

Post-Doctoral Research Associate in Biological Control of Invasive Emerald Ash Borer



SUMMARY: Emerald ash borer (EAB), *Agrilus planipennis* (Coleoptera: Buprestidae), is the most destructive pest of ash (*Fraxinus* spp.) trees. Shortly after the discovery of EAB in North America in 2002, researchers began foreign exploration for natural enemies of this destructive beetle in northeastern Asia, where it is native. This activity has led to development of a classical biological control program since 2007, when three Chinese parasitoids (one egg parasitoid

Oobius agril and two larval parasitoids, *Spathius agrili* and *Tetrastichus planipennis*) were introduced to U.S. as classical biocontrol agents against EAB. In 2015, additional braconid larval parasitoid (*Spathius galinae*) was also introduced to the U.S. for protection of large ash trees against EAB. To date, the four introduced parasitoids have been mass-reared and released in over 350 counties in 30 EAB-infested states and Washington, D.C. in the United States, and four provinces of Canada. We seek a Postdoctoral Researcher to participate in research into assessing the impact of EAB biocontrol program on target pest density, ash tree regrowth and recovery to functionally viable sizes or canopies. This includes continuing collection of data on EAB density and associated natural enemies (primarily parasitoids), ash demographics and health conditions from the previously established biocontrol sites in Midwest (Michigan) and Northeastern states (Connecticut, Massachusetts, and New York) and construction of spatial and temporal models based on the current and historical dataset to assess ash regrowth and recovery dynamics from the interaction of EAB and its natural enemies (including introduced biocontrol agents) under various ecological conditions (or geographic ranges). The successful candidate will have opportunities to work with both federal (USDA ARS, FS and APHIS) and State corporators and should have excellent oral and written communication skills, should be capable of independently conducting data analysis, modeling, and writing research articles arising from the research work. This is a one-year term position, renewable for a second or third year depending on funding, available work, and performance.

The Postdoctoral Research Associate will be stationed at the USDA ARS Beneficial Insects Research Unite (Newark, DE), coordinate and carry out the proposed project under supervision of Joe Elkinton (Umass) and Jian Duan (USDA ARS) including the literature review and all laboratory and field experiments, and analyze the data and prepare written summaries of the projects for publication in peer-reviewed journals.

Application:

Applicants should submit a Cover Letter, CV, Statement of Research Background and Interests, and contact Information for three people who can provide professional references. All components of the application must be submitted through the University of Massachusetts application portal: <https://careers.umass.edu/en-us/job/514664/post-doctoral-research-associate-beneficial-insects-lab>

However, we welcome discussion about the position in advance of application, and candidates are encouraged to contact **Joseph Elkinton** (elkinton@umass.edu) and **Jian Duan** (Jian.Duan@usda.gov) to discuss research interests and potential future directions.