



Sandy Wilmot: Creating Management Strategies That Encourage Resilient Forest Ecosystems

"You can accomplish a lot in life if you don't care who gets credit for it"
- Harry Truman

These sage words have guided and informed Sandy Wilmot's work with the Dept. of Forests, Parks & Recreation for the last 25 years. A Forest Health Specialist, Wilmot has also worked on international forestry projects, served for thirteen years as a co-director of the Vermont Monitoring Cooperative and is currently the Department's Climate Change Coordinator. In all of her roles and with all of her efforts, Wilmot has strived to identify opportunities for collaboration, to cross boundaries of expertise and geography in order to learn as much as possible about forest ecosystems, and about what it might take to ensure that Vermont's forests, and the organisms that rely on them, remain viable into the future.

For many years Wilmot's work has centered on long-term monitoring of forest ecosystems. "There's a lot of public concern about environmental issues and often we don't have the understanding behind it. A lot of what I'm doing is trying to better understand forests so that we can explain how things are connected and how our management may be affecting forest change. I train our staff for field work going to the same forest locations year after year to learn about trends over time, and report those findings to staff and to forest professionals so that they can get a feel for how healthy our forests are and how the work that they do can support forest resilience."

Far from just looking at trees, Wilmot's work has spanned the gamut from soil nutrition affecting a tree's ability to rebound from acid rain to the effects of air quality on forest health. "I look at trying to tie all of the pieces of an ecosystem together," explains Wilmot. "My work is about noticing connections – the better we understand and can explain how things are connected and how our management may be affecting forests and forest changes, the better we are at making informed decisions."

In addition to her work on forest ecology and forest health, Sandy Wilmot studies forests in relation to climate change. "Recently in the climate change arena I've been working on the contribution of forests to reducing greenhouse gases in the air. I also try to determine how vulnerable forests are to climate change impacts and how we can develop management practices that will help our forests adapt to climate change."

I ask Wilmot for her definition of adapting – does it mean that we will encourage active management for certain species? Will we try to keep things as they are, or maybe let nature take its course without interference? "I'll talk about climate change addressing two areas. One is the existing forest – influencing how healthy they are and looking at potential declines in what's there already. The other is the regenerating forest and what is able to survive under these new conditions. I am concerned with how to prevent as much damage as possible to the existing forests by reducing stressors, and also watching what is happening do that down the line, we may be able to make decisions about whether we actively manage for certain species or natural communities or not. We're really not advocating either way. We try to make forests as resilient as possible by creating a diversity of species, a diversity of age classes and a diversity of habitats, and then replicate that across the landscape. Those practices create pockets of diversity. As far as individual species though, they won't be the same. Each species is going to be influenced by climate change individually. How different they are in a way will be dependent on how we manage the forests. It's a complicated situation."

Equally complicated are managing the stressors that are affecting forests. "The major stressors for forests are really invasive plants and pests", explains Wilmot. "Those, air pollution and of course, climate change – these are the big three."

About invasive plants, Sandy has this to say. "Over the last fifty years temperatures have increased. Invasive plants have methods that make them more competitive in warmer conditions. They flush out earlier in the spring. They hold their leaves longer in the fall. That longer growing season benefits them, especially because we have seen growing seasons expanding over time. It's giving the invasives an edge."

I ask her to leave us with something practical and implementable that each of us can do in order to support forest health. "I feel like education is really key to keeping our natural resources", she responds. "The more people understand how they're connected to the forests the more they'll be engaged in what happens to them. I would encourage people to stay current. Try to understand what is going on at the local level and how local planning is influencing natural resources. It sounds simple, but it is really the most powerful thing we can do."