June | Terri Lacourse, Paleoecologist

Who are you?

I am a biology professor at the University of Victoria. I help university students to understand the scientific process and the importance of careful study design and statistics in biology and climate change science. My research as a paleoecologist is focused on trying to understand how changes in climate have affected forest ecosystems over thousands of years. My research students and I use plant fossils that are preserved in lake sediments to figure out what ancient forests were like and how they responded to changes in climate, which plant species were present or when they disappeared, and how the arrival of different plant species affects the abundance of other plants.

Why is it important?

I teach students and train future scientists about how ecosystems change over thousands of years and what effects past climate change has had on our ecosystems. Climate has always been constantly changing and ecosystems can adapt to natural changes in climate, but usually environmental changes don't occur as fast as the changes we are seeing now. By figuring out how natural changes in climate have affected ecosystems in the past, we are better able to understand the changes we are seeing now and predict the ecological effects of future climate change.

What does your research involve?

My research starts with collecting lake sediments and then bringing these back to my lab to analyze their contents and figure out how old they are. Often, the lake sediments span the last 15,000 years. Using a microscope, we identify the fossil pollen and other plant fossils that are contained in these sediments and figure out how forests ecosystems have changed through time in response to changes in the environment and climate. For example, we can figure out just how old BC's ancient rainforests really are, the frequency of past forest fires, and how and when past changes in climate caused changes in forest type.

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What got you into the field of climate change science?

I still remember the day I first heard about how you can use fossil pollen and other plant remains to figure out how plant communities change over thousands of years in response to past changes in climate. It was in a third year university class and after that class, I was so intrigued that I just had to learn more about it. The rest is history.

Did you ever want to be something else?

Yes, a dentist!

What do you like most about your work?

I really love spending long hours at the microscope identifying and counting pollen. I love the challenge of data analysis: as soon as I have data, I can't wait to graph it and analyze it statistically. (Yes, math really is important.) And, I like that I am constantly learning new things and that I get to investigate new scientific questions. What I really like about teaching is seeing the "Eureka!" moments that students have – those moments when that imaginary light bulb above their heads turns on and they understand something new. Those moments are priceless.

What are three achievements/findings/other things in your life you are proudest of?

Getting a PhD in Biology; helping my research students successfully complete their own research; getting students excited about statistics and data analysis (that one is not easy!)

What was your first summer job?

Delivering the local newspaper when I was 9 years old.

What 5 favourite artists/groups/pieces of music do to you listen to on your iPod?

Mostly I listen to rock music, but I also like folk, bluegrass, and roots & blues music. My favourite musicians right now are Gov't Mule, Phil Ochs, and Neil Young.

What's your favourite colour?

I don't have one.

How do you get to work every day?

I walk.

What are your favorite things to do when you aren't working?

I like to garden, play tennis, and I'm a big movie fan. I also have a microscope at home in case I get the sudden urge to identify plant fossils!

What 5 words would you use to describe yourself?

Intense; inquisitive; tenacious; principled; compassionate.

What advice do you have for a young person wanting to pursue a career in your field?

Get a good university education and be willing to learn from your mistakes. Don't take life (or yourself) too seriously and don't be afraid to ask lots of questions.

To learn more about Terri Lacourse visit **http://web.uvic.ca/biology/people/facpages/lacourse.php**