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By Emma Jacklin

Print Page

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## Column: Lecture brings the art to Ipswich

On April 28, Dr. Jason Briner, a geology professor at the University of Buffalo, came to our middle school to talk to us about his work. He explained to us how his work focuses on the changes within glaciers, which provide clues to polar climates. He told us how he, his students and colleagues often go on expeditions to the Arctic.

I was amazed when I saw a photo of his team spending all day forcing a plastic tube into the bottom of lake to uncover sediments that have been buried for hundreds of years. Once pulled up, the tube reveals 15 to 20 feet of silt. During the presentation I watched a film of these samples being collected. Using these pieces of mud, Dr. Briner can date the last movement of the ice sheet within the Holocene Epoch (the time period from the last ice age to now).

Dr. Briner also studies vegetation at the receding lines of glaciers. He showed us that at the bottom of one glacier he found small, grimy pieces of moss clinging to the rocks. When he showed us pictures of the moss it looked like any moss that you find in your backyard, but Dr Briner said that this was quite unusual. He explained that most moss is usually scraped away by glaciers. Instead of being killed by the glacier this moss was preserved by it.

Using modern technology, Dr. Briner can figure out when the moss was last touched by sunlight or brushed by the air. This data gave him a lot of information: How the glacier changed over the years or when it was last the size it is now. Dr. Briner showed us a map that pinpointed all the places that his studies have taken him, such as Alaska, Greenland, Baffin Island, Tibet, Norway and Iceland. He will go to these desolate places at least once a year and live in bright dome-shaped, orange tents. He says that the Arctic is like his playground. That when the helicopter drops his team off in the middle of nowhere he feels nothing but exhilaration and anticipation. As they watch their last link to civilization fly away, they don't feel fear or abandonment, even though they won't see it again for a long time.

Now, I am a smart, confident and daring young woman, but the thought of staying in a barren wasteland for a month in cloth domes seems frightening to me. I suppose that my hesitation is based on the polar exploration stories I have read. For instance, Shackleton's unbelievable story that I learned this year in eighth grade science: His men became so desperate that they saw their friends as possibly the next meal; limbs gladly sliced off when the searing and scathing pain of frostbite and gangrene became so bad.

When I asked Dr.Briner what was the most frightening moment he had in the Arctic, he said, "One time the ice broke under me while I was on a snowmobile. However, in this case neither man nor machine were harmed."

Still I wondered what could compel a man to go to a place with such potential danger. Fascination. That is the answer. Fascination with the towering ice giants known as glaciers or the shifting ice sheet of Greenland. I am, as well, fascinated. The allure of the mysterious ice mountains and the vast information a scrape of mud or moss can hold captivates me.

Even though I might not become a geologist, Dr. Briner inspires me. I want to know more. What is the process of getting the information out of the mud or moss? Will the dirt I was working in yesterday be hidden under a lake waiting for a scientist to dig up and learn from in a thousand years? How much labor does it take to get the mud samples from the lake? Does it ever get lonely, being in God's country with only a few friends?

I might never know the answer to these questions but my science teacher, Mrs. Ciarametaro, has a chance to answer them. This summer she will be joining Dr. Briner in Greenland. This is a once-in-a-lifetime opportunity that Mrs. Ciarametaro has had to work very hard for. I am so excited for her and a little bit jealous of her chance. This year has been a real eye opener for me. I am thinking thoughts that would have never crossed my mind before, because of these two incredible scientists, whom I am so lucky to have learned from this year.

Emma Jacklin attends the eighth grade at Ipswich Middle School.



Dr. Jason Briner, a geology professor at the University of Buffalo, explains glaciers to the eighth graders at Ipswich Middle School. Courtesy photo

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