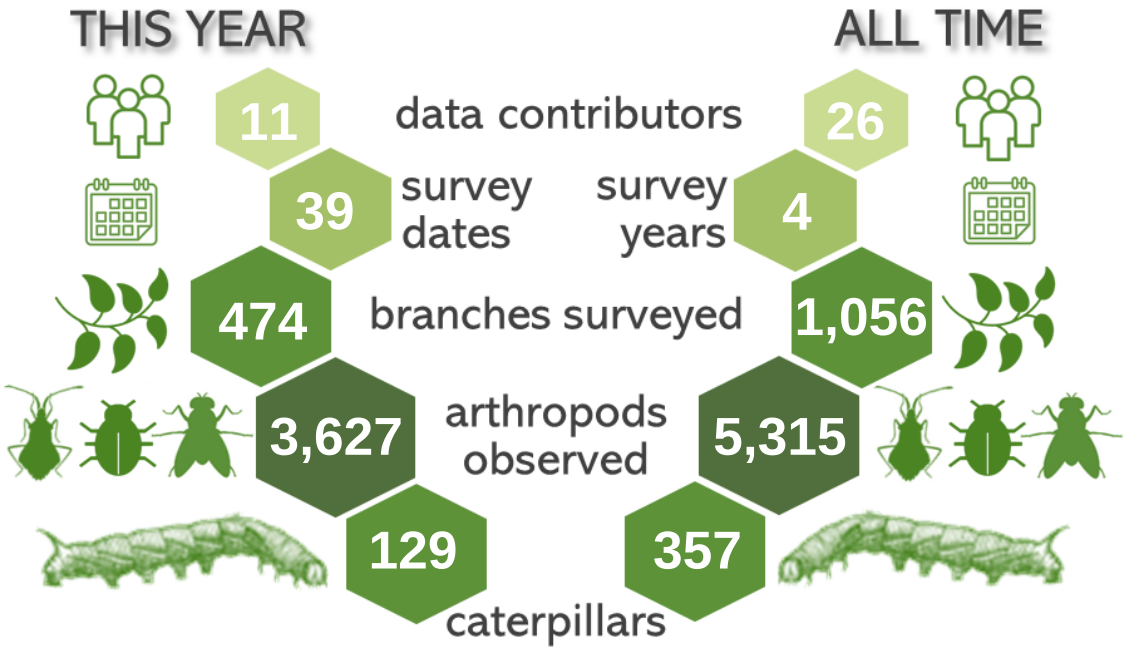
EwA at the Fells, 2022 Summary



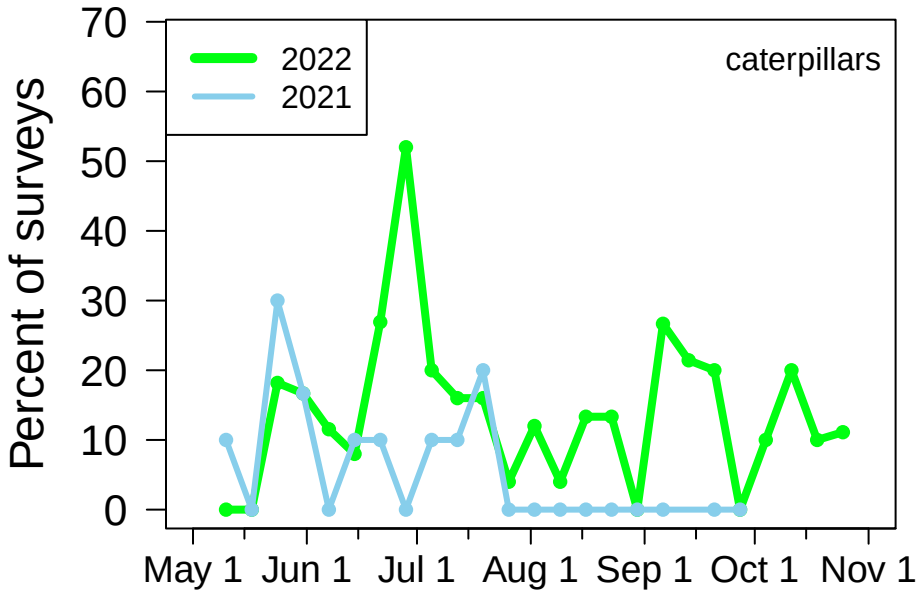
The **474** total surveys conducted at **EwA at the Fells** this year ranks **4th** out of the **70** sites that participated in 2022.

Top Participants of 2022

User	Surveys	Arthropods	Caterpillars	% Caterpillars
M Morgan	4	17	1	25.00
C O'NEILL	46	236	16	21.74
N Reilly	12	111	2	16.67
K Danziger	355	3125	110	16.34
A Walsh	5	30	0	0.00
B Jusino	4	6	0	0.00
H Barraza	2	7	0	0.00
K McGlathery	9	33	0	0.00

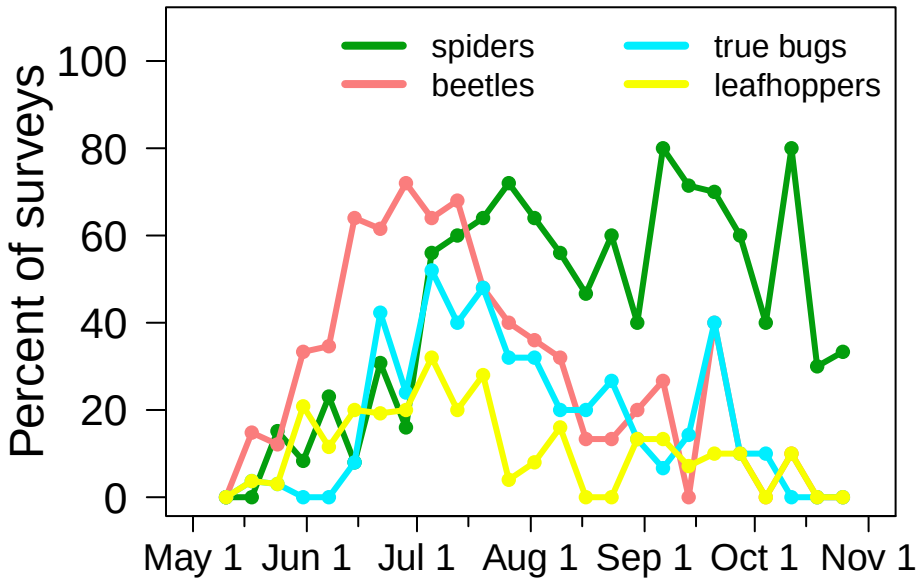
Caterpillar Phenology

As a major source of food for nestlings of migratory birds, we are especially interested in the timing of caterpillar availability. At **EwA at the Fells** in **2022**, caterpillar occurrence peaked at **52%** of surveys on **28 June**. Do you see other peaks as well? How does the pattern compare to the previous year?



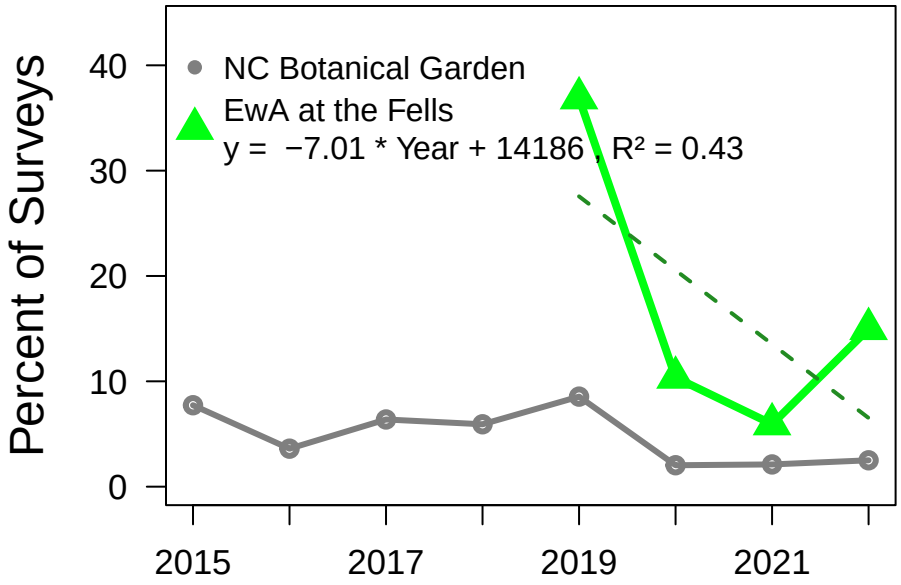
Other Arthropod Phenology

While caterpillars tend to have pronounced seasonal peaks, other groups are more variable. What patterns do you see below for **2022**? You can explore the phenology of other groups on the ***Caterpillars Count!*** **website**.



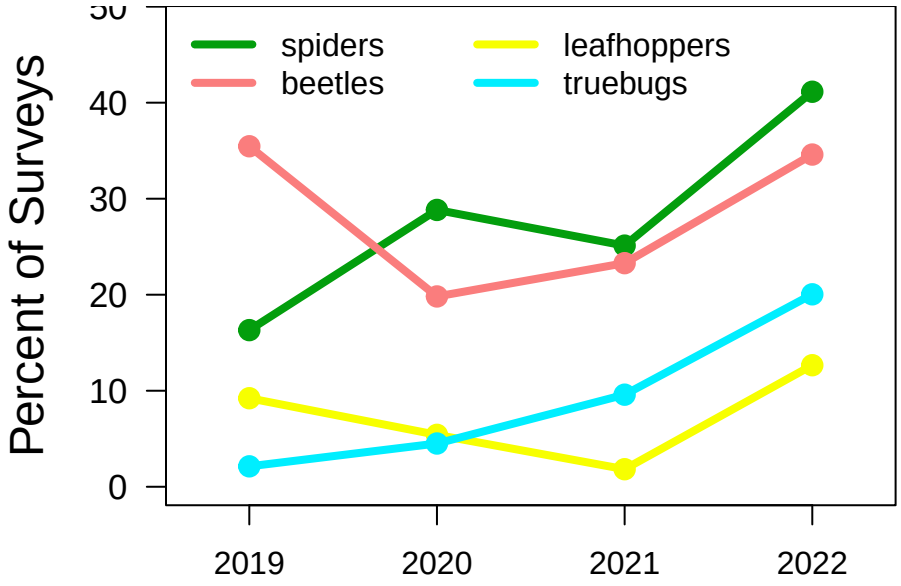
Arthropod Trends

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?

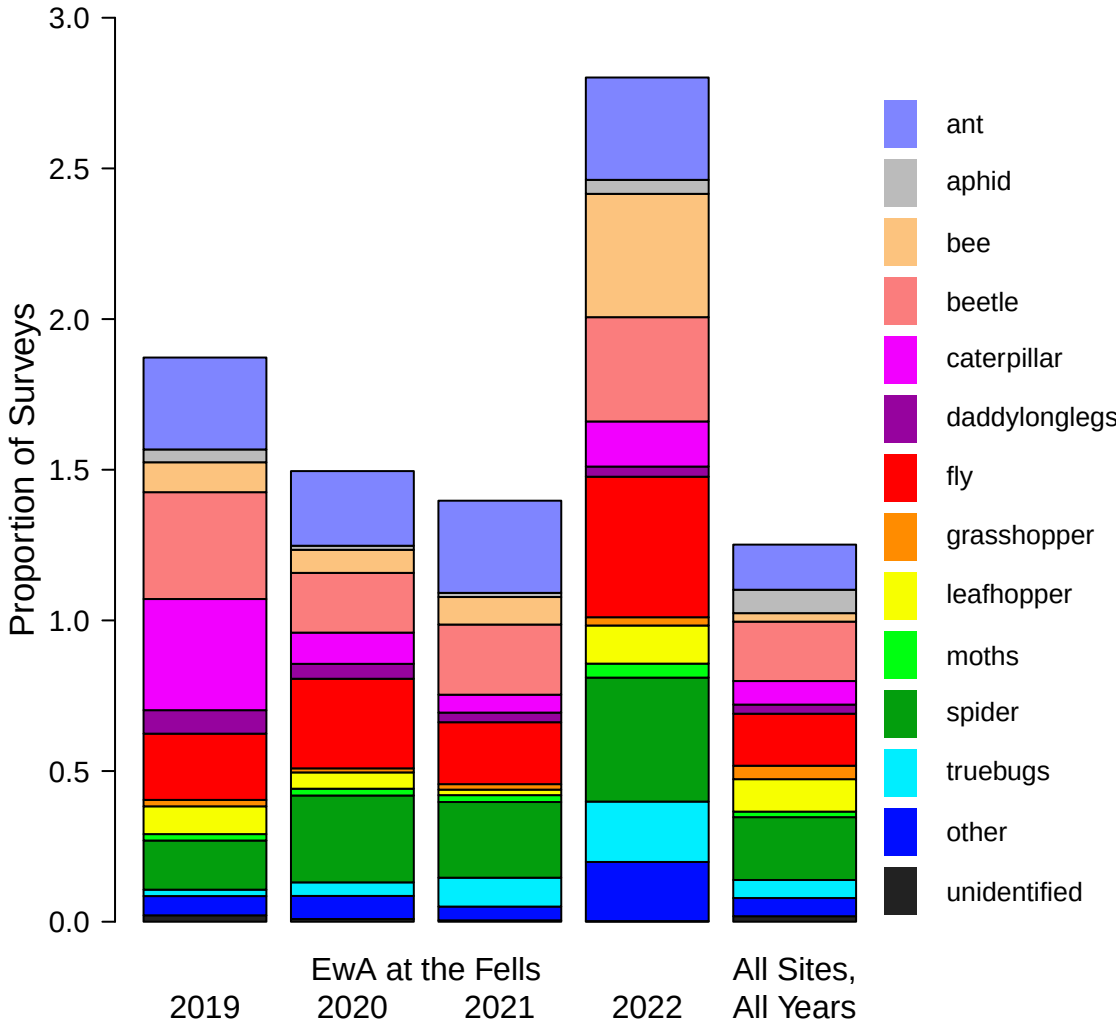


You can explore trends for more arthropod groups, and compare trends at different sites, on your site's Trends Page. See also our November 2021 newsletter for more on how to interpret these trends.

Site Arthropod Composition

Some arthropods are more commonly encountered than others. The graph below portrays the occurrence (proportion of surveys where a given group was found) for each arthropod group 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*).

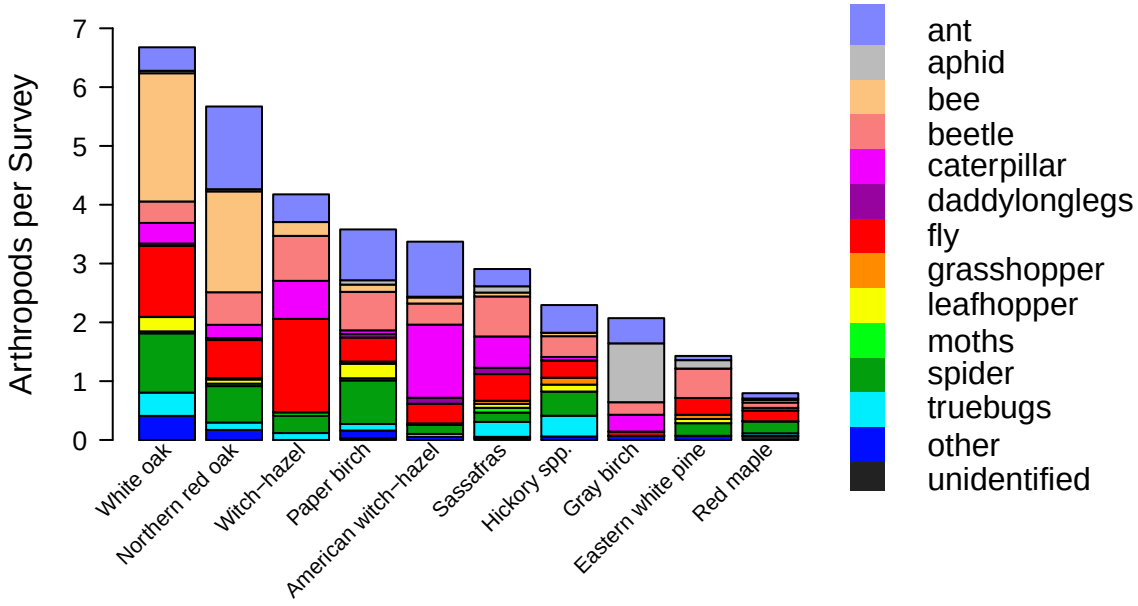
- What are the most common arthropod groups found at your site?
- Has that varied by year?
- Is anything noticeably different about **EwA at the Fells** compared to all other participating sites?
- If arthropod photos were submitted as part of your site's surveys, check the last section of this report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

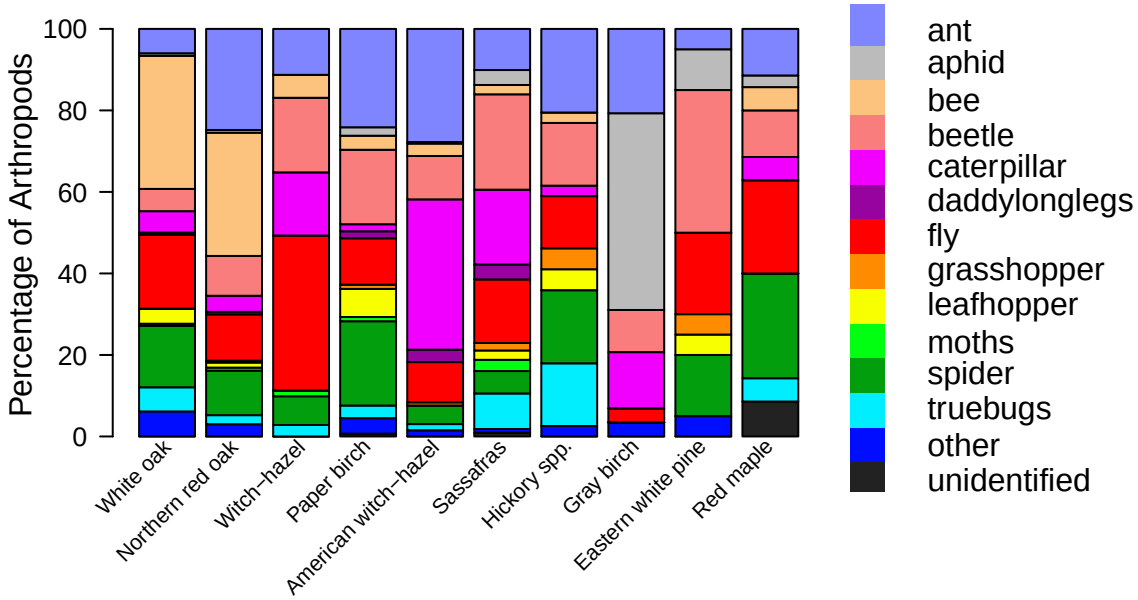


Arthropod Composition by Plant Species

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?

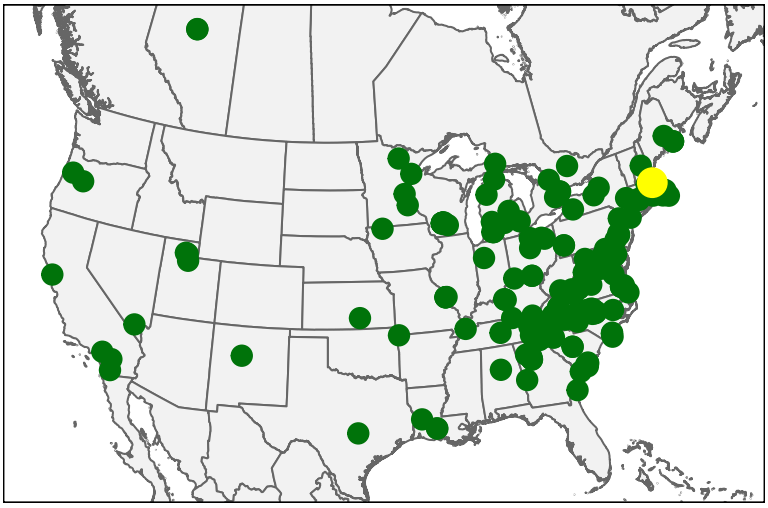




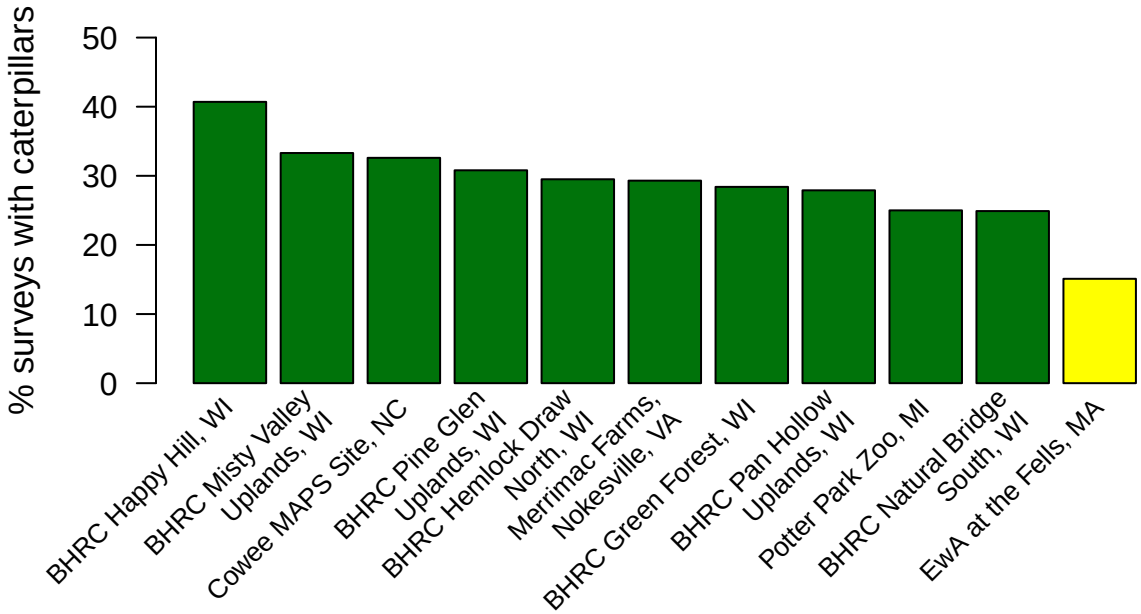
This bottom panel shows, of the arthropods found on a given plant species, what proportion were from each taxonomic group. At most, only the top 25 plant species are shown.

Broader Patterns

Thanks to participants like yourself, ***Caterpillars Count!*** observers have now submitted a total of **220,722** arthropod observations–including **16,838 caterpillars**–from **185** different sites.



Across all surveys ever done at **EwA at the Fells**, caterpillars have been found **15.1%** of the time, which ranks **28th** 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

2311 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, including at least **62** unique species. Taxa seen for the first time this year are marked with a *.

Caterpillars

Erebidae
- Halysidota tessellaris

Geometridae

Gracillariidae
- Phyllonorycter sp.*

Limacodidae*

Noctuidae
- Acronicta increta*
- Feralia sp.
- Pyreferra sp.
- Amphipyra pyramidoides
- Morrisonia latex

Notodontidae
- Nadata gibbosa

Psychidae
- Psyche casta

Sphingidae
- Paonias excaecata*

Tischeriidae
- Coptotriche badiiella*

Moths, Butterflies

Gracillariidae
- Phyllocnistis vitifoliella*

Oecophoridae
- Mathildana newmanella*

Tortricidae
- Olethreutes fasciatana

Spiders

Agelenidae

Anyphaenidae
- Anyphaena sp.*

Araneidae
- Araniella displicata

Dictynidae

Hahniidae*

Linyphiidae
- Florinda sp.
- Pityohyphantes sp.*

Mimetidae
- Mimetus sp.

Philodromidae
- Philodromus sp.

Salticidae
- Hentzia mitrata

Tetragnathidae
- Leucauge venusta*

Theridiidae
- Theridion sp.*
- Parasteatoda tepidariorum*

Grasshoppers, Crickets

Acrididae
- Melanoplus sp.*

Gryllidae
- Hapithus saltator*

Oecanthidae
- Oecanthus sp.

Tettigoniidae
- Scudderia sp.*
- Meconema thalassinum

True Bugs

Lygaeidae
- Kleidocerys sp.*

Miridae
- Hyaliodes harti
- Neolygus sp.
- Neurocolpus sp.
- Phytocoris sp.*

Pentatomidae*

Phymatidae
- Phymata sp.*

Reduviidae
- Zelus luridus

Tingidae
- Corythucha sp.*

Leafhoppers, Cicadas

Acanaloniidae
- Acanalonia conica

Cicadellidae
- Eratoneura sp.*
- Jikradia olitoria
- Ossiannilssonola australis*
- Rugosana querci

Derbidae
- Cedusa sp.

Membracidae

Aphids, Scales

Aphididae

Beetles

Aderidae
- Syzeton subfasciatus*

Anthribidae*

Attelabidae
- Synolabus bipustulatus

Buprestidae
- Agrilus sp.*
- Brachys aeruginosus
- Brachys ovatus*

Cantharidae
- Rhagonycha angulata
- Tytthonyx erythrocephala*

Cerambycidae

Chrysomelidae
- Systena sp.*
- Baliosus nervosus

Cleridae
- Phyllobaenus sp.*

Coccinellidae
- Hyperaspis sp.*
- Coleomegilla maculata
- Cryptolaemus montrouzieri*

- Harmonia axyridis
- Curculionidae
  - Monarthrum sp.*
  - Cyrtepistomus castaneus*
  - Eulechriops minuta*
  - Odontopus calceatus
  - Pseudoedophrys hilleri*
  - Strophosoma melanogrammum
- Elateridae
  - Melanotus sp.
  - Horistonotus curiatus
  - Idolus bigeminatus*
  - Limonius basilaris
- Lampyridae
  - Ellychnia corrusca
- Lycidae
  - Leptoceletes basalis*
- Mordellidae
  - Mordella marginata*
  - Mordellistena trifasciata
- Scirtidae
  - Contacyphon sp.
  - Scirtes tibialis*
- Scraptiidae
  - Anaspis sp.
- Tenebrionidae

Bees, Wasps

- Bethylidae*
- Braconidae*
- Diapriidae
  - Belyta sp.*
- Eurytomidae*
- Evaniidae
  - Evaniella semaeoda*
- Figitidae*
- Ichneumonidae*
- Pergidae
  - Acordulecera sp.
- Tenthredinidae
  - Caliroa sp.
  - Craterocercus sp.
  - Profenusa sp.*
- Vespidae
  - Polistes fuscatus
  - Vespula vidua

Ants

- Formicidae
  - Formica fusca
  - Formica neogagates*
  - Formica neogagates−group
  - Temnothorax schaumii*
  - Temnothorax curvispinosus
  - Camponotus nearcticus
  - Camponotus pennsylvanicus
  - Crematogaster sp.
  - Dolichoderus sp.
  - Tapinoma sessile*

Flies

- Asilidae
  - Efferia aestuans
- Bibionidae
- Cecidomyiidae*
- Ceratopogonidae*
- Chaoboridae
  - Chaoborus sp.
- Chironomidae
- Chyromyidae
- Dolichopodidae
- Lauxaniidae
  - Homoneura sp.
  - Minettia sp.*
- Limoniidae*
- Phoridae*
- Rhagionidae
  - Rhagio mystaceus*
- Sciaridae*
- Tipulidae

Other observations

- Blattodea
  - Ectobius pallidus
  - Ectobius
- Neuroptera
  - Chrysoperla
  - Chrysopidae
  - Coniopterygidae*
- Odonata
  - Lestes*
  - Sympetrum*
  - Sympetrum vicinum
- Opiliones
  - Leiobunum vittatum
- Psocodea
  - Psocidae
- Psocoptera
  - Polypsocus*
- Trichoptera
  - Leptoceridae
- Trombidiformes
  - Anystis*

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!

Sycamore tussock caterpillar, *Halysidota harrisii*, at Walker Nature Center, VA.

Allen Hurlbert
Director
Caterpillars Count!