to build a solid network of professionals I could trust in terms of their knowledge and background. And of course, the programming was not only inspiring, but exposed you to so many topics and aspects of conservation that you may or may not have every heard before. Experts would present controversial, complex, and/or challenging issues; issues that are hard to digest on your own. It expanded your mind, made you think. That exposure to so much great and diverse science became a great resource to me in my work because you never knew when a challenge or issue might come up where what you learned could become an important part of your decision-making. Those conferences helped me to

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keep growing in knowledge and made me better at my job. You cannot put a price on that.

Being the recipient of the Carl Becker award meant so much to me, not just because I had met him, and he was an impressive and accomplished person, but because the ceremony was held in Indiana, and I was among my those in my region who I went to school with and worked with. I was with my tribe.

I definitely recommend NAA for young people and for others throughout their careers. I especially recommend going to the annual conference. As I said before, the conferences open your mind to so many things, and sometimes offer opposing views on topics. Then you can discuss these topics with others who work on the land, and it really makes you think. You need to stretch your brain and stay in touch with the new science.

Moira McGinty Klos: What do you plan to do in retirement?

Joyce Bender: As I prepared to retire, I read a book to help prepare me for this next stage in life. The author said that in retirement you will not be the person you were, and that scared me because this work, my commitment to conservation and stewardship of the land is a part of my soul. Just because my employment has ended, my love of the work has not. I hope that even in my seventies, I am out in the field somewhere with my chainsaw, because I do not want to do anything else. I am just so lucky to have found a career that was never just a job. Yes, I was paid, but more importantly, it filled my heart in way that nothing else ever has. Protecting the land is inherent to who I am, and I cannot imagine not working with nature for the rest of my days.