

Socio-Spatial Ecology of the Bed Bug and its Control

Award Year:

2016

Principal Investigator:

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Associated Program:

[Propose a Workshop](#) [1]

Bed bugs are a resurgent problem in cities worldwide. In this workshop we will explore how the structure of human society is implicated in bed bug distribution, and how understanding the social and geographical processes affecting bed bug populations can help direct efforts at control. We adopt a theoretical framework that views bed bug populations as metapopulations—networks of local populations coupled by dispersal. Metapopulation ecology has been widely applied to conservation and asks how the spatial structure of a population can make it more or less sensitive to risk of extinction. In the context of pest control, we are interested in how spatial characteristics of a pest metapopulation can be modified to reduce the proportion of habitats occupied. The workshop will evaluate potential existing spatial datasets on bed bug occurrences and various approaches to parameterizing a stochastic patch occupancy model of bed bug metapopulations.

Participants:

Chris Sutherland, University of Massachusetts

Warren Booth, The University of Tulsa

Chris Rehmann, Iowa State University

Dawn Biehler, University of Maryland, Baltimore County

Xiaoyue Xie, University of Pennsylvania

Sacoby Wilson, University of Maryland, College Park

Alison Hill, Harvard University

Changlu Wang, Rutgers University

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Links

[1] <https://www.sesync.org/workshops>