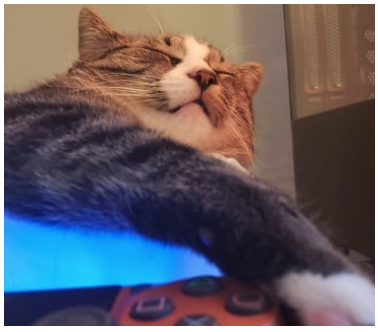
BIOL3611 – Evolutionary Ecology (Fall 2020)

A singular question that might define this course is: How can we account for the diversity we see among and within biological hierarchies? A simple answer is: Adaptation is meaningful only with respect to an ecological context. Perhaps in other words, what would evolution even look like without an ecological context? Pretty boring, I would wager.

BIOL3611 will explore many of the evolutionary outcomes from ecological contexts such as: mating systems, ageing, sexual reproduction, sexual dimorphism, geographic variation, phenotypic plasticity, and life histories.

We will look at classic and current literature to better understand not only these outcomes, but how the field of evolutionary ecology itself has 'evolved'. There will be several experiential learning activities to provide insight on the processes which produce these outcomes, as well as how we might measure and compare them. Lectures will be pre-recorded, and the scheduled time slots will be used for recorded live Q&A sessions and discussions, and office hours.

Note: Students will be asked to individually collect field data from local flora. Student data will be combined with my own and compiled in to a data-set accessible to everyone. This will not be a requirement, but is certainly encouraged.



Instructor: Winston Campeau winstoncampeau@cmail.carleton.ca

Textbooks: No textbook required. Electronic material will be provided on cuLearn or through the MacOrdum Library.

Prerequisites: BIOL 2600 (Ecology)

"Nothing in biology makes sense except in the light of evolution ... Evolution is a light which illuminates all facts, a curve that all lines must follow." – Dobzhansky