



Assistant Professor/ Assistant Entomologist in Agroecology and sustainable pest management: Elias H. Bloom, Ph.D.

Post Doctoral Researcher
Department of Plant Pathology and Plant-Microbe Biology
Cornell University, Ithaca, NY

Date: Thursday, March 21, 2024
Time: 10:00 am - 10:50 am
Format: In-Person Seminar & Virtual Access
Location: Genomics Auditorium, Room 1102A
Zoom: 983 6120 0167
Passcode: 818719

Title:

“Promoting sustainable pest management and agroecology through social and ecological theory”

Abstract:

Creating sustainable farming systems remains one of the greatest challenges of the 21st century. Simultaneously, insect declines jeopardize ecosystem services including biological control and pollination. My research leverages social and ecological theory to promote insect conservation and agroecosystem sustainability. Here, I demonstrate the importance of long-term organic management, floral complementarity, and landscape diversity for promoting the assembly of functional insect communities within agroecosystems. Then I use socio-ecological theory to show how variation in farmer pest management beliefs drive the adoption of practices which enhance a novel pest management approach, soil microbiome mediated insect pest suppression. Moving forward, my research program seeks to: (1) develop models that leverage social and ecological theory to assist farmers in adopting sustainable insect management; (2) examine the ecological, social, and economic benefits of increasing national adoption of sustainable agriculture; and (3) address how farmer wellbeing shapes insect conservation within farms. Taken together, my research program blends agroecology and entomology across the social and ecological sciences, aspiring to address the ongoing challenge of promoting farmers, beneficial insects, and sustainable farming systems.