Caterpillars Count!

BHRC Happy Hill, 2021 Summary

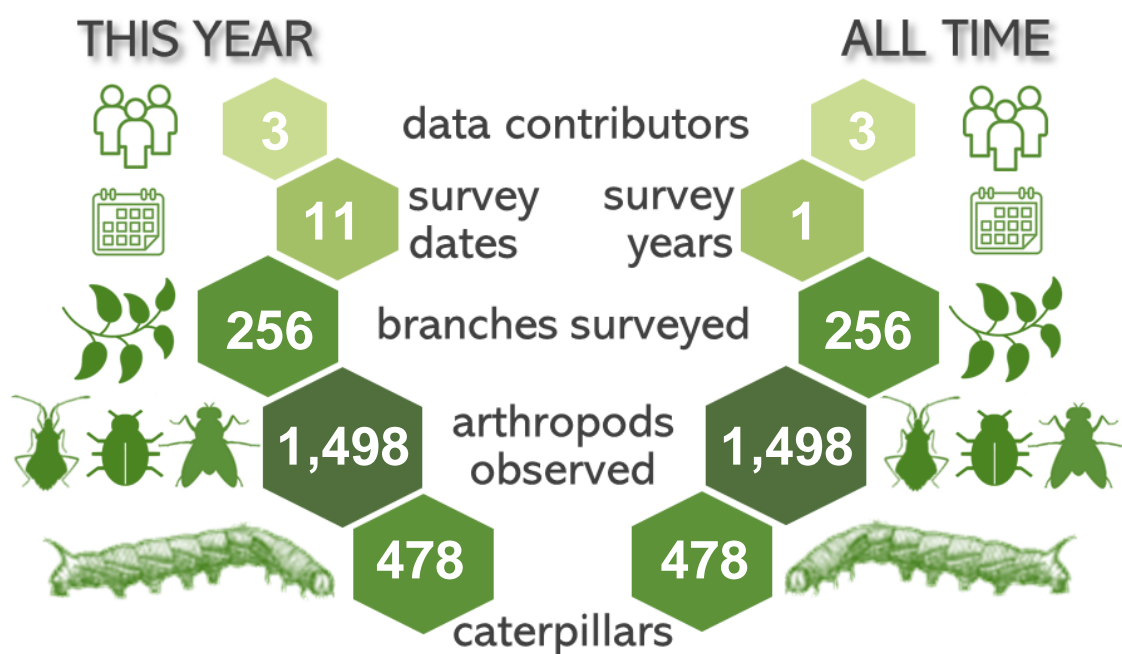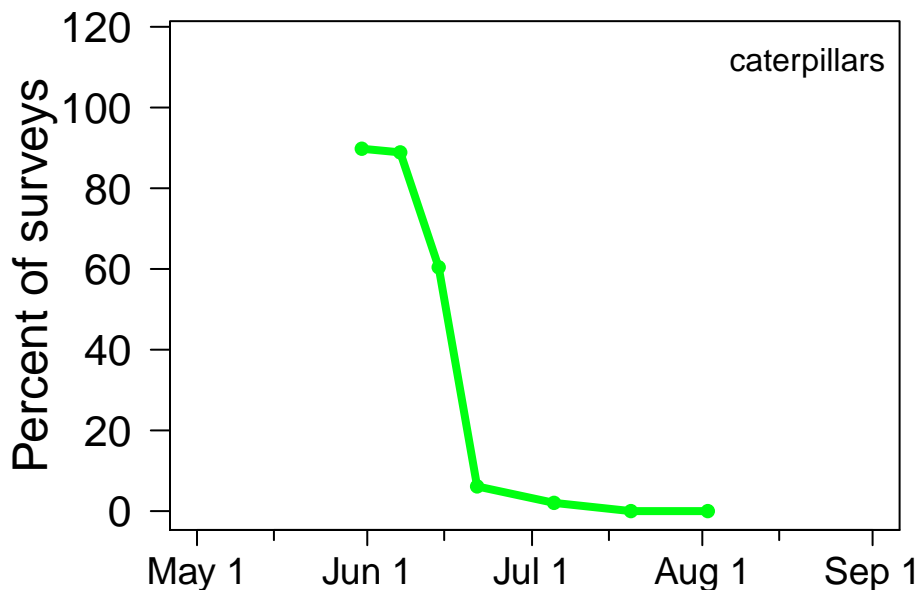|	THIS YEAR	ALL TIME
data contributors	3	3
survey dates / survey years	11	1
branches surveyed	256	256
arthropods observed	1,498	1,498
caterpillars	478	478

The **256** total surveys conducted at **BHRC Happy Hill** this year ranks **19th** out of the **52** sites that participated in 2021.

Top Participants of 2021

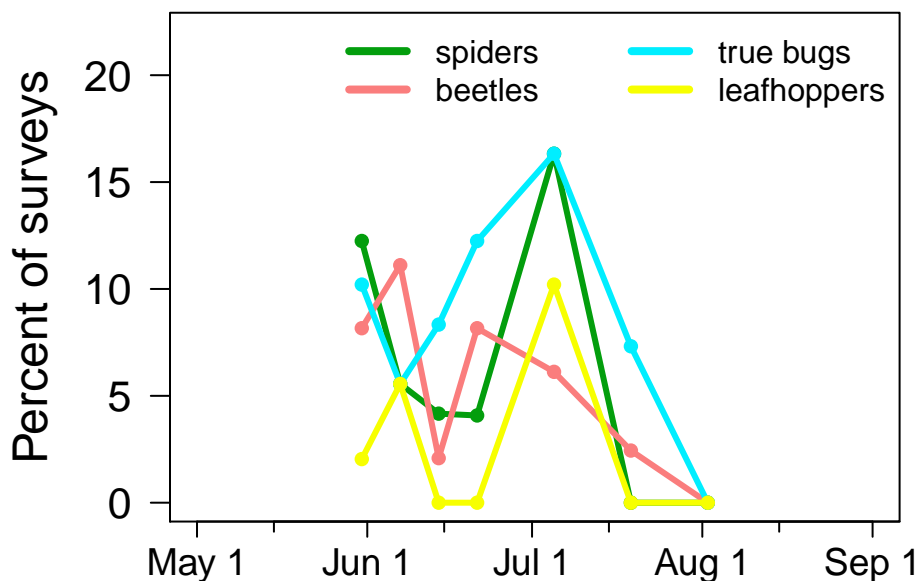| User	Surveys	Arthropods	Caterpillars	% Caterpillars
M Persche	150	1082	386	52.00
O Beaupre	88	267	92	17.05
J Schneiderman	18	149	0	0.00

Caterpillar Phenology

As a major source of food for nestlings of migratory birds, we are especially interested in the timing of caterpillar availability. At **BHRC Happy Hill** in **2021**, caterpillar occurrence peaked at **89.8%** of surveys on **31 May**. Do you see other peaks as well?
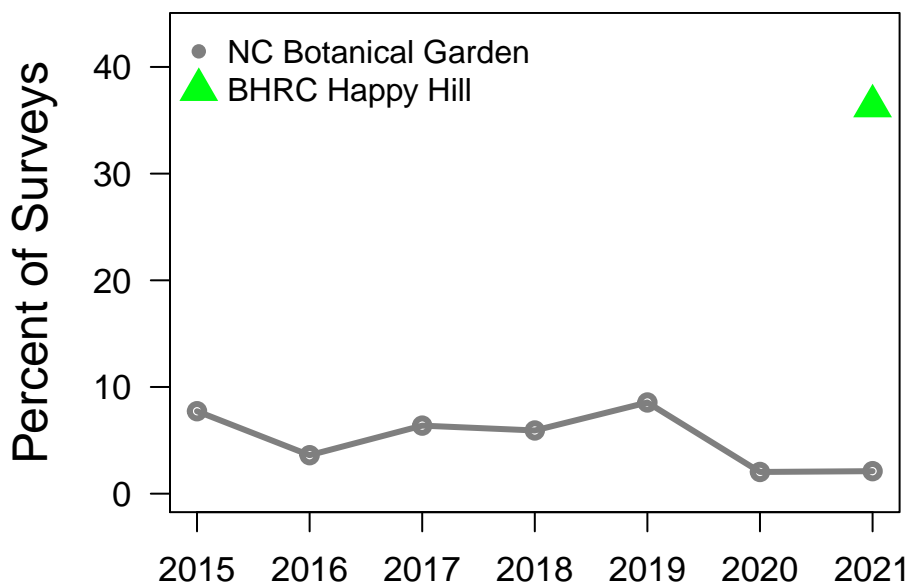

Other Arthropod Phenology

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**.
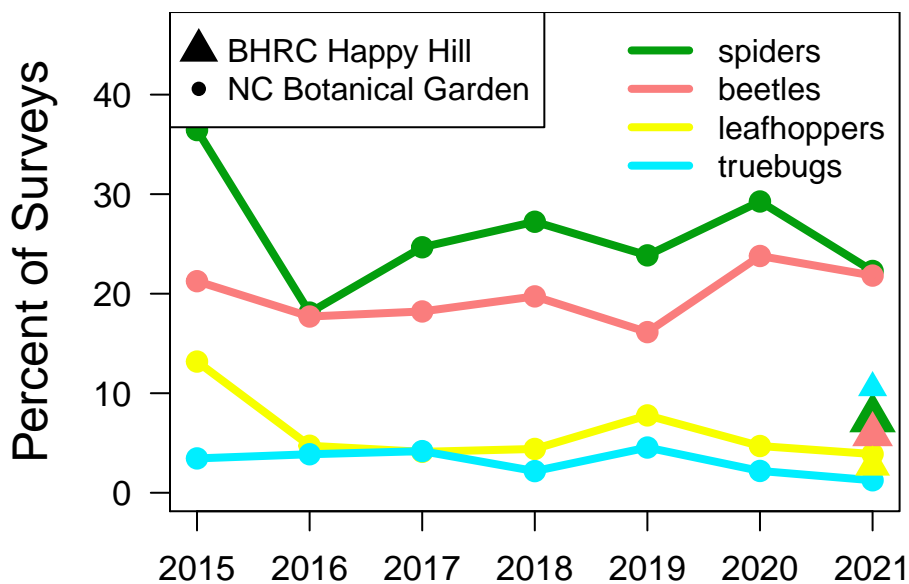
Arthropod Trends

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, **NC Botanical Garden**, 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?
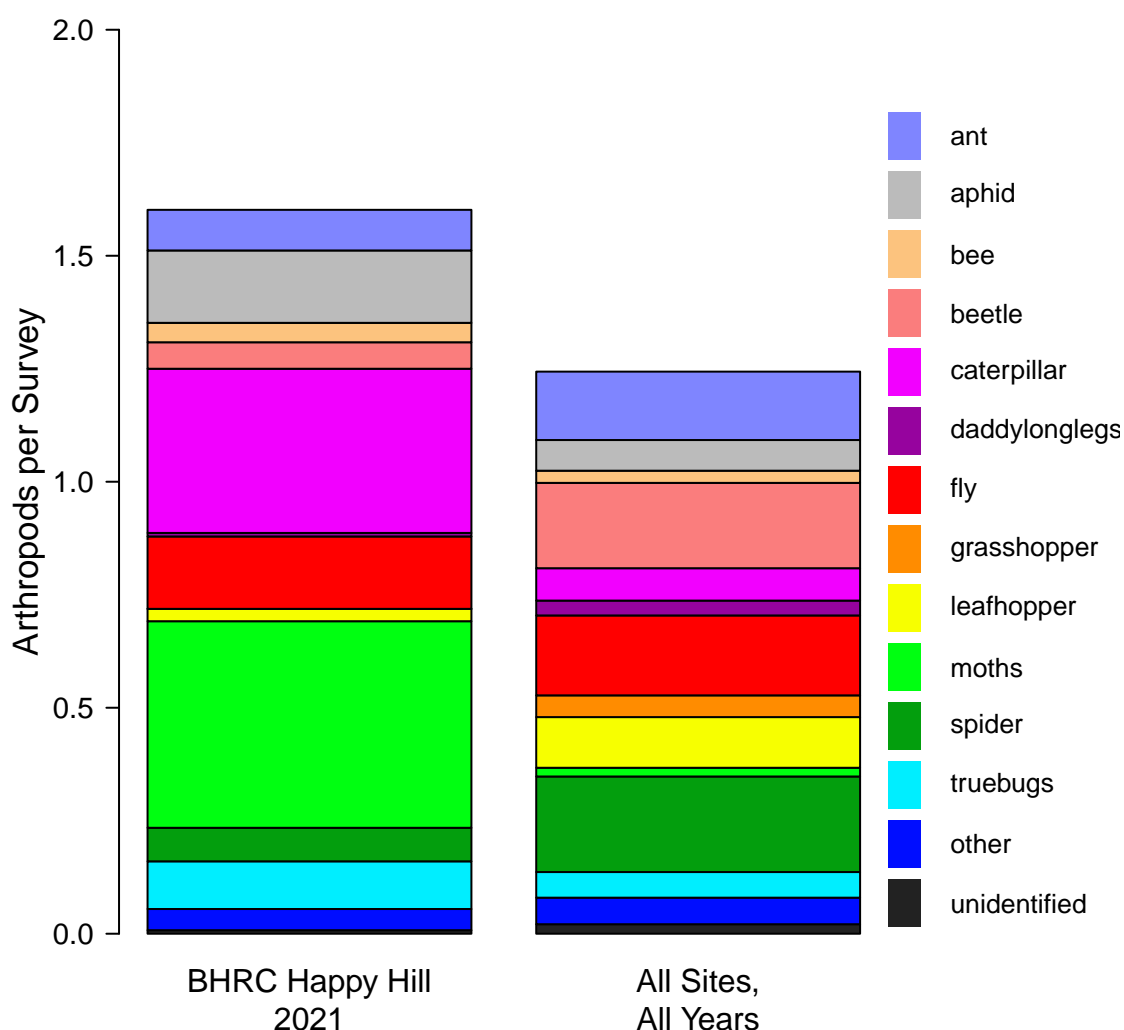

You can explore trends for more arthropod groups, and compare trends at different sites, on your site's Trends Page. See also our November 2021 newsletter for more on how to interpret these trends.

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*).
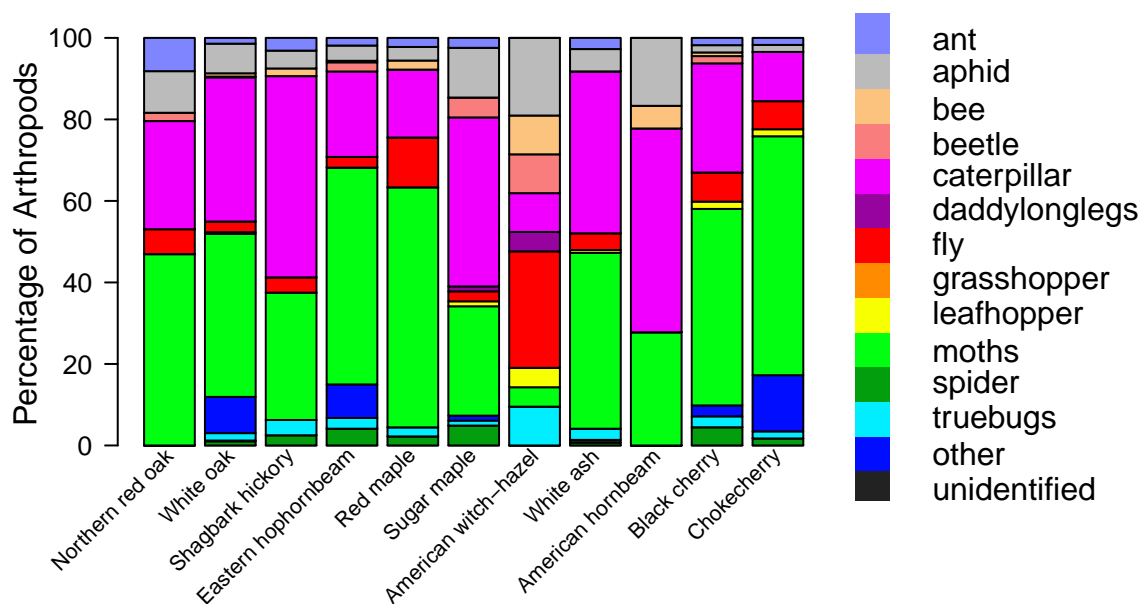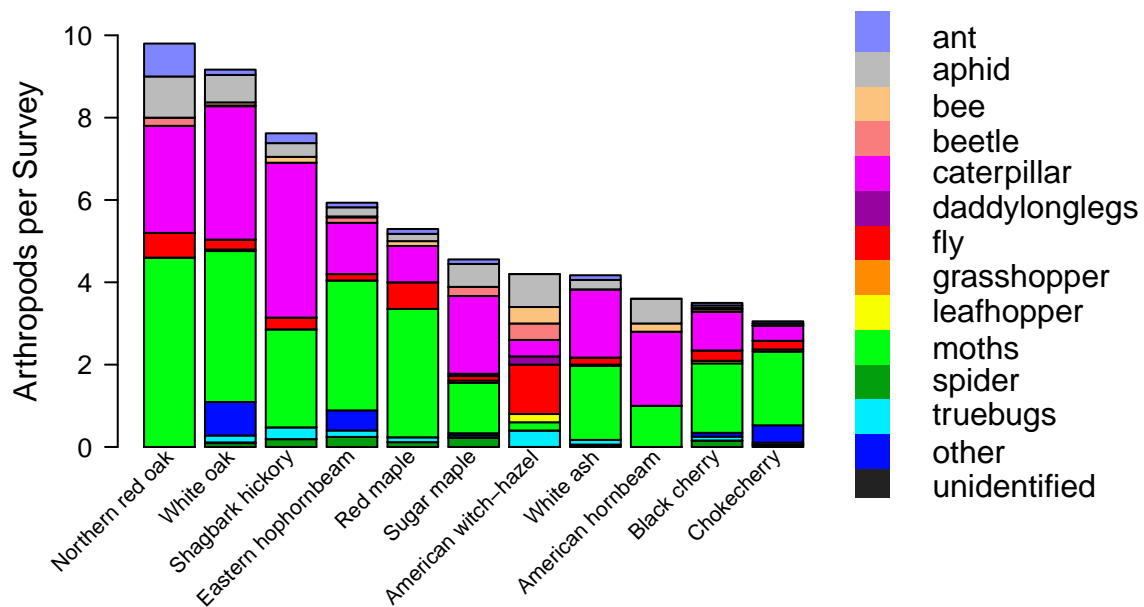
- What are the most common arthropod groups found at your site?
- Has that varied by year?
- Is anything noticeably different about **BHRC Happy Hill** compared to all other participating sites?
- If arthropod photos were submitted as part of your site's surveys, check the last section of this report 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.
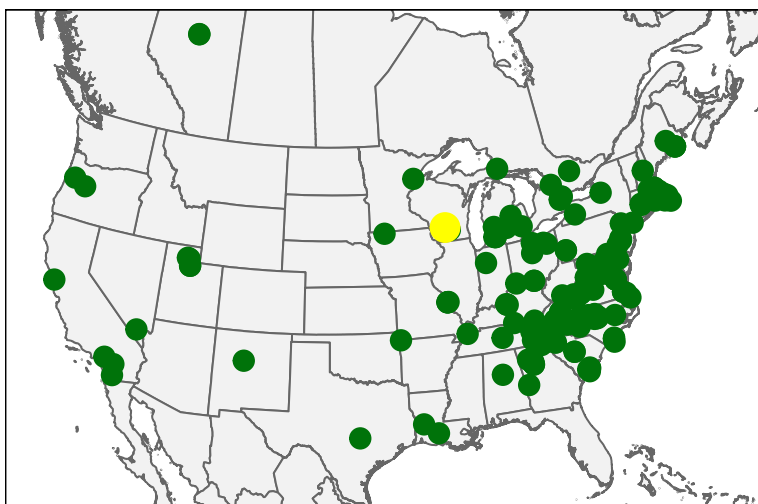
- Which plant species supports the most arthropods per survey?

- Which plant species supports the most **caterpillars**?

- Are any plant species dominated by just one or two types of arthropods?

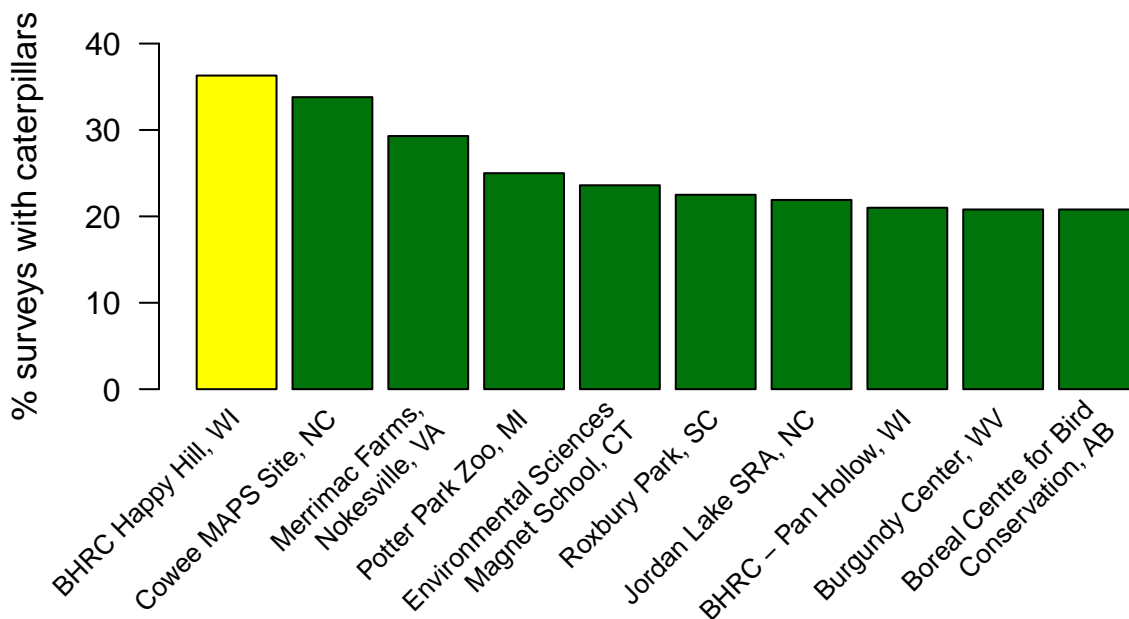- Or do they support a diversity of arthropod types?

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 **BHRC Happy Hill**, caterpillars have been found **36.3%** of the time, which ranks **1st** across sites. The top 10 sites (with ≥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

355 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 *.

<u>Caterpillars</u>
Elachistidae
   Phigalia strigataria*
   Phigalia titea*
Erebidae
   Lymantria dispar*
Gelechiidae*
Geometridae*
Noctuidae
   Amphipyra pyramidoides*

<u>Moths, Butterflies</u>
Geometridae
   Ennomos subsignaria*

<u>Spiders</u>
Philodromidae
   Philodromus sp.*
Salticidae*

<u>True Bugs</u>
Reduviidae*

<u>Leafhoppers, Cicadas</u>
Cicadellidae
   Scaphoideus sp.*
Membracidae
   Cyrtolobus sp.*

<u>Bees, Wasps</u>
Ichneumonidae*

<u>Ants</u>
Formicidae*

<u>Flies</u>
Dolichopodidae*
Sarcophagidae*

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!