

2008-2009 Speaker Series

The Center for Women in Science & Mathematics Speaker Series

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5:00 p.m.

SMB 162

“Estimation of vital rates in aphid populations undergoing sublethal exposure to pesticides”

With newer, more environmentally friendly and, subsequently less lethal, pesticides in use, evaluating efficacy of a pesticide now requires more than simply counting deaths after treatment. A deterministic, age-structured matrix model that incorporates a species' life history traits (such as birth rate, death rate and fecundity) has previously been used by ecologists. This model will be presented and discussed along with an alternative continuous, age-structured model which offers significant advantage in considering sublethal damage. We use this continuous model to estimate time-dependent mortality parameters in a least-squares technique. Confidence intervals are given and results from tests for statistical significance of added parameters are presented.

***Counts for a
convocation
requirement***



*Meredith Center for Women in
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