Thanks for your interest in my lab! Below is some information on the sort of work I do and my mentoring philosophy. It also includes a few questions for you, to help me to get to know you better.

My science
I work on population, community, and evolutionary ecology. Currently, I’m most interested in spatial synchrony, and the links between interspecific interactions and adaptive evolution, but my interests are pretty broad. I’m the kind of scientist who has lots of medium-sized ideas rather than one big idea. My work is question-driven and fundamental rather than applied. While I’m not averse to taking on students interested in applied problems, I would want an “applied” student to select an applied problem that also has interesting fundamental aspects. It’s not that I don’t value applied work, it’s just not what I do.

Because my work is question-driven, I don’t focus on a particular favorite organism. I work in whatever system is most appropriate for addressing the question of interest. I encourage you to do the same. Past students of mine have worked with microcosms (as I do), bean beetles, alpine plants and their pollinators, and lake bacteria.

My own work involves a combination of experiments and mathematical theory. In particular, I do a lot work with “model” communities of protists, bacteria, and small zooplankton growing in bottles (laboratory microcosms). Much as an engineer can learn a lot about aerodynamics by studying model planes in a wind tunnel, I believe ecologists can learn a lot about communities and ecosystems by studying model ecosystems under controlled conditions. One advantages of microcosms is that you can collect long-term data (hundreds of generations) in a few months. I use these model communities to test the predictions about the fundamental “rules” that all (or at least many) populations and communities should obey.

My mentoring philosophy
My general mentoring philosophy is to treat my students as colleagues as far as possible. This has numerous implications. The most important is that I expect my students to think and work independently, as far as possible. One of the most important things you can learn in grad school is how to identify and answer important questions, and you can only learn this by thinking and working independently.

Note that in expecting you to work independently, I will not be expecting you to work alone. I work independently of my colleagues, but I interact with them frequently. We talk about science a lot, and ask each other for advice, but we don’t tell each other what to do. As far as possible, I try to interact with my students in the same way. When you do want/need to talk, my door will always be open. Talking with students is the best part of my job, and I try to keep my lab on the small side (3-4 grad students, ideally) so that I have plenty of time to give each student the one-on-one attention they need.

I expect my students to think and work quantitatively. You won’t have to become a modeler, but you’ll probably need to understand the models others have produced, and you’ll probably have to learn some statistics more advanced than regression or ANOVA. I also expect my students to learn how to write and speak well, both of which require a lot of practice. Quantitative thinking and communication skills will come in handy no matter what you go on to do in life.
I expect my students to participate actively in the intellectual life of the lab and the department (and hopefully in the social life as well!) You will learn as much from your fellow students as you will from me. This means I expect you to participate actively in lab meetings, attend seminars, meet with visiting speakers, etc. Grad school is about more than simply putting your head down and doggedly pursuing your own research. It’s about taking advantage of myriad opportunities for intellectual and professional growth. It’s your graduate program—take charge of it and get the most out of it!

Finally, I won’t expect you to be in the lab 24/7 or anything silly like that (if you do start sleeping in the lab, I’ll tell you to go home!). And I won't put my name on any work to which I haven't made a significant intellectual contribution. Your work is yours.

**Some questions for you**

Being a graduate student is very different from being an undergraduate. Graduate students are producers rather than consumers of knowledge.

Here are a few questions I ask all prospective graduate students:

- What gets you excited about ecology and evolution?
- What’s your academic background (courses taken and grades received)?
- Do you have any research experience (e.g., honors thesis, field assistant)?
- Why do you want to go to graduate school?
- Are you thinking of getting an M.Sc., or a Ph.D.?
- What do you think you might want to do after graduate school?
- What interests you about my work, and/or about the U of Calgary?

**What next?**

Deciding to go to graduate school is a big commitment. You want to be as sure as you can be that graduate school, and my lab, are the right choice for you. If after reading this you’re still interested in working with me, send me an e-mail; the questions above are intended to guide you in what to talk about. At that time, send me a transcript (unofficial is fine) and a CV. I’ll get back to you as soon as I can and we’ll go from there. If you and I both feel I might be the right advisor for you, I’ll pay for you to come to Calgary for a visit (ideally 6-12 months before you plan to start). Thanks again for your interest, looking forward to hearing from you.