



# Meet the Scientist!



Fire ecologists study how wildfire changes ecosystems. As a fire ecologist, I focus on forests. Specifically, I study the impacts of removing fire from, or changing how fires burn in, forests which originally had fire.

## Dr. Sharon Hood Fire Ecologist

Ph.D., University of Montana  
USDA Forest Service scientist



<http://www.naturalinquirer.org>

### Important Scientist Characteristics

I love forests, and I am amazed how much forests can change over time. Spending time outside sparks my curiosity to understand forests and how climate and disturbance impacts forests. As a scientist, it is important to keep long-term goals in sight, accept some failures, and collaborate with others for successful research.

### Example of a simple research question I have tried to

**answer:** How do bark beetles and fire interact? How does one influence the other? In one project, I specifically asked, "Does a low 'dose' of fire, one in which trees survive, increase tree defenses to better help trees fend off attacking bark beetles, similar to the way a vaccine works in humans?"

### Technology or equipment used in research:

I use increment borers to collect wood samples from trees. The borer extracts a 3/16" wood cylinder so I can measure wood traits without killing the tree. As trees grow, they leave a record of every year they are alive. This record enables scientists to reconstruct the conditions under which trees were growing in the past.

### Most Exciting Discovery

In the United States, we stop many fires occurring in forests. Stopping fires has reduced how often fires burn in many forest types. My most exciting discovery was reducing low-severity fires can make trees vulnerable to bark beetles.

### When did you know you wanted to be a scientist?

I like science because it helps me understand the world in which we live. I studied forestry in school because forests have such huge ecological and economic impacts. I thought I would become a forest manager. I gradually realized I loved the whole scientific process of going from ideas to publishing to informing land management.

<https://www.firelab.org/profile/hood-sharon>