1067-R1-118 **Rachael Miller Neilan*** (rmill48@lsu.edu), 2139 Energy, Coast, and Environment Building, Louisiana State University, Baton Rouge, LA 70803. *Calibrating, Simulating, and Evaluating an Exposure-Effects Model for Fish Growth.*

Ordinary differential equations are often used to describe the dynamics of fish growth. During exposure to a stressor such as hypoxia (low dissolved oxygen, DO), instantaneous growth rates of fish decline. When conditions improve, growth rates return to normal. We show how published data from experiments in constant hypoxia can be used to calibrate an exposure-effects model for fish growth. During fluctuating conditions, DO can be approximated and model equations can be solved on an hourly-time step to compute the growth of a fish. We will discuss how students can calibrate, implement, and evaluate the exposure-effects model. (Received September 21, 2010)