UNIVERSITY OF MINNESOTA EXTENSION

# Wasp Watchers Program

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

**WASP WATCHERS**

# 2015 Field Report

**By Jennifer Schultz, Wasp Watchers Coordinator**

## VOLUNTEERS

Volunteers are the heart and soul of any citizen science project and Wasp Watchers is no different. We couldn't do what we do without the passion, expertise, and commitment of volunteers. Thank you.

Students from Urban Roots helped conduct EAB biosurveillance in St. Paul.

## VOLUNTEERING IN NUMBERS:

Over 50 Wasp Watchers volunteer worked on the project of EAB biosurveillance through Wasp Watchers this season. Some volunteers helped by scouting their communities for new Cerceris wasp nesting sites and some volunteers adopted known Cerceris sites to conduct biosurveillance and collect buprestid beetles from the wasps.

Over 160 volunteer hours were committed to EAB biosurveillance with the help of the *Cerceris fumipennis* wasp.

Volunteers were from 11 different counties: Aitkin, Anoka, Benton, Chisago, Crow Wing, Dakota, Goodhue, Hennepin, Olmstead, Ramsey, and Washington.

## NEW CERCERIS SITES

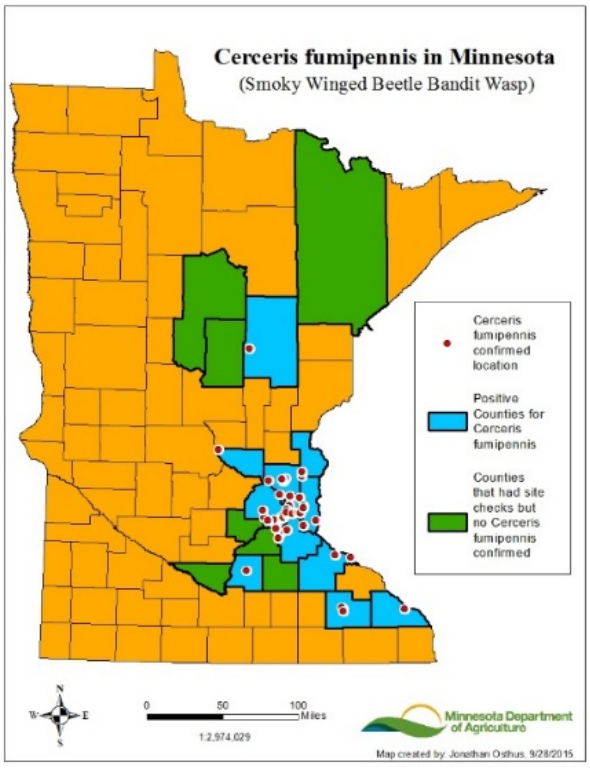
In the summer of 2015, 88 new sites were scouted in 27 different cities in 11 different counties around the state of Minnesota.

13 new or confirmed Cerceris sites were discovered in Lakeville, Eden Prairie, Wyoming, St. Paul, Afton, Frontenac, Red Wing, St. Cloud, Eagan, Wayzata, and Aitkin.

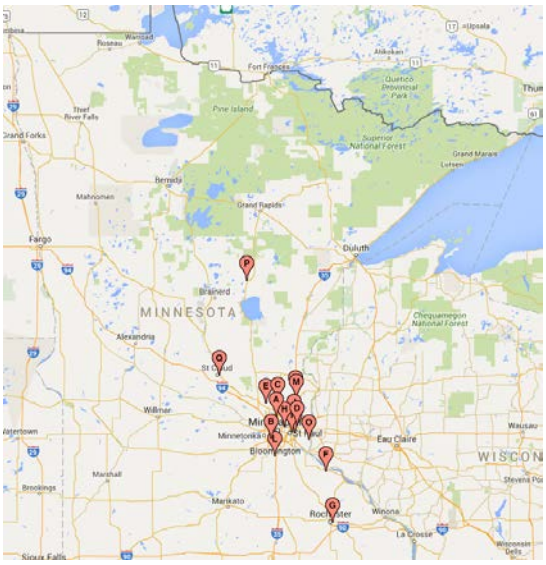
## KNOWN CERCERIS SITES

Currently there are 31 known Cerceris sites, with 15 additional sites of interest (unconfirmed or past Cerceris sites).

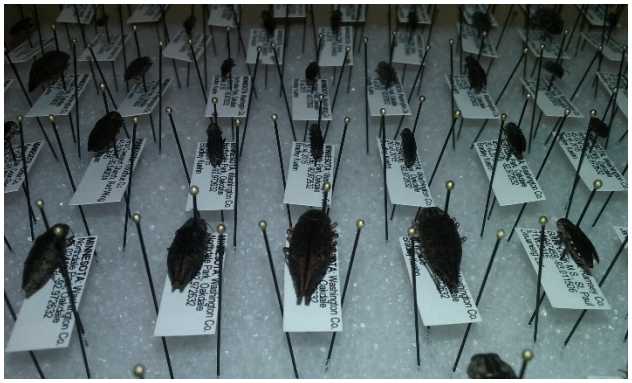
Currently, confirmed Cerceris sites are found in 11 counties: Aitkin, Anoka, Sherburne, Chisago, Dakota, Goodhue, Hennepin, Le Sueur, Olmstead, Ramsey, and Washington.



## BIOSURVEILLANCE SITES:




Biosurveillance was conducted at 17 different sites in 9 counties. Volunteers captured 95 buprestid (metallic, wood-boring) beetles. None of these captured beetles were Emerald Ash Borer.



## CERCERIS FIND IN AITKIN COUNTY

Prior to this summer, the northern-most Cerceris colony in Minnesota was found in Anoka County.

Wasp Watchers Allison Rian and Pam Brand (left) discovered a small Cerceris colony in Aitkin, MN. According to entomologist and Cerceris researcher Claire Rutledge, this is very far north, even nationwide, for Cerceris fumipennis to be found.


Allison Rian (right) and Pam Brand (left) found Cerceris fumipennis in Aitkin County, the northern-most Cerceris find in Minnesota.

MINNESOTA STATE FAIR

## THE GREAT MINNESOTA GET-TOGETHER

Wasp Watchers had an opportunity to be a part of the Minnesota State Fair to help highlight the many wonderful Citizen Science projects occurring throughout Minnesota. Volunteers worked at the Citizen Science Exhibit hosted by the Minnesota Pollution Control Agency in the Eco-Experience Building. Look for more opportunities during the 2016 State Fair.

## WHAT IS CITIZEN SCIENCE?

Citizen scientists are volunteer data collectors. They observe and record information about the natural world and contribute to a growing need for environmental data. In Minnesota, there are dozens of programs that train and support thousands of citizen scientists. Citizen-collected data are regularly used in decision making and conservation efforts.

Minnesota Citizen Science Links:

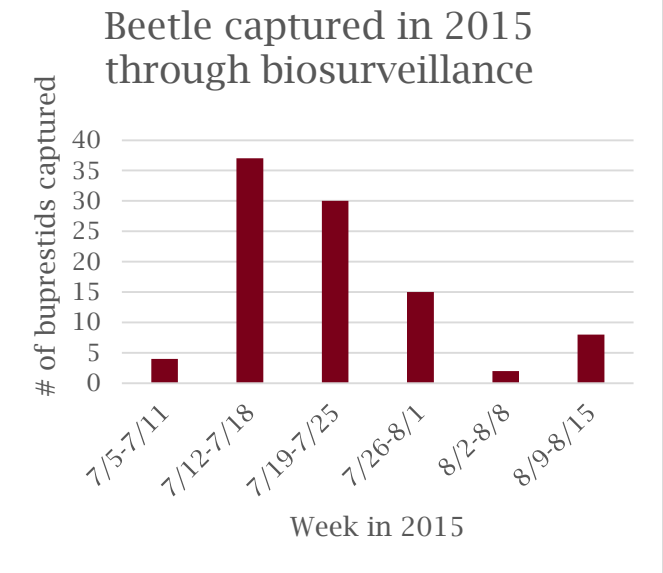
https://www.pca.state.mn.us/living-green/citizen-science

http://www.extension.umn.edu/environment/citizen-science/

## JULY IS A BUSY MONTH

The majority of our biosurveillance sites are found in the twin cities area and July is our busiest Wasp Watching month. EAB flight season peaks around 900-1100 DD. This corresponds well with the Cerceris emergence and peak foraging period.

In northern areas of the state, EAB is active into August (due to a lag in accumulated degree days) so Cerceris is likely to be active well into August in Minnesota's northern areas.




## IN THE MEDIA

On July 21, 2015 Wasp Watchers hosted a media event at a ballfield in Oakdale. This was our opportunity to introduce the smoky winged beetle bandit (*Cerceris fumipennis*) to Minnesotans.


Three television news agencies took video coverage and EAB biosurveillance was covered in the evening news. In addition, the Star Tribune and several local newspapers covered Wasp Watchers efforts to find EAB (Rochester Post Bulletin and Winona Daily News). To see or read the stories, please visit the media links on the Wasp Watchers website.


Jennifer Schultz doing an interview with the WCCO News Team.

## GROWING DEGREE DAY DATA

Tracking growing degree days helps to predict the emergence of the smoky winged beetle bandit wasp (*Cerceris fumipennis)* at the beginning of the field season.

We track the emergence after the wasp overwintering using degree days. Degree days (dd or DD) are a measurement of the amount of heat that accumulates above a specified base temperature. In measuring degree days for insect development, base 50F is commonly used. Insect development occurs above 50F, stops when the temperature drops below this threshold and resumes when the temperature rises above 50F again.

Degree days help us track the emergence of insects as well as their peak and their end of season.

This is a great tool to use when monitoring for any turf or landscape pests. Emerald Ash Borer adults start emerging around 450-500 degree days (base 50) and peaks at 900-1100 degree days.

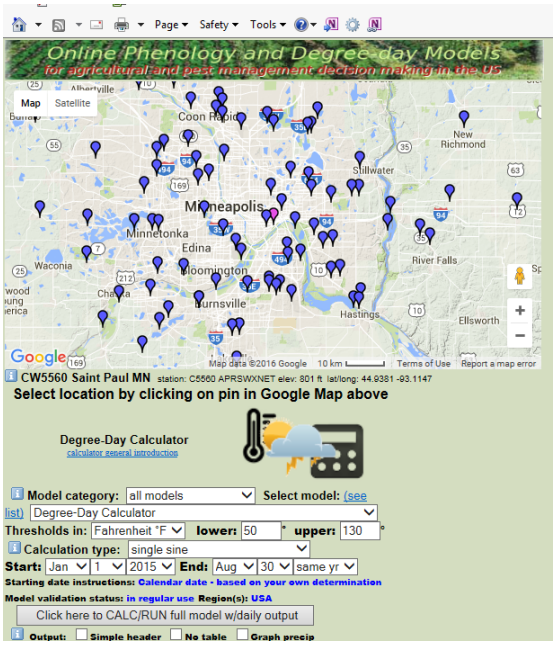
Emergence data had not been collected in Minnesota on the Cerceris wasp species before 2015. However, in Connecticut, reseachers placed emergence at around 865DD.

After analyzing the result of the degree day data that was gathered in the summer of 2015, it appears that in Minnesota, Cerceris fumipennis emerges closer **950-975** degree days. We will be tracking emergence again this summer to collect and verify previous data. If you are curious what the accumulated degree days are in your area, try the US Pest Degree Day model website:

http://uspest.org/cgi-bin/ddmodel.us

Find the weather station nearest to your home, enter January 1st and 50F for the lower threshold and click the CALC/Run button.

It will generate a list of data that will tell you the real time degree days and the projected future degree days.




## WE NEED YOUR HELP IN 2016!

Please consider being a Wasp Watcher in the summer of 2016. Experienced or new volunteers, we need you all! We need help searching for new Cerceris wasp nesting sites as well as collecting beetles from known sites.

## PERMIT TO COLLECT IN STATE PARKS

The Wasp Watchers Program has obtained a permit from the Minnesota DNR to collect beetles in Minnesota State Parks. We have a known site in Afton State Park already. If you are visiting any other state parks this summer, be on the lookout for Cerceris.

Thank you from the entire Wasp Watchers Team!