1106-60-2180 **Amanda A Groccia*** (amandagroccia@gmail.com), 102 Lone Oak Drive, New Milford, CT 06776. *Stochastic Differential Equations: Killer Shrimp.* Preliminary report.

Stochastic differential equations yield solutions that are continuous-time stochastic processes. We show how stochastic differential equations can be applied to a very specific ecological system which examined canabalistic shrimp in Southern German waters, which were experiencing several drastic population changes. We specifically modeled a very special case of the predator-prey model, known as mutual predation in which a canabalistic term was added. This model was then later nondimensionalized to determine the longterm trends when additive noise was introduced. These equations gave rise to useful methods for numerically approximating longterm trends in these shrimp populations. (Received September 16, 2014)