



Project Impacts

NSRC-FUNDED RESEARCH FINAL REPORT

Predatory Wasp Used for Detecting Emerald Ash Borer

PROJECT AWARD YEAR AND TITLE:

2013

*The Prey and Foraging of *Cerceris fumipennis* and Its Use for Bio-Surveillance of the Emerald Ash Borer (*Agrilus planipennis*)*

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Ash trees are a prominent feature in the Northern Forest region and are important to the biodiversity of this 26-million-acre landscape. Destruction of large populations of ash can have severe ecosystem-level consequences. Currently, the greatest threat to ash trees comes from extensive infestations by the emerald ash borer (EAB), an introduced insect from eastern Europe and Asia. *Cerceris fumipennis*, a predatory wasp, is recognized as presenting an extremely effective technique for locating and parasitizing adults of wood-boring beetles, including EAB, which was recently found in New Hampshire.

The NH Department of Agriculture and Division of Forests and Lands regards understanding the biology of this wasp as being critical in development of their plans for detecting low density populations of EAB. NSRC researchers monitored two large colonies of this wasp at the Boscawen State Forest Nursery and on private land in Epsom, NH. Researchers captured incoming female wasps with their beetle prey which were collected and documented.

Beginning June 26, 2013, 200 female wasps emerged from ground nests within 15 days of each other. Wasps continued to forage for beetle prey after August 22 but become unproductive by August 31. Thirty-four prey species were collected and studied throughout the summer, but no EAB was observed during the 2013 field season. Monitoring for EAB is a key step in keeping the forests of New England and New York healthy and productive. The wasp is being used to help in the detection of low density populations of EAB, so effective management in the Northern Forest region can be implemented early.



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