As a research fire ecologist, I study how vegetation, weather, and terrain interact to influence wildland fires.

Dr. W. Matt Jolly
Research Fire Ecologist
Ph.D., University of Montana
USDA Forest Service scientist

Dr. W. Matt Jolly

Important Scientist Characteristics: My most valuable skill is persistence. In science, we almost never learn exactly what we need to know the first time we try. We are always learning, adapting and trying new things. Most importantly, we never give up trying to learn more.

Example of a simple research question I have tried to answer: How have long-term changes in weather influenced where wildland fires ignite and how wildland fires burn?

Technology or equipment used in research: Some of my work is outside, some of my work is done in a laboratory, and some of my work is done on computers. Because of these differences, I use many types of technology. One of the tools that we use in the laboratory is called a calorimeter. A calorimeter measures the amount of heat released when a sample of plant material is burned. This tool helps us understand the energy released from wildland fires when they burn different types of plants and at different times of the year.

Most Exciting Discovery
My team and I found that changes in climate over the last 35 years have made fire seasons longer across more than 25% of Earth.

When did you know you wanted to be a scientist? I was born curious. I knew I wanted to become a scientist when I completed my Environmental Science merit badge in the Boy Scouts. I became more aware of the complicated connections between all the living and nonliving things on Earth. These ideas sparked my interest to find a career in ecology. Ecology enables me to use my curiosity to explore how the world works. I use that knowledge to help other people make good decisions about the environment.