A plant physiologist studies the biology of how plants work. These studies are often done to determine if a part of a plant is not working or is causing the plant problems. An example includes low air temperatures causing injury and poor growth.

Dr. Paul Schaberg

Research Plant Physiologist

Ph.D., University of Vermont

USDA Forest Service scientist

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Dr. Paul Schaberg

Important Scientist Characteristics: I am very curious and enjoy the challenge of solving mysteries within forests–my favorite places on Earth. Curiosity provides the motivation needed to think creatively, act methodically, ask the right questions, and systematically answer questions. Together, these are the basic steps for conducting science.

Example of a simple research question I have tried to answer: How do genetics and the environment (e.g., climate change) influence the likelihood that trees will have an injury from freezing? Low temperatures can injure trees. Freezing can reduce tree growth and cause death. Genetics, or the traits a tree gets from parent trees, can also influence how sensitive a tree is to freezing damage.

Technology or equipment used in research: Recently, I used an increment borer to extract a pencil-thin piece of wood. I examine the wood under a microscope to measure tree growth rings. This process doesn't hurt the tree. The sample of wood provides year-by-year measurements of when trees grow best (e.g., long growing seasons) and worst (e.g., freezing injuries).

http://www.nrs.fs.fed.us/people/pschaberg/#8819

Most Exciting Discovery
My most exciting discoveries involve getting unexpected results during an experiment. It is great to test a hypothesis and show that it is correct. However, sometimes you get results that are surprising and teach you something completely new. These novel results can lead to new insights about the natural world.

When did you know you wanted to be a scientist?
In college, I was an intern on small forestry research studies. I loved working outdoors trying to solve mysteries about real-world problems, such as "why are these trees dying?" It was like being a forest ecology detective–something I knew would make for a fun and rewarding job!