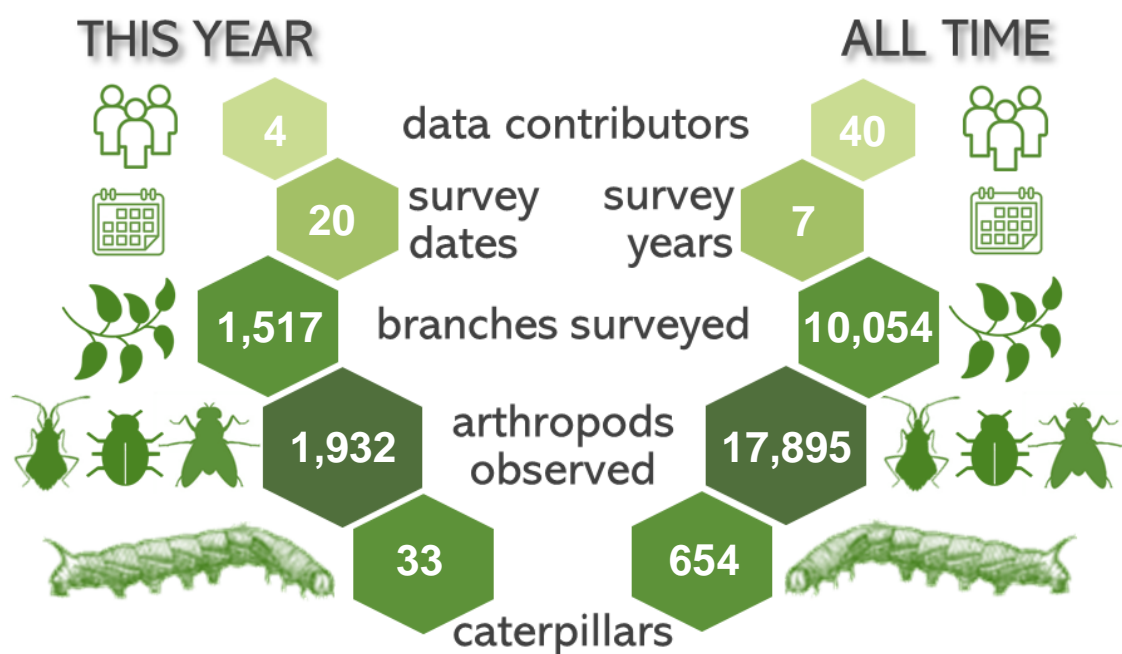




## NC Botanical Garden, 2021 Summary



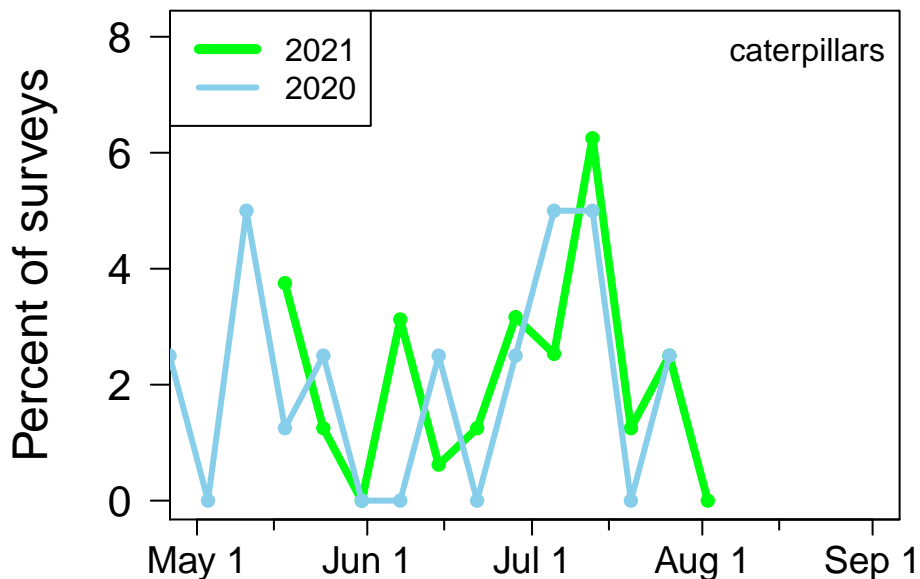
The **1,517** total surveys conducted at **NC Botanical Garden** this year ranks **2nd** out of the **52** sites that participated in 2021.

## Top Participants of 2021

User	Surveys	Arthropods	Caterpillars	% Caterpillars
G Di Cecco	474	516	13	2.53
C Whitener	465	651	11	2.37
A Hurlbert	330	592	7	2.12
I Edwards	248	173	2	0.81

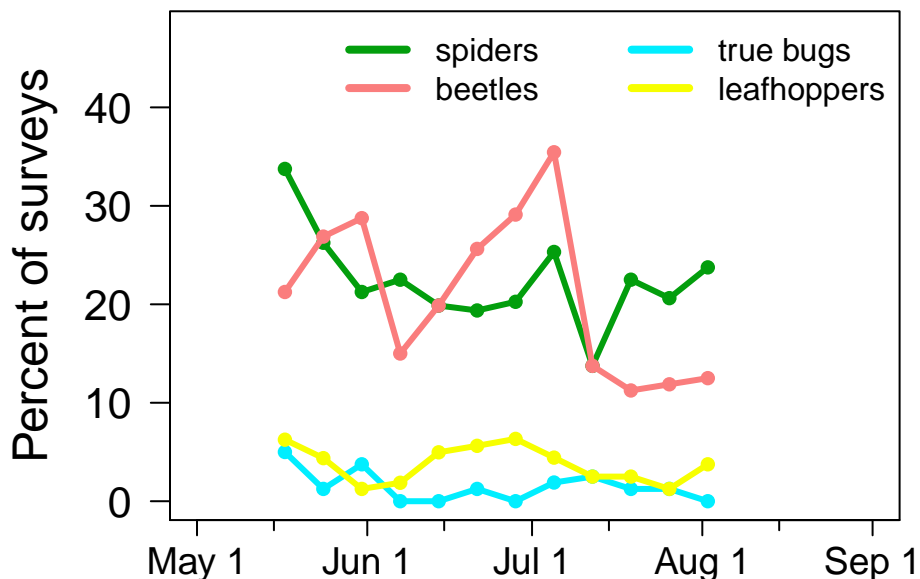
## Caterpillar Phenology

As a major source of food for nestlings of migratory birds, we are especially interested in the timing of caterpillar availability. At **NC Botanical Garden in 2021**, caterpillar occurrence peaked at **6.2%** of surveys on **12 July**. Do you see other peaks as well? How does the pattern compare to the previous year?



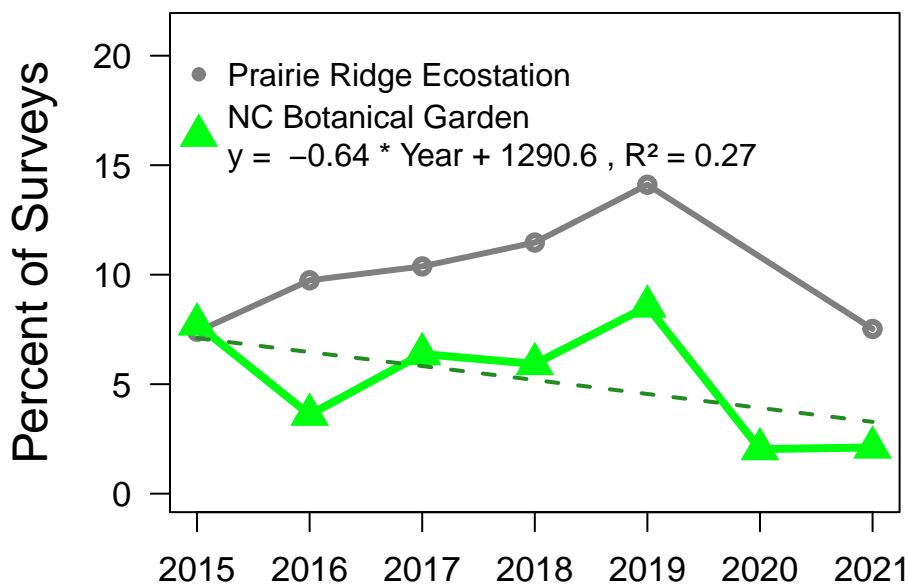
## Other Arthropod Phenology

While caterpillars tend to have pronounced seasonal peaks, other groups are more variable. What patterns do you see below for **2021**? You can explore the phenology of other groups on the [Caterpillars Count! website](#).



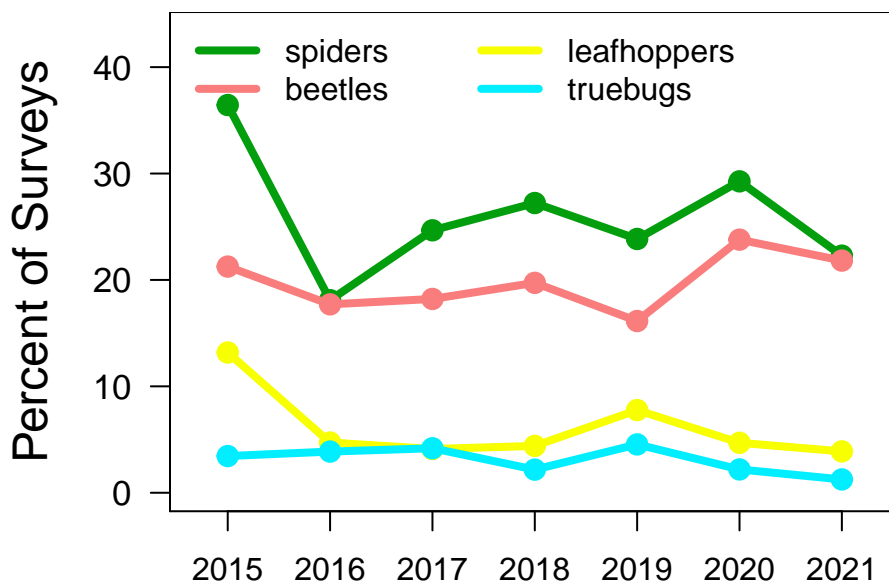
## Arthropod Trends

Annual monitoring is critical for assessing the health of ecosystems and evaluating the impacts of environmental change that may be happening in your area. There have been worrying reports of insect declines around the world but there is much we don't know, so your efforts help to fill in pieces of the puzzle. Keep it up!



Above you can see how the proportion of surveys with caterpillars has varied over time at your site, with the trend for one of our flagship sites, **Prairie Ridge Ecostation**, for comparison. If you've surveyed for at least 3 years, then you will also see the average dashed trend line displayed.

Below are trends for some other common arthropod groups. Do the different groups go up and down in sync, or seem to vary independently?

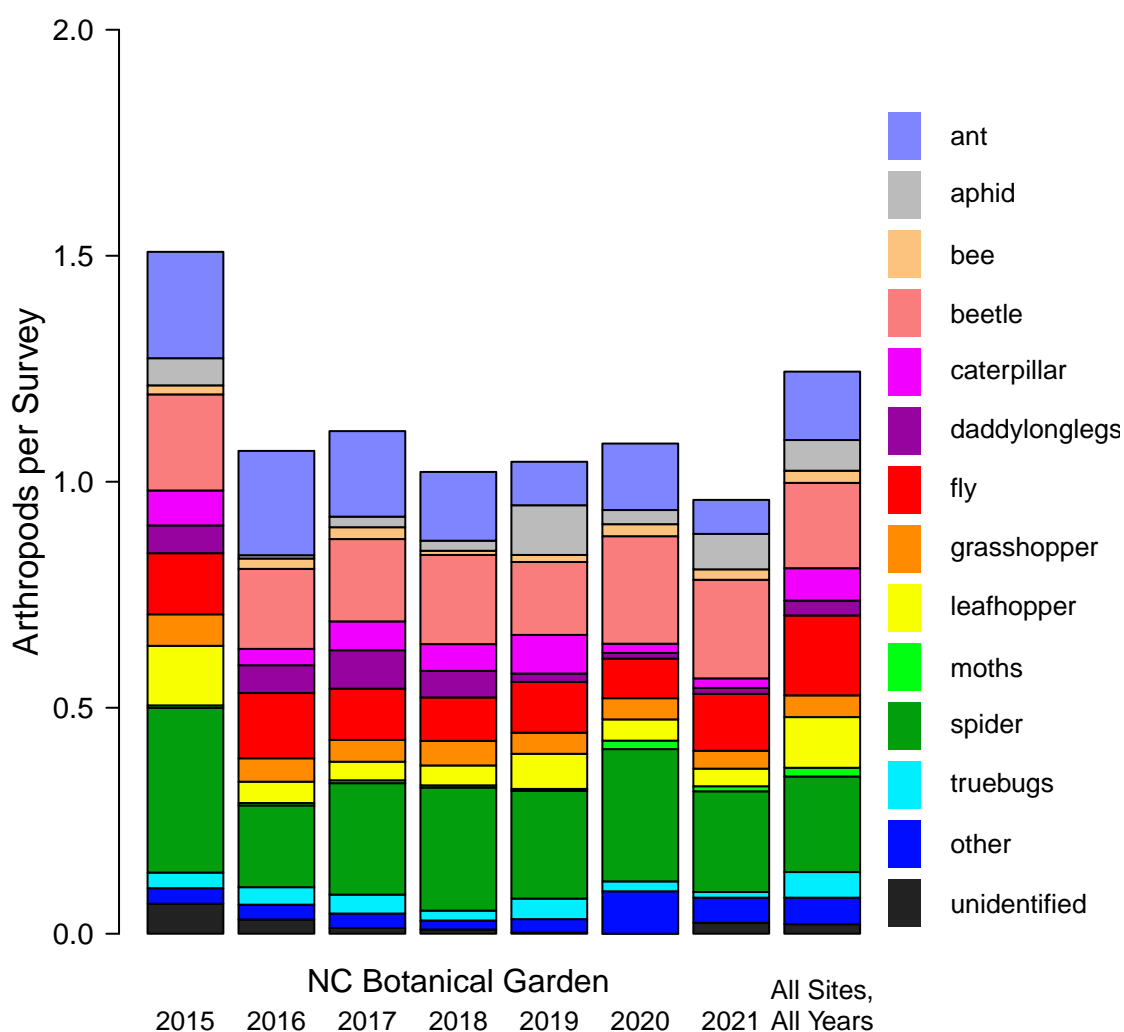


You can explore trends for more arthropod groups, and compare trends at different sites, on your site's [Trends Page](#). See also our [November 2021 newsletter](#) for more on how to interpret these trends.

## Site Arthropod Composition

Some arthropods are more commonly encountered than others. The graph below portrays the density (arthropods per survey) of all arthropods groups found at your site. See how what was found varies by year (if the site has been participating for multiple years), and how it compares to what has been found across all sites in the **Caterpillars Count!** network (*right bar*).

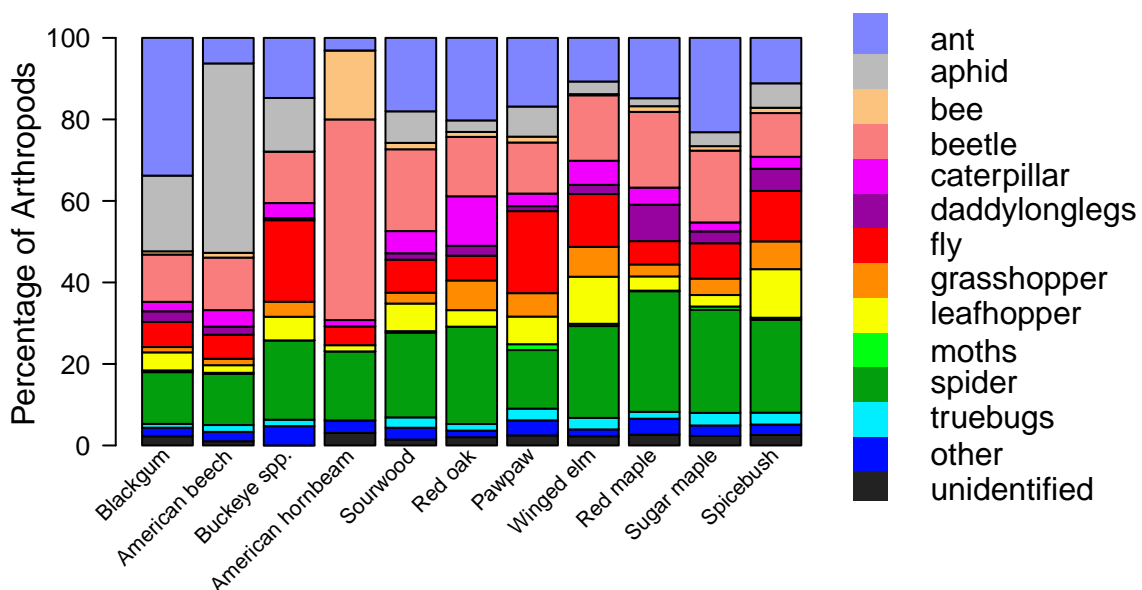
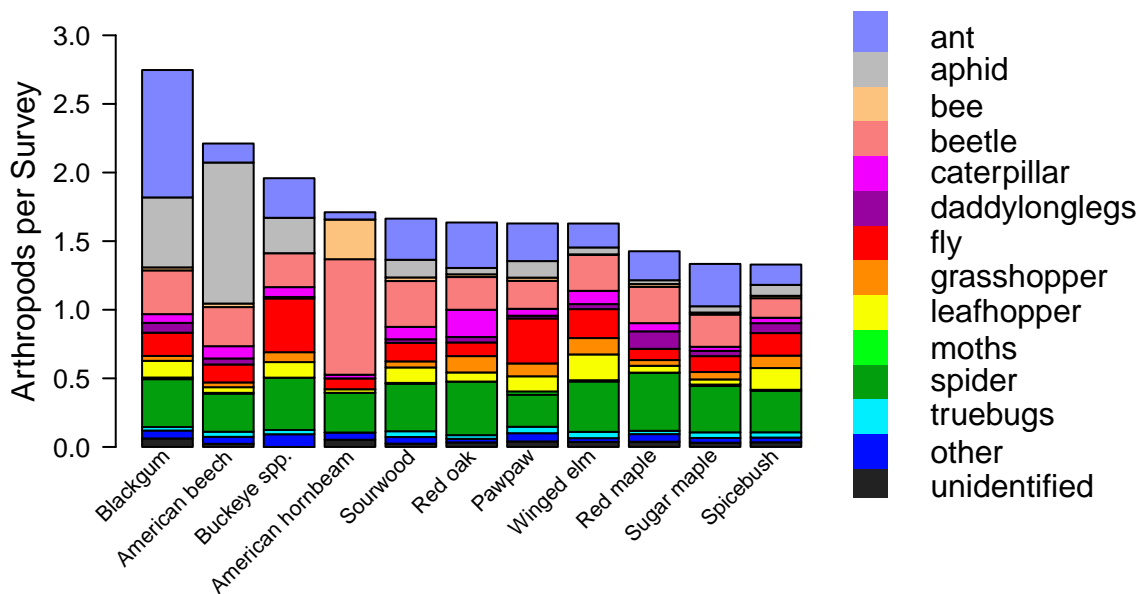
- What are the most common arthropod groups found at your site?
- Has that varied by year?
- Is anything noticeably different about **NC Botanical Garden** compared to all other participating sites?
- If arthropod photos were submitted as part of your site's surveys, check the last section of this report for a summary of any finer taxonomic id's that have been made.



## Arthropod Composition by Plant Species

For some arthropods like spiders, trees and leaves are merely habitat—a place where they live, hide, and hunt. For others like caterpillars, the leaves are not just habitat, but also food.

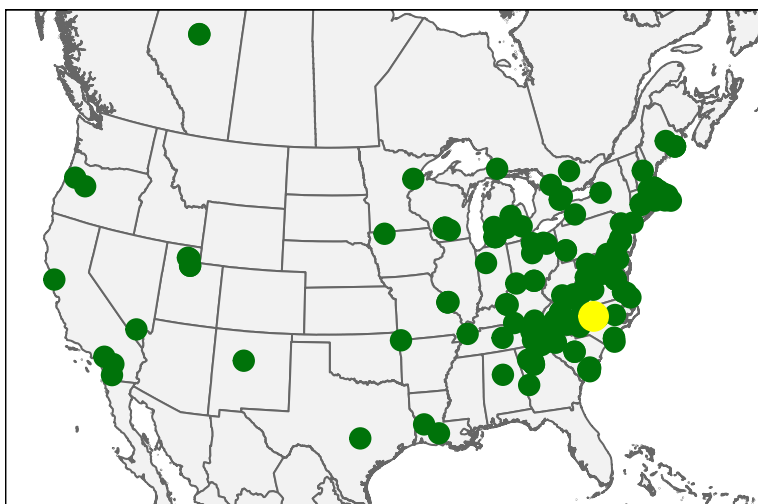
- Which plant species supports the most arthropods per survey?
- Which plant species supports the most **caterpillars**?
- Are any plant species dominated by just one or two types of arthropods?
- Or do they support a diversity of arthropod types?



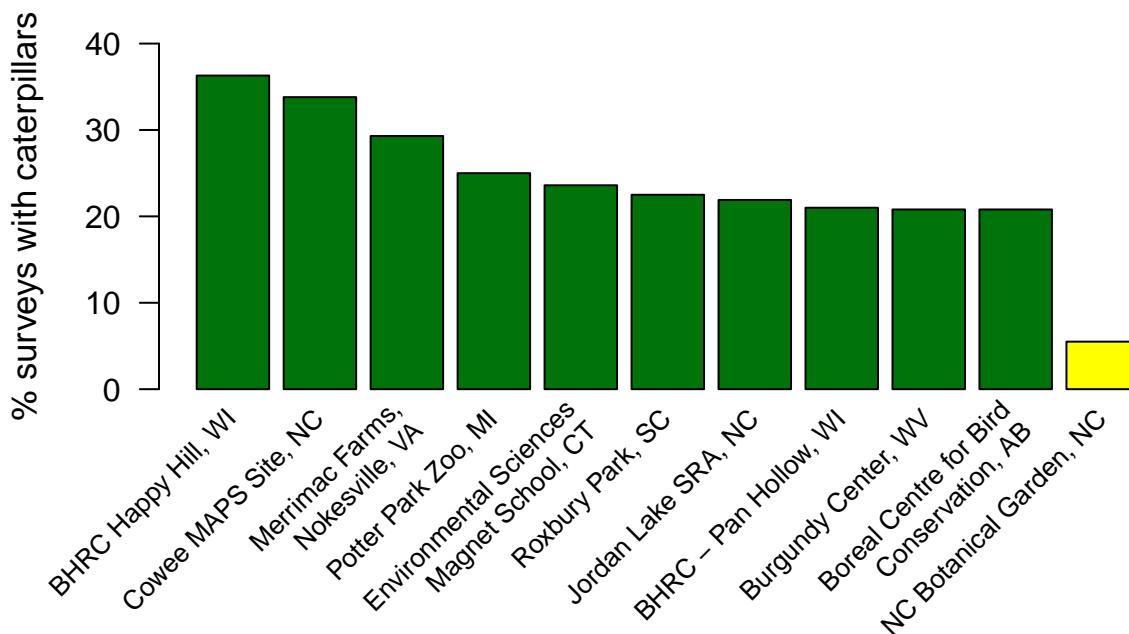
This bottom panel shows, of the arthropods found on a given plant species, what proportion were from each taxonomic group. At most, only the top 25 plant species are shown.

## Broader Patterns

Thanks to participants like yourself, **Caterpillars Count!** observers have now submitted a total of **163,022** arthropod observations—including **11,354 caterpillars**—from **152** different sites.



Across all surveys ever done at **NC Botanical Garden**, caterpillars have been found **5.5%** of the time, which ranks **60th** across sites. The top 10 sites (with  $\geq 20$  surveys) are shown below.



Caterpillar occurrence and phenology vary as a function of climate, land cover, tree species, and other local factors, and **your data** are helping us understand this variation and what it might mean for birds. Thank you for participating in **Caterpillars Count!**

## Expert Identifications

**642** photo observations from **Caterpillars Count!** surveys have been submitted from your site. You can check them all out at the site's [iNaturalist page](#). Based on these photo observations, experts on **iNaturalist** have identified the following taxa. Taxonomic groups seen for the first time this year are marked with a \*.

### Caterpillars

#### Erebidae

Halysidota tessellaris  
Hypena sp.  
Hyphantria cunea  
Orgyia leucostigma

#### Geometridae

Epimecis hortaria

#### Limacodidae

Acharia stimulea

#### Noctuidae

Acronicta americana  
Acronicta retardata  
Colocasia sp.  
Morrisonia confusa

#### Notodontidae

Heterocampa guttivitta  
Heterocampa umbrata  
Lochmaeus sp.  
Peridea basitriens  
Macrurocampa marthesia

### Spiders

#### Anyphaenidae

Anyphaena sp.  
Wulfila sp.

#### Araneidae

Araneus marmoreus  
Eustala sp.  
Larinioides sp.\*  
Mangora sp.  
Micrathena sagittata  
Verrucosa arenata

#### Philodromidae

#### Salticidae

Colonus sylvanus  
Hentzia sp.  
Lyssomanes viridis  
Paraphidippus aurantius

#### Tetragnathidae

Tetragnatha sp.  
Leucauge venusta

#### Thomisidae

Misumessus oblongus

#### Uloboridae

Uloborus glomosus

#### Stenotrachelidae

### Grasshoppers, Crickets

#### Gryllidae

Cyrtoxipha columbiana

#### Oecanthidae

Oecanthus sp.

#### Tettigoniidae

Scudderia sp.\*

#### Trigonidiidae

Phyllopalpus pulchellus

### True Bugs

#### Alydidae

#### Coreidae

Acanthocephala declivis  
Acanthocephala terminalis  
Leptoglossus fulvicornis

#### Miridae

#### Pentatomidae

Podisus maculiventris\*

#### Reduviidae

Pselliopus barberi\*  
Zelus luridus

### Leafhoppers, Cicadas

#### Acanaloniidae

Acanalonia conica

#### Cercopidae

Prosapia bicincta

#### Cicadellidae\*

#### Flatidae

Flatormenis proxima

Metcalfa pruinosa

Ormenoides venusta

#### Issidae

#### Membracidae

Platycotis vittata

### Bees, Wasps

#### Chrysididae

### Ants

#### Formicidae

Camponotus snellingi\*  
Camponotus subbarbatus\*  
Brachyponera chinensis

### Flies

#### Dolichopodidae\*

#### Keroplatidae

Macrocera sp.\*

#### Lauxaniidae

Homoneura sp.\*

Minettia sp.\*

#### Syrphidae

#### Tipulidae

Thank you for participating in **Caterpillars Count!** For a more in-depth exploration of the data check out our [Maps & Graphs page](#). The raw data from your site, or any site, can be downloaded [here!](#)

We can't wait to see what you find next year!



Saddled prominent, *Heterocampa guttivitta*. Photo by Lauren Whitenack.

**Allen Hurlbert**  
Director  
*Caterpillars Count!*