



Candidate for Assistant Prof of Biological Control position: Allison Bistline-East

Postdoctoral Research Associate
Department of Entomology,
Purdue University

Date: Monday, January 23, 2023
Time: 4:00 pm - 4:50 pm
Format: In-Person Seminar & Virtual Access
Location: Genomics Auditorium 1102A
Zoom: 938 1040 4405
Passcode: 833289

Title:

“Parasitoids, predators, & pollinators: A systems ecology approach to utilizing ecosystem services in insect management”

Abstract:

Insects play fundamental roles in agroecosystems, the most important of which are the ecosystem services they provide as pollinators or natural enemies of crop pests. For such ecosystem services to be effectively utilized, there must be a detailed understanding of the organism’s ecology at multiple levels. In terms of pest control, this includes not only the ecology of the pest itself, but considerations of whether it is invasive or native, what natural enemies are known, the crops or natural resource(s) affected, and the habitat requirements and preferences of each organism individually and holistically within the pest-natural enemy complex. Additionally, knowledge of habitat characteristics at the site and landscape level are essential for both biological pest control and pollination services. Often, natural and seminatural habitats within or adjacent to agroecosystems can cause spillover effects, whereby beneficial insects migrate into crops from adjacent areas, and is widely regarded as a vital factor in ecosystem resiliency against pest outbreaks, pesticide resistance, and extreme climate effects. This talk will highlight approaches to insect management at multiple ecological levels, including invasive pest-parasitoid interactions, ecological niches of native pests and their natural enemies, and native landscape conservation providing beneficial insect habitats.