



# Meet the Scientist!



Paleontology is the study of past life on Earth, from single-celled organisms to vertebrate animals. A paleontologist thinks about the idea of humans on Earth which has geologic layers filled with extinct life forms spanning billions of years.

## Dr. Bruce A. Schumacher Paleontologist

Ph.D., South Dakota School of Mines  
USDA Forest Service scientist



<http://www.naturalinquirer.org>

### Important Scientist Characteristics:

Important characteristics for my work include creativity and a strong work ethic. Work ethic gives me diligence, enabling me to be both a serious student and worker. Creativity enables me to develop unique questions about paleontology and helps me stay passionate about my work.

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

How can we associate the age of rocks and fossils from one part of the planet to another? Do different groups of dinosaurs evolve more quickly than others? What are the factors that trigger new species to evolve or go extinct?

### Technology or equipment used in research:

The absolute age of rocks can be measured using microscopic pieces of radioactive minerals contained within them. This process, called radiometric dating, requires specialized equipment at laboratories. Like carbon dating, radiometric dating uses minerals that decay slowly over millions rather than thousands of years.

### Most Exciting Discovery

I discovered a large fossil fish skull in 2012. The skull belonged to a creature called Rhinconichthys, whose name means 'fish like a whale shark'. This fossil fish was a filter feeder, and it proved to be one of only three known specimens of this type of fossil fish in the world. It's the only known specimen from the Western Hemisphere.

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

I was fascinated with the natural world as a child. When I was in college, I took some general education classes in geology, and I discovered how fascinated I was by prehistoric life. In that class, I realized for the first time that I could pursue such work in the real world.