

## Eastern Conservation Science Team Member Profile:

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### **Mark Anderson**

**Director of Conservation Science  
Eastern US  
Boston, MA**

**This past year was extremely busy for the team, and a lot was accomplished. What challenge are you most looking forward to tackling this new year?**

The most important thing to me is that our work is used and makes a difference in conservation planning, both by us and others. We put a lot of effort into getting the science and mapping right, now I want to figure out how to maximize its usefulness and uptake by others. It has less to do with rigorous methods, and more to do with how we communicate the science, the tools we develop to understand and visualize the results, the language we use in our presentations, and continuing to grow a network of people who are excited about the work and communicate it well.

**You've worked in conservation science for many years. What have been the biggest changes in the state of the science over the years?**

There are a bunch. The first that comes to mind is just the level of information. When I started, simply knowing the location of a rare species was a big deal. Our understanding of the world was all point by point, and it was hard to see how locations connected, and how they related to changes and trends on the landscape - or even what those trends were. Now there is so much information, it is almost impossible to assess and process it all. This has paralleled the intensity of the conservation problems we are trying to address. We couldn't fathom the problems we are addressing now; they were there but we couldn't see what was happening.

The political climate has also changed dramatically. I started conservation in the 70's when the environmental movement was strong and bipartisan. It was not such a polarized world. Everybody understood and could agree on the fundamental importance of nature. That has really changed, unfortunately.

**Where do you see the science that guides conservation going in the coming years?**

The breakthroughs in biological science in the last 20 years have been incredible. Our understanding of trees and plants is completely different, and the same goes for birds, mammals, fish, and even insects. I am not sure if those breakthroughs have really impacted conservation yet. Who knew that trees were communicating, sharing resources, and maintaining social networks? And what does that mean for conservation?

The science on other organisms is becoming so eye-opening that in my daydreams eventually humans will realize that other species deserve equal respect to our own species. Ha - that is a long way off!

Currently we don't give equal respect to every one of our own species. Even the conservation community seems no closer to absorbing Aldo Leopold's fundamental truth that we can't succeed in conservation when we regard nature as a commodity belonging to us rather than a community to which we belong.

The other aspect is big data. Planetary scale datasets, massive increases in analytical power, decades of remotely sensed data, accurate geophysical data surfaces, machine learning, these will allow us to solve huge conservation problems that we are only beginning to perceive. We will have a better understanding of the large functioning systems that we have broken apart and we will start to understand how to put them back together.

**What are some key changes the conservation community and/or TNC could make to help facilitate lasting resilient ecosystems for nature and people?**

Human diversity is important in that if you look across different human cultures, there are many ways to perceive and interact with nature. The more we bring those into our mission and work, the closer we will get to reaching our goals. Moreover, the issues of diversity, respect, and fairness are fundamental moral principles that underly our mission. The only reason we don't extend those values to the rest of life is a century of bad science used to support a false view of human exceptionalism. Eventually, good science will reverse that, and we will start to actually have a world where people and nature thrive.

**What is the best career advice anybody has given you (or something you learned that people starting really need to know)?**

I have never been good at getting or giving career advice because I knew exactly what I wanted to do my whole life. I have been into nature and science since I was in elementary school so career choices have been very easy for me. I can see, as I raise my own family that others might have to think about it a lot more than I did. Still, my parents gave me the best advice which was do what you really care about; something that is meaningful to you and will make a difference.

*What spurred your interest in nature?* I grew up in Colorado, in a relatively rural area. In my family, kids were not supposed to be in the house. We were pushed out in the morning and told don't come back until dinner. That worked for me. I was outside a lot and I loved to wander and poke around. My original motivation for learning natural history and ecological science was simply a way to stay outside all the time! My dad was an avid fly fisherman, so I grew up camping, fishing, and hiking. Conservation just grew out of a basic interest in plants and animals, not so much their names as their life histories, and the more I tried to understand them, the more intrigued and interested I became in geology and landforms.

**If you could not be in a Conservation position, what can you see yourself doing?**

Maybe teaching or outdoor recreation. I can't really imagine not being connected to nature in my work.

**What was the worst job you've ever had?**

Cleaning machinery in a laundry warehouse in downtown Denver. I was locked in a room with a rag and totally toxic cleaning materials.

**You are an avid reader, and we always appreciate your book recommendations. What is the first book you remember reading? What book are you planning to read next?**

There were two books that I read a million times when I was young. *Hubble's Bubble* was about a group of kids that stole ingredients out of their kitchen and brewed up a potion that gave them special powers. I tried that so many times but could never really get it to work. Still I loved the whole idea of making mysterious concoctions. I also loved *Harriet the Spy*, especially the way Harriet snuck around and kept notes on everybody.

I just started reading *Mammoths of the Great Plains*, which seems to be an odd combination of Native American characters, bison, and mammoths all being around at the same time. Its quirky.

**Where in the world, that you have never been, would you most like to travel? Why?**

I have so many answers for this one. Mostly north, Swedish Lapland. I would love to hike around the boreal world. I am excited to go to Alaska later this year as I have never seen intact boreal systems on the scale that they occur there.

**What is the most memorable or most meaningful outdoor experience you ever had?**

The most memorable outdoor experience was being circled by a mountain lion while I sat next to a little fire in the Sangre de Cristo Mountains in Colorado. It was getting dark and I heard some snapping twigs and a deep grunt like my cat makes when he hits the ground from a high place. I could just perceive this shadowy shape circling around my small campsite. I stayed up all night dozing off only briefly near dawn. It was my last day in the mountains after a week of backpacking and I was not far from where my car was parked. As I packed up, I almost convinced myself that I had imagined it and panicked over nothing. But, as I was walking down a man came running out of the parking lot in a rush, pointing at my campsite. He told me that at dusk the largest mountain lion he had ever seen had dropped out of a tree and crossed the meadow over to where I was camping, and he had recorded it all on a video camera. When he showed it to me the hair on the back of my neck stood up...that was a predator and I was prey.



*Mark and his wife, Suzie, in Canyonlands at the confluence of the Green & Colorado river.*