

Biology Seminar



Western
UNIVERSITY · CANADA

12:30 - 1:30 pm
Friday, March 13, 2020
WSC 240



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Empirical and theoretical insights into the feedbacks between green and brown food chains

Green and brown food chains derived their energy and nutrients from production and decomposition, respectively. A body of empirical work has demonstrated that the rates of production and decomposition should be dependent on the composition of both green and brown food chains. This evidence has been taken to mean that interactions between the animals in these food chains, plants, and ecosystem nutrient availability should produce feedbacks between green and brown food chains that alter ecosystem functioning. Yet, very few empirical tests for these feedbacks have been conducted in the field. I will present a series of field experiments and corresponding mathematical models that test for feedbacks between the animals in green and brown food chains. Using this evidence, I will argue that ecosystem heterogeneity, especially in the large stable nutrient pools, can comprise the hypotheses we generate under simpler experimental conditions..