Biology 570 - Models in Ecology

Winter 2005 (0-3s-1)

This course is designed to introduce ecology students to quantitative methods which are relevant to research. We will cover methods for formulating, analysing, parameterizing, and validating quantitative models for ecological processes. These models will be applied to population dynamics, species interactions, movement, and spatial processes. Approaches we will use include classical hypothesis testing, computer simulation, differential equations, individual-based models, least squares, likelihood, matrix equations, Markov processes, multiple working hypotheses, and stochastic processes. There will be 2 hours of lecture, one hour of discussion, and one hour of computer lab each week. The lab covers computer simulation methods.

Students should have introductory computer skills and basic math skills (familiarity with introductory statistics and introductory calculus). Relevant text and references will be announced.

Instructor: Dr. Mark Lewis
Prerequisite: Consent of the instructor. Grad students and senior undergrads are encouraged to enroll.
Questions: Contact M. Lewis Biology B326 (mlewis@math.ualberta.ca)

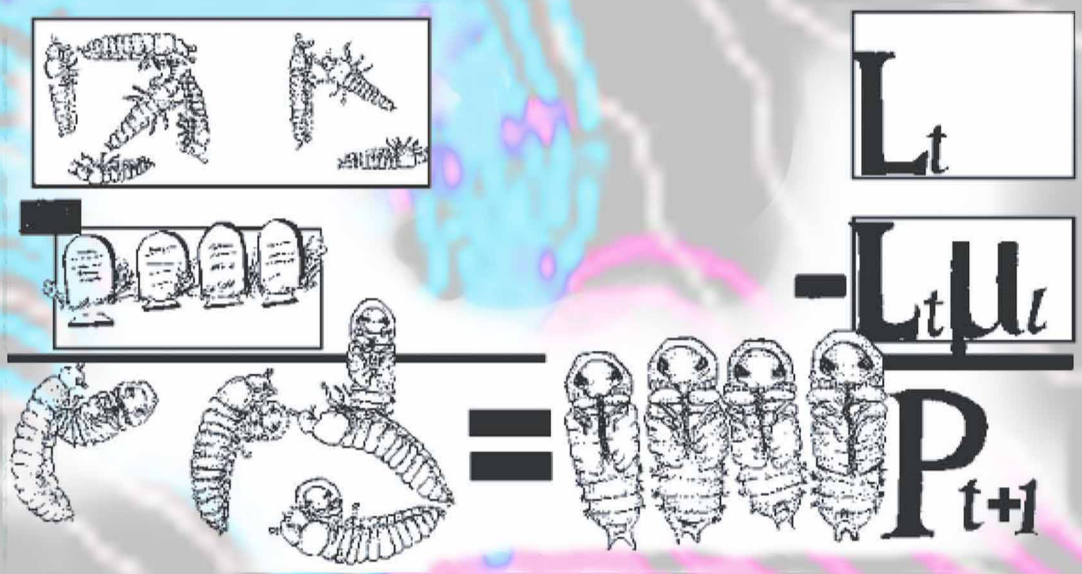

Image title: "Surviving Larvae Minus Dead Larvae Equals Pupae" Artist: Pao Her