



# Meet the Scientist!



I am an aquatic ecologist researching native fish and amphibians in high elevation ecosystems. I work primarily in the Sierra Nevada of California.

## Dr. Kathleen R. Matthews

### Aquatic/Fish Ecologist

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



<http://www.naturalinquirer.org>

### Important Scientist Characteristics

Critical thinking skills and an ability to conduct field research in wilderness environments. Wilderness research takes place in remote natural areas and requires good organization and physical toughness. While conducting field research, I have experienced dangerous blizzards and lightning storms as well as some of the most beautiful scenery in the world.

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

**to answer:** What is the impact of stocking nonnative trout in high elevation lake ecosystems in the Sierra Nevada? Stocking is the practice of raising fish and releasing them into natural waterways so people can catch them. We found an important link between nonnative fish stocking and the disappearance of the Sierra yellow-legged frog. We concluded that populations of frogs, plankton, and invertebrates could recover once trout were removed.

### Technology or equipment used in research:

I work in wilderness areas of the Sierra Nevada. We hike 7-20 miles into the wilderness and use a wide variety of tools for research. Radio-telemetry equipment and PIT tags help us track animals as they move. We also use Global Positioning System (GPS) units and water temperature recorders.

### Most Exciting Discovery

Our research showed the link between fish stocking and amphibian declines. We also found a hopeful management solution. If managers want to protect the Sierra yellow-legged frog from extinction, it is possible. To do this, we must change practices to balance fish stocking and amphibian survival.

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

In high school I enjoyed science and math classes. Once I was an undergraduate in college, I knew that I wanted to pursue a career in field ecology.

<http://www.fs.fed.us/psw/programs/cb/staff/matthews/>