UNIVERSITY OF MINNESOTA EXTENSION

Wasp Watchers Program

WASP WATCHERS

2016 Field Report

In Partnership with: MINNESOTA DEPARTMENT OF AGRICULTURE With Support from: ENVIRONMENT AND NATURAL RESOURCES TRUST FUND

By Jennifer Schultz, Wasp Watchers Coordinator

WASP WATCHERS PARTICIPANTS

Thank you, Wasp Watchers Volunteers. We are humbled by your knowledge, generosity, and commitment. Thank you for all the time and energy you devote to protecting and conserving the natural landscapes of Minnesota, including our ash trees!

Students from Urban Roots conducted EAB biosurveillance in St. Paul.

VOLUNTEER ACCOMPLISHMENTS:

There were 65 Wasp Watcher volunteers engaged in this project in 2016. There were **458 hours** spent scouting for and monitoring the smoky winged beetle bandit wasp (*Cerceris fumipennis).* Since the beetle bandit has a short lifespan, all of these volunteer hours were completed in a nine week period. Great work, everyone!

Volunteers were from thirteen different counties: Aitkin, Anoka, Chisago, Dakota, Hennepin, Houston, Olmstead, Ramsey, Rice, Sherburne, St. Louis, Todd, and Washington.

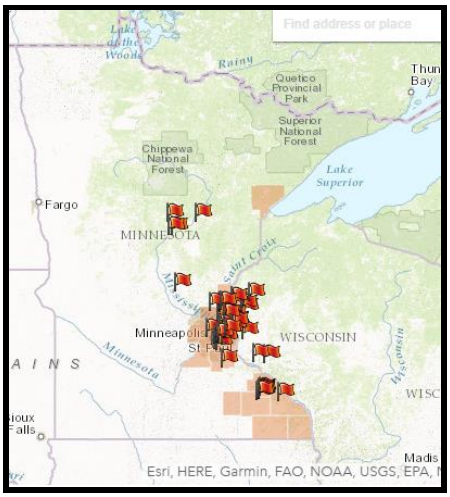
NEW BEETLE BANDIT WASP SITES

In the summer of 2016, there were 219 new sites scouted for the presence of the smoky winged beetle bandit wasp (*Cerceris fumipennis).* This is more than double the number of sites searched in the previous year. (87 sites were searched in 2015.)

There were 29 new or confirmed beetle bandit wasp sites discovered from mid-June to mid-August in 2016. (13 were found in 2015.)

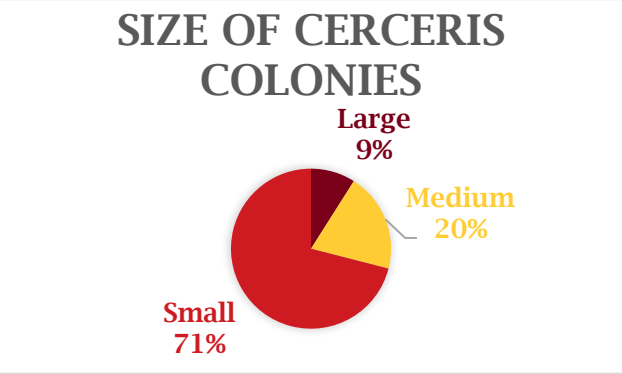
KNOWN BEETLE BANDIT WASP SITES

Currently there are 56 known smoky winged beetle bandit wasp sites around the state of Minnesota, with 53 additional sites of interest (unconfirmed or past sites). Confirmed sites are found in 13 counties: Aitkin, Anoka, Benton, Chisago, Crow Wing, Dakota, Goodhue, Hennepin, Olmstead, Ramsey, Rice, Washington, and Winona.

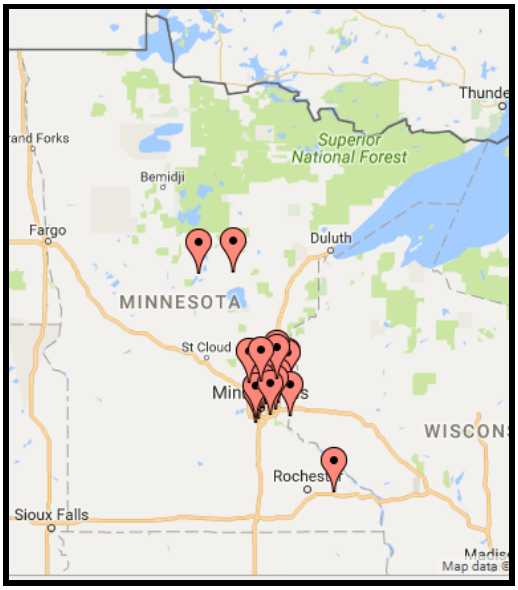


COLONY SIZE

Of the 56 known Cerceris sites, 71% of the colonies are small (1-9 nests), 20% are medium sized (10-29 nests), and 9% are large (30+ nests). Biosurveillance is most effective at medium or large colonies, but capturing buprestids at small colonies can be quite informative for collecting taxonomic and geographic data.



BIOSURVEILLANCE SITES:



Biosurveillance was conducted at 21 different sites. Volunteers captured 183 buprestid (metallic, wood-boring) beetles throughout 9 counties including; Aitkin, Anoka, Chisago, Crow Wing, Dakota, Hennepin, Ramsey, Washington, and Winona counties. Emerald Ash Borer specimens were captured at Riverside Park in Minneapolis.

Native buprestid specimens capturing during EAB biosurveillance. Photo credit: U of MN Extension

BIOSURVEILLANCE IS PRIZE WINNING!

Kaley, a 4H partipant from Wyoming, MN, completed an Entomology Project on biosurveillance for her county fair. She adopted 2 sites in Wyoming and collected over 60 buprestid beetles. Kaley received Reserve Grand Champion on her project at the Washington County Fair and earned a spot to take her project to the State Fair. At the Minnesota State Fair, she earned a purple ribbon on her project. We are so proud of Kaley's achievement and so appreciative of her work to highlight Wasp Watchers and the biosurveillance process. Thanks, Kaley!

SUMMER FIELD TRAININGS

We had several free Wasp Watchers field trainings in 2016 with widespread interest from city and county professionals as well as community members and dedicated volunteers. These biosurveillance events provided opportunities to practice identifying *Cerceris fumipennis* wasps and nests as well as to enjoy the biosurveillance process with others. There will be more trainings in July of 2017.

Volunteers examine netted beetle prey. Photo credit: University of Minnesota Extension

Wasp Watchers also partnered with the Minnesota Master Naturalist Program to offer a more intensive educational opportunity through an Advanced Training. This fee-based class is open to everyone and will happen again in July of 2017.

Participants in the Master Naturalist Advanced Training with Wasp Watchers. Photo: U of MN Extension

ANOTHER CERCERIS SPECIES?

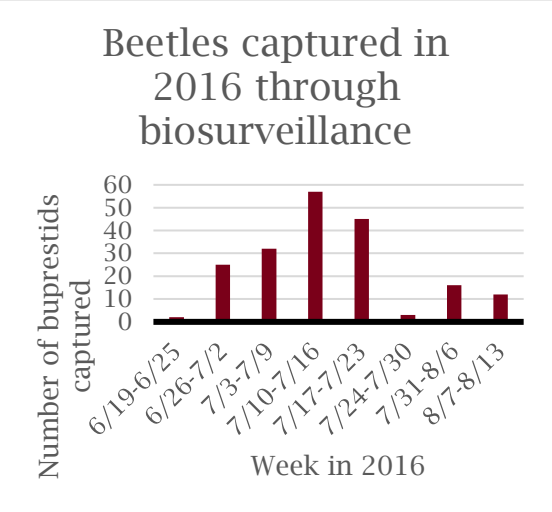
Wasp Watcher Walt Niemiec has been a committed volunteer for 2 years. In 2015, he covered dozens of miles searching for a beetle bandit colony in Afton State Park where he regularly hikes in the summer. After much searching, he found a small colony (10-15 nests) on a hiking trail leading to a backpacking campsite. In 2016, he collected over 30 buprestids at this colony—quite an accomplishment for such a small colony. He dedicated several days each week to spending numerous hours at his site monitoring *Cerceris fumipennis* nest holes. He also searched the park for additional colonies. His inquisitiveness and pursuit of knowledge led to an interesting discovery. He found ground nesting wasp that resembled *Cerceris fumipennis*: both in the wasp's appearance and in the nesting holes. After consulting a taxonomist at the University of Minnesota, this other wasp was identified as *Cerceris atramontensis*.

Cerceris atramontensis. Photo credit: Tom Murray, Bugguide.net

Cerceris atramontensis does not hunt buprestids, so cannot be utilized for EAB detection. Rather, *Cerceris atromentensis* hunt weevils, small, long snouted beetles in the Curculionidae family. *Cerceris atramontensis* has not been encountered at any other biosurveillance site in Minnesota, so Walt's find was an informative one. The specimen will be added to the University of Minnesota Insect Collection. Thanks, Walt!

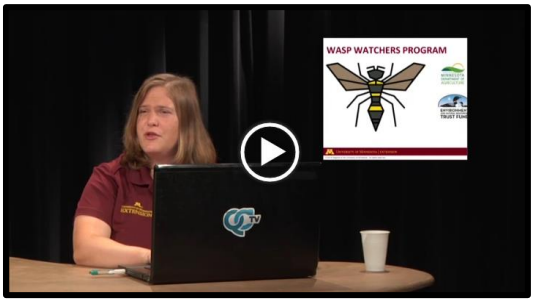
JULY REMAINS OUR MOST ACTIVE TIME

The smoky winged beetle bandits have consistently been most active in their beetle hunting in July throughout much of Minnesota. The majority of our biosurveillance sites are found in the Twin Cities metro area, and July is our busiest Wasp Watching month. In northern areas of the state, EAB is active into August (due to a lag in accumulated degree days), so beetle bandits are likely to be active well into August in Minnesota's northern areas.



IN THE MEDIA

One of the goals of the Wasp Watchers Program is to educate people around the state of Minnesota about Emerald Ash Borer and encourage citizens to be involved in the early detection of EAB in their own communities. During the fall, winter, and spring months, Jennifer Schultz, Wasp Watchers Coordinator, had the opportunity to travel around the state to talk with Minnesotans about this invasive beetle and what we can do about it. Last year, Wasp Watchers was featured in various local newspapers including *Kanabec County Times*, *Pine City Pioneer*, and *Alexandria Echo Press*. The Wasp Watchers Program was highlighted on the QCTV cable channel on the Master Gardener segment in August, 2016. To watch this one hour-long presentation on Wasp Watchers, go to this link: http://qctv.org/anoka-master-gardener/



HEAVY RAIN IMPACTS BEETLE BANDIT COLONIES?

According to NOAA, Minnesota saw +3 inches of rain from June 15-August 15 2016. This means that compared to average rainfall measures, 2016 saw a 3 inch increase in those critical 2 months of the biosurveillance field season. Many of the 2016 rain events were extremely heavy. While certainly, ground-nesting wasps are adapted to survive rain, it is unknown how much these extreme rain events impact their underground nests and the mortality of their eggs and larvae.

WE NEED YOUR HELP IN 2017!

Capturing a beetle bandit wasp during biosurveillance
Photo credit: U of MN Extension

Please consider being a Wasp Watcher in the summer of 2017. Experienced or new volunteers, we need you all! We need help searching for new beetle bandit nesting sites as well as collecting beetles from known sites.

Thank you from the entire Wasp Watchers Team!