

## **The Clear Blue Ice: An Essay on Why I Want to be a Glaciologist**

The snapping and cracking rings like a bell to my ears. The earth science that appealed to me most was glaciology, a mixture of all the others, the study of glaciers and all phenomena involving ice

The typical image that comes to mind when one thinks of a glacier is the clear, blue ice on a slope emitting the cracking sound. Glaciers are formed in areas with high snowfall and low temperatures. The snow accumulates and becomes compressed, the air spaces are squeezed out and the snow turns to ice. However, a glacier is not officially a glacier until it begins to move under its own weight or on a layer of water underneath the glacier. The glacier may move only a few centimeters a month, or hundreds of meters a day. Glacier movement is unpredictable and depends largely on the thickness of the glacier and the degree of the slope that it is on.

A typical day in the life of a glaciologist involves conducting fieldwork, analyzing data, and studying ice samples in the laboratory. Of course, not all of these tasks are done in the same day, but to me are all equally fascinating. Sometimes plans are not carried out, but if a glaciologist cannot be out in the field they can bring the glacier to the office. Using satellite remote sensing, these specialized scientists can study and monitor glacier movement, find the effect of temperature on the glacier, and discover where ice bergs break off; all by simply turning on their computer. Other tools used by glaciologists in the field are microwave sensors that detect glacial movement underneath the surface, and altimeters that measure the depth of the glacier.

Glaciers are retreating due to natural processes and global warming. If all glacial ice melted earth's sea levels would rise by 70 meters. Also seventy-five percent of the world's fresh water is contained in glaciers. If I was a glaciologist I would contribute to science in a huge way by discovering all that I could about glaciers before they disappear and by educating others about them.

The glaciers contain an abundance of information for us, especially when dealing with the earth's climate. The earth is unique in that it contains life, and we should take advantage of this and study all of the phenomena that earth has to offer us. Being a glaciologist not only means sitting down and learning about a topic by reading books, but by traveling into the field to do research. Fieldwork takes glaciologists to areas like Antarctica and possibly places where no other person has set foot before. Just imagine what that must feel like. After visiting a glacier in Norway I was amazed at seeing one of the earth's most amazing features; I could hear the glacier shifting. It was live and exciting. I would enjoy having a job with these aspects involved in it. A job in which every day I could study the earth and its phenomena.