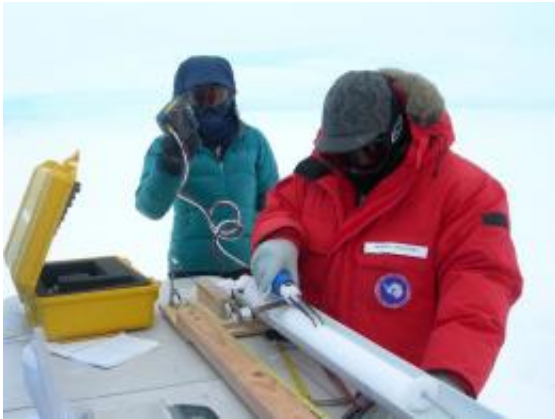


BYU geologists bring Antarctic ice cores to campus

March 6 2012



BYU grad student Jessica Williams (red coat) spent her holiday break drilling Antarctic ice for climate research directed by Professor Summer Rupper.

BYU student Jessica Williams spent Christmas morning alone in a tent pitched in the depths of Antarctica, waiting out a four-day snowstorm by re-reading the Harry Potter series.

The storm passed that afternoon, and Williams emerged from her tent and got back to work drilling 20 meters deep into the [Antarctic ice](#) for samples that are en route to BYU's new Climate Dynamics Lab on campus.

A masters' student in geology, Williams and BYU Professor Randy Skinner joined researchers from NASA and the University of Utah to

obtain 160 ice samples in locations across Western [Antarctica](#). The goal is to find out how much snowfall occurs every year in Antarctica over the past 30 years.

“Antarctica gets so much snow that comes each year, but we want to know how much is staying,” Williams said. “The part that BYU plays is getting the actual ice cores and analyzing those in the lab.”

Though the ice is still on its way to campus via freezer ship and trucks, Williams and Skinner returned during the first week of the semester. In April she will begin analysis of the cores alongside her faculty mentor, Professor Summer Rupper.

The first stop of the expedition was New Zealand, where they purchased and fitted their extreme weather wear. Next, it was off to McMurdo Station, the United States research center on the coast of Antarctica, where the team enjoyed showers, dorm rooms and even a Thanksgiving feast.

However, it wasn’t long until they were flying four hours to remote Byrd Station in Western Antarctica where this team drilled as long as the weather allowed.

“You bring a lot of movies, a lot of comedies to keep you happy,” Williams said. “We try to keep it a lot of fun, and Randy Skinner is a really funny guy.”

Skinner shared some of the amusement on Facebook when he uploaded pictures of himself competing in an Antarctic 5K race held Thanksgiving Day, proudly wearing blue BYU Physical Education shorts.

But it wasn’t all fun and games. When he couldn’t maintain a phone connection to talk to his family on Christmas Eve, Skinner’s homesick

tears froze to his face.

"I needed this experience to hit me in the face really hard, to say to me: look around, see what you have," Skinner told the Deseret News.

Antarctica in the summer is daylight for 24 hours, has winds strong enough to blow a snowmobile over and average temperatures ranging from -4 F to -40 F (-20 C to -40 C) without wind chill.

Williams has always had a love for the outdoors. She's camped on glaciers with BYU's geology department in Switzerland and British Columbia, but this was her first time to sacrifice Thanksgiving and Christmas with her family in Orem, Utah to work on her Master's thesis.

"I just like being in the field – going out and doing field trips," Williams said. "I'm a hands-on learner, which is probably why I like geology, because you spend a lot of time out looking for something."

Her thesis advisor, Summer Rupper, has traveled to Antarctica before but did not accompany Williams this time around. She said Williams was a perfect candidate for the Antarctica trip because of her positive attitude.

"She's really bright and really fun to work with, and both of those things are really important when you are working in a region like Antarctica," Rupper said. "It's a once in a lifetime opportunity, but it's not without its sacrifices, for sure."

Williams' fellow student Landon Burgener went to Antarctica last year to do the same work and lost 18 pounds in the 6 weeks he was there. His advice for Williams before she left was to find joy in the frigid and sometimes strenuous journey.

“Definitely, have fun. You are working long hours every day, so you have to try and have as much fun as you can. Enjoy the scenery, because it’s something that very few people see and that I’ll probably never see again,” Burgener said. “Enjoy all the people. It’s its own little culture, so definitely enjoy all the people.”

Williams is due to graduate with her Master’s degree in December 2012 and is hoping to continue her rugged work as a geologist.

“I really enjoy doing research, so I might just keep going and get a Ph.D.,” Williams said. “Then maybe teach at a university like BYU where you can do research and teach.”

Provided by Brigham Young University

Citation: BYU geologists bring Antarctic ice cores to campus (2012, March 6) retrieved 24 May 2024 from <https://phys.org/news/2012-03-byu-geologists-antarctic-ice-cores.html>

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