



December | Trisalyn Nelson, Geographer

What do you do?

I am a geographer. There are many kinds of geographers, so more specifically I am a spatial scientist. I am interested in combining maps and statistics to study the environment and health. As an example, I apply statistics to maps that show where the forests are infested with mountain pine beetle. Geographic methods help us better understand how beetles move and spread across large areas. We can't see mountain pine beetles fly because they are the size of a grain of rice and only fly for a few days each year. Instead, we use patterns of infested trees to determine the most likely ways beetles move around.

Why is it important?

Society has developed many new ways to make maps. You can now map your neighbourhood using images from GoogleMaps. New mapping technologies can be really useful for answering environmental questions, if we know how to use them. My students and I develop methods for using maps. For example, we are interested in

how to statistically analyze data points received from grizzly bear collars in order to understand how these bears use their habitat. Knowing how a bear uses its habitat allows wildlife managers to make better conservation decisions.

What does your research involve?

Most of my research is collaborative so I get to do a lot of work with different groups of people. I enjoy working with experts in forestry, biology, and health. When people with different expertise get together, really interesting questions can be addressed and we end up learning a lot from each other. Most of my research is done right from my computer. I get data from many different sources—satellites, field biologists, and GPS units to name but a few. My expertise is in how to handle and extract useful information from these large data sets. Using statistics and geographic information systems (GIS) I find patterns in all this information—over space, time, or both.

What got you into it?

I was interested in environmental conservation. I realized that science is an important tool for protecting the environment. Spatial science is exciting because we use a lot of cool technology (GPS, satellite images, google maps) to study many different things. Right now I am studying if the mountain pine beetle will be able to spread across Canada, how well British Columbia's food system could handle everyone eating a 100 mile diet, and the impact of forest harvesting on how grizzly bears use the environment.

Did you ever want to be something else?

In the past I have wanted to be a music teacher, a biologist, and a photographer. I took a Geography course as an elective and got hooked.

What do you like most about your work?

I like a lot of things. The students I teach and do research with are amazing. It is fun to get others excited about ideas that I enjoy. I also like being a detective. I get to figure out what maps can tell us about how wildlife, the climate, or people behave. When I can link the numbers I extract about map patterns to mechanisms that beetles use to infest trees, it is pretty exciting.

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

I really like being a mom. The day I found out I got my job as a professor at UVic was exciting and I bought myself a new bike to celebrate. I also enjoy running a research lab (**Spatial Pattern Analysis and Research (SPAR) Lab**). If I can convince someone to fund my ideas then I can study anything that interests me. Part of my research involves training students and I really enjoy

working with them. When students succeed, I feel proud to have contributed to their success.

What was your first summer job?

I cleared tables at a local restaurant. When I dumped eight large glasses of water on some customers I knew that I probably needed to find something else to do with my life.

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

I seem to keep listening to Jack Johnson and Sarah Harmer. Other than that I like to be able to sing along, even if I am out of tune.

What's your favourite colour?

Green.

How do you get to work every day?

Most days I ride my bike. I really enjoy biking and sometimes take a long route just for fun. It is a good way to prepare for the day and I don't have to deal with crazy parking lots.

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

When I am not working I like to play with my 2 year old son, bake cookies, ride my bike, kayak, and visit my friends.

Where do you get funding for your research?

Mostly from different government agencies.

Why are you here at UVic?

Initially I came to UVic because I grew up in Victoria and most of my family is here. Geographically, it is a nice place to live. The students at UVic are really great and make it a nice place to work.



To learn more about Trisalyn Nelson's research click here:

communications.uvic.ca/research/details.php?go=1&id=799 and
www.geog.uvic.ca/dept2/faculty/nelson/nelson.html

