



Meet the Scientist!



As a forest entomologist, I provide expert help to federal land managers on forest health-related issues. My goal is to protect and improve forest health and insect related issues.

Dr. Andrew Graves

Forest Entomologist

Ph.D., University of Minnesota

USDA Forest Service scientist



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Important Scientist Characteristics:

Staying curious and always keeping an eye out for something new are skills that contribute most to my work. Being able to take difficult issues and convey the information in simple and understandable ways to our clients is also an important skill.

Example of a simple research question I have tried to answer:

Why are bark beetles attracted to some trees and not others? What are the chemicals that drought-stressed trees make that are attractive to bark beetles? I found that when trees don't have enough water, they produce different chemicals than trees that do have enough water.

Technology or equipment used in research:

A gas chromatograph (GC) is an instrument that can separate and measure various compounds in a liquid mixture. We can use the GC to determine what compounds are being released by insects that are feeding underneath the bark of a tree.

Most Exciting Discovery

One way a tree can defend itself against bark beetles is to produce large amounts of resin. This is called an inducible defense. I found that by using a certain plant hormone I could cause spruce trees to increase the amount of resin they produce to defend against bark beetles.

When did you know you wanted to be a scientist?

When I nearly failed college calculus, I realized I would not be an engineer. I enrolled in the school of forestry because I love the outdoors and I am interested in healthy forests. I became interested in studying insects when I was forced to take a forest entomology course.

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