STATEMENT OF TEACHING

Carl Rogers had it right in 1951, when he developed the student-centered teaching approach: "We cannot teach another person directly; we can only facilitate his learning." (Rogers 1951). I follow this pedagogical philosophy by striving to make the learning process accessible to students with diverse backgrounds and targeting multiple learning styles (e.g., visual, auditory) using relevant and approachable examples. As a teaching assistant for Genetics at Oregon State University, I helped undergraduates calculate Prince Charles' inbreeding coefficient, and I illustrated heterozygosity and Mendelian inheritance using live corn snakes with heritable color patterns. By making even complex material applicable to pragmatic or familiar scenarios, students better retain information.

I also encourage students to take ownership of the learning process. Following the principle of experiential learning (i.e., students learn best by doing), I include hands-on activities, demonstrations, and student-led lectures. Whenever possible, I teach by asking questions and thus encourage students to recognize appropriate questions they can be asking on their own. As an NSF GK-12 fellow at Oregon State University, I helped elementary school students (2^{nd} – 5^{th} grade) become a living food web by assigning animal names to everyone and asking them who eats whom. As the connections were shouted out, string was passed among predators and prey, until a complex food web emerged. In the statistics course I taught at California State University, Monterey Bay, students reviewed for the final exam by giving a short lecture to their classmates on a statistical principle covered during the course, which students found helpful. I am currently leading a graduate seminar in proposal writing, in which students bring incremental stages of their grant proposal (ideally one they will actually submit) to each seminar. Each student gets around ten minutes of time during which we read their draft and provide feedback. In this way, they learn the process of planning, organizing, writing, and revising a grant proposal first-hand, as well as how to edit others' works in progress.

My diverse research background has prepared me to teach a number of available courses at the George Washington University including genetics, introductory biology, evolution, behavioral ecology, ecological and evolutionary genetics, cell biology, or molecular biology. If not currently available, I can also develop courses in genomics, population genetics, quantitative genetics, biostatistics or grant writing.

In addition to coursework and seminars, I am committed to mentoring undergraduates, graduate students and postdocs. At Syracuse University, I have gained valuable experience in advising at all of these levels, directing lab research and administration as well as serving on two graduate student committees, one to administer a doctoral thesis defense and the other to participate in a doctoral candidacy qualification exam. Over the course of my research career, I have mentored two dozen undergraduate and high school students, over half of whom were women. My approach to mentoring involves close direction and guidance early on, focusing on developing skills researching background information on a question of interest, identifying and accessing the primary literature, and reading and interpreting scientific results. In so doing, undergraduates develop skills in obtaining, processing and interpreting information while developing a background understanding that will ideally inform and motivate the design and implemetation of subsequent experimental research. Regardless of the career path a student embarks on, I want them to leave their experience with an ability to think critically, creatively and independently and a basic understanding of the scientific process. In this way, the student-centered approach has provided valuable structure to both my teaching and mentoring and will continue to be a foundation on which I will direct my lab as a principle investigator.