



NIMBioS

National Institute for Mathematical
and Biological Synthesis



NIMBioS Interdisciplinary Seminar 3:30 p.m.**, Tuesday, February 26, 2013

Dr. Ludek Berec*

Department of Theoretical Ecology, Institute of Entomology, Biology
Centre, Academy of Sciences of the Czech Rep.
**NIMBioS Postdoctoral Fellows Invited Distinguished Visitor*

***Hallam Auditorium, Room 206
Claxton Education Building, 1122 Volunteer Blvd.***

“Allee effects and pest control”

Allee effects, or positive density dependence in one or more fitness components, still enjoy the glare of popularity, but are sometimes regarded as a sort of theoretical amusement with little practical consequences. This talk will deal with how Allee effects can be exploited in pest control. After briefly reviewing what Allee effects are and what supportive evidence we have for them, I will first illustrate how Allee effects can be strengthened to enhance pest control efficiency. One way of strengthening Allee effects is to introduce another component Allee effect, and I will present various ways in which component Allee effects may interact. Then I will demonstrate how Allee effects can be used to enhance efficiency of management of the invasive gypsy moth *Lymantria dispar*. Finally, I will show that neglecting uncertainty behind Allee effect estimation may generate false predictions of population extinction risk.

****Join us for refreshments at 3 p.m. *in the 1st floor visitor breakroom.***

For more information about this and other NIMBioS Seminars, visit
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The National Institute for Mathematical and Biological Synthesis (NIMBioS) brings together researchers from around the world to collaborate across disciplinary boundaries to investigate solutions to basic and applied problems in the life sciences. NIMBioS is sponsored by the National Science Foundation, the U.S. Department of Homeland Security, and the U.S. Department of Agriculture with additional support from The University of Tennessee, Knoxville.

