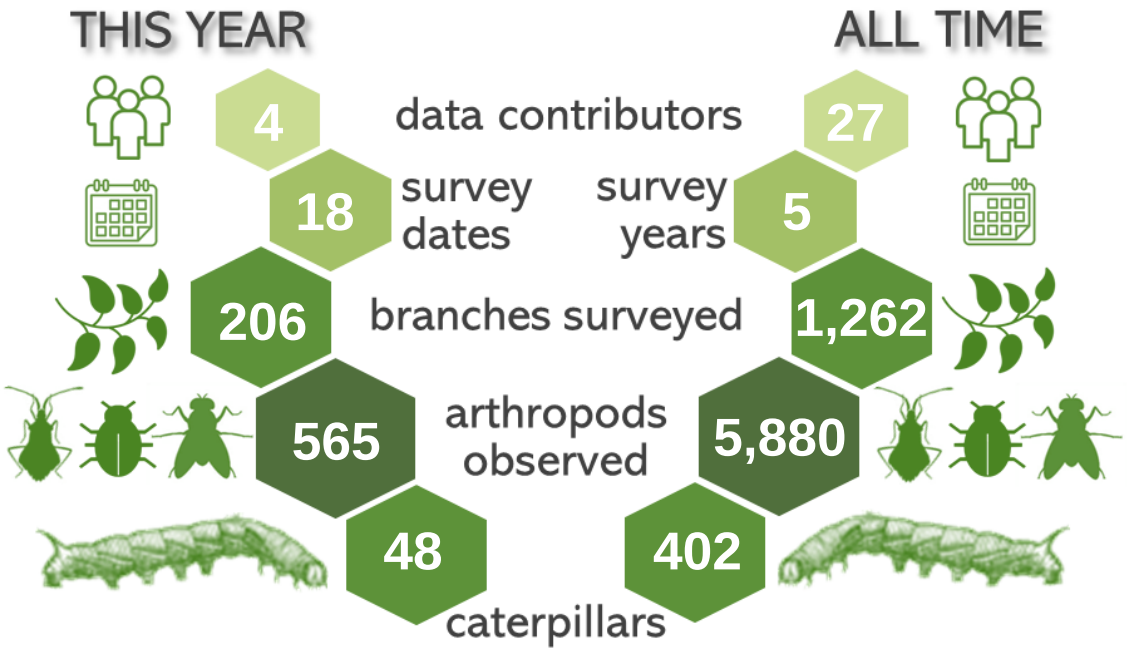
EwA at the Fells, 2023 Summary



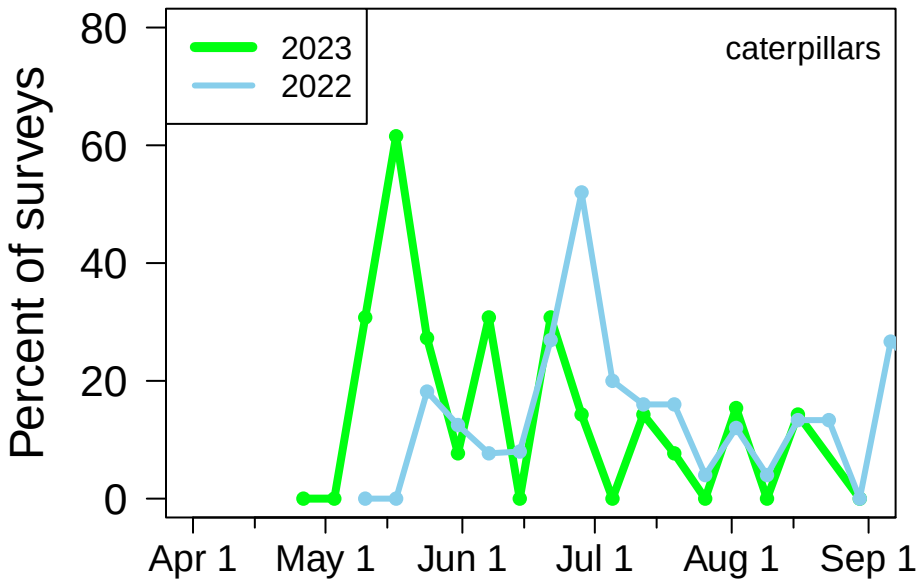
The **206** total surveys conducted at **EwA at the Fells** this year ranks **31st** out of the **79** sites that participated in 2023.

Top Participants of 2023

User	Surveys	Arthropods	Caterpillars	% Caterpillars
C O'NEILL	56	183	26	26.79
Y Liu-Constant	38	106	14	23.68
M Logan	45	130	5	11.11
L DiRocco	67	146	3	4.48

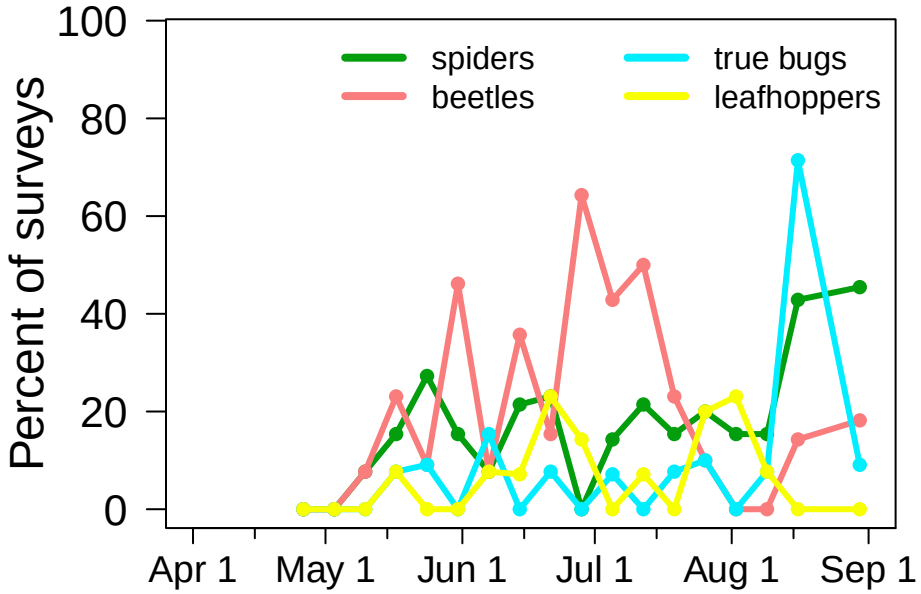
Caterpillar Phenology

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 **2023**, caterpillar occurrence peaked at **61.5%** of surveys on **17 May**. Do you see other peaks as well? How does the pattern compare to the previous year?



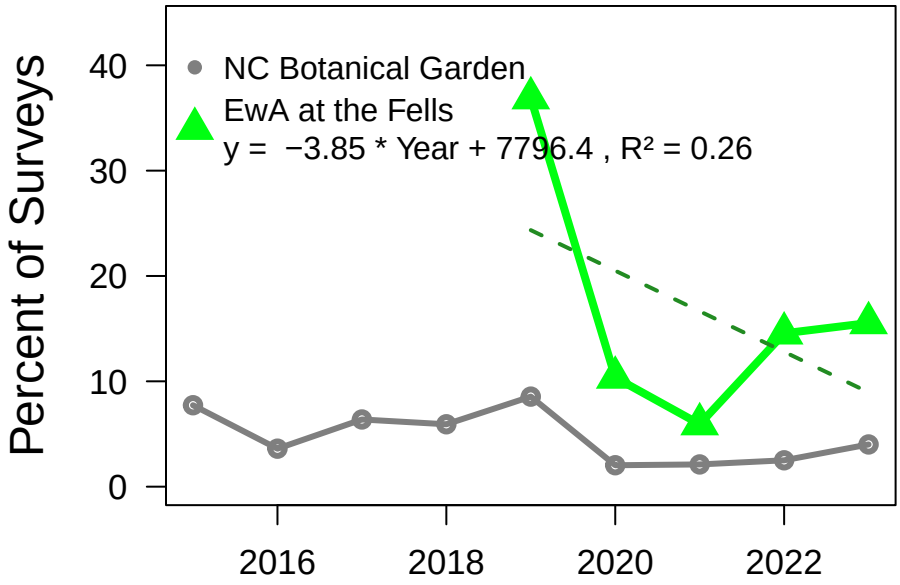
Other Arthropod Phenology

While caterpillars tend to have pronounced seasonal peaks, other groups are more variable. What patterns do you see below for **2023**? You can explore the phenology of other groups on the ***Caterpillars Count!*** **website**.



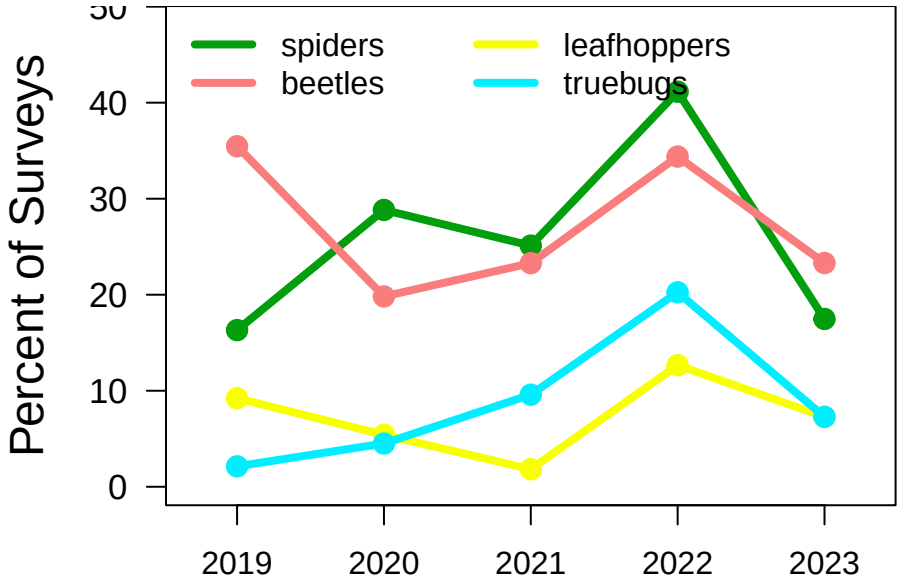
Arthropod Trends

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?

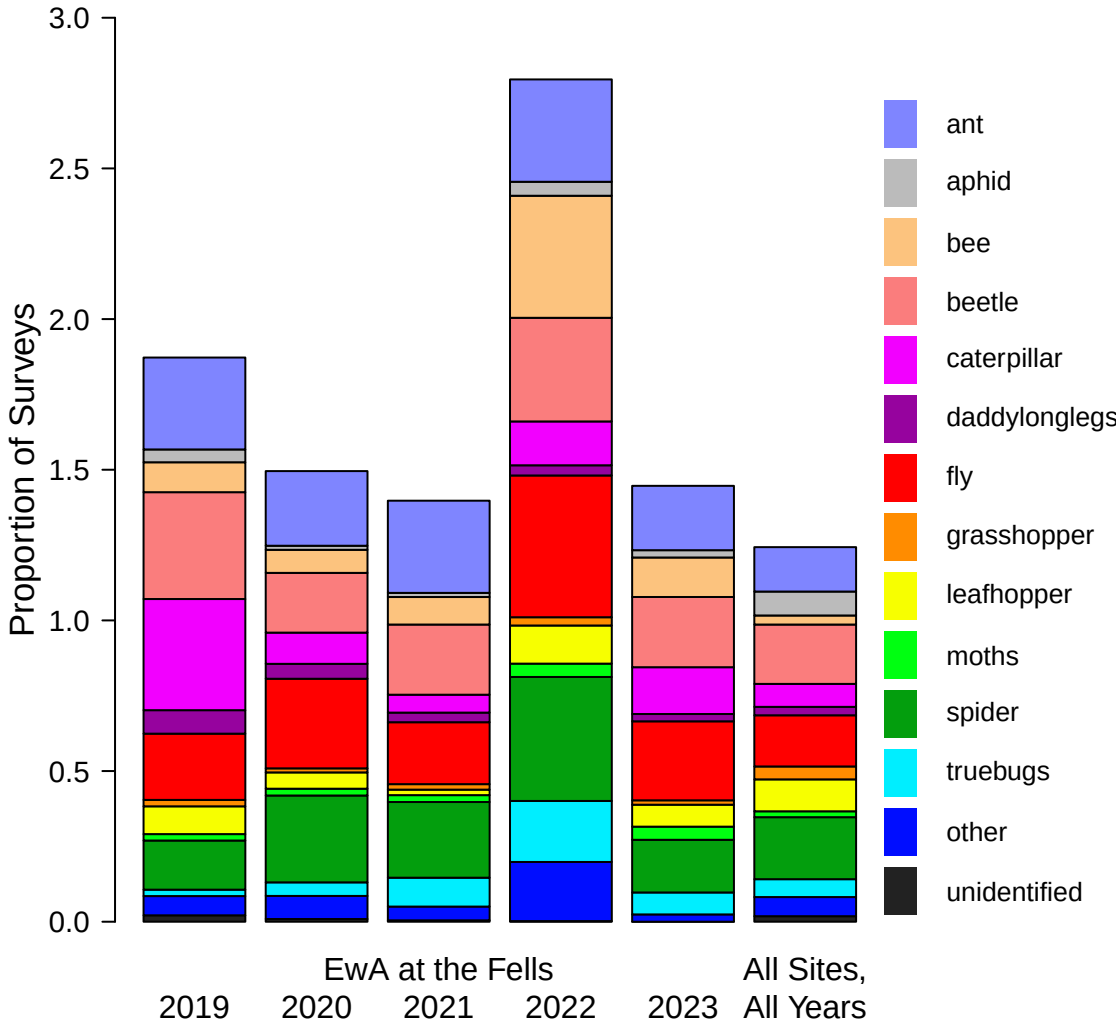


You can explore trends for more arthropod groups, and compare trends at different sites, on your site's Trends Page. See also our November 2021 newsletter for more on how to interpret these trends.

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*).

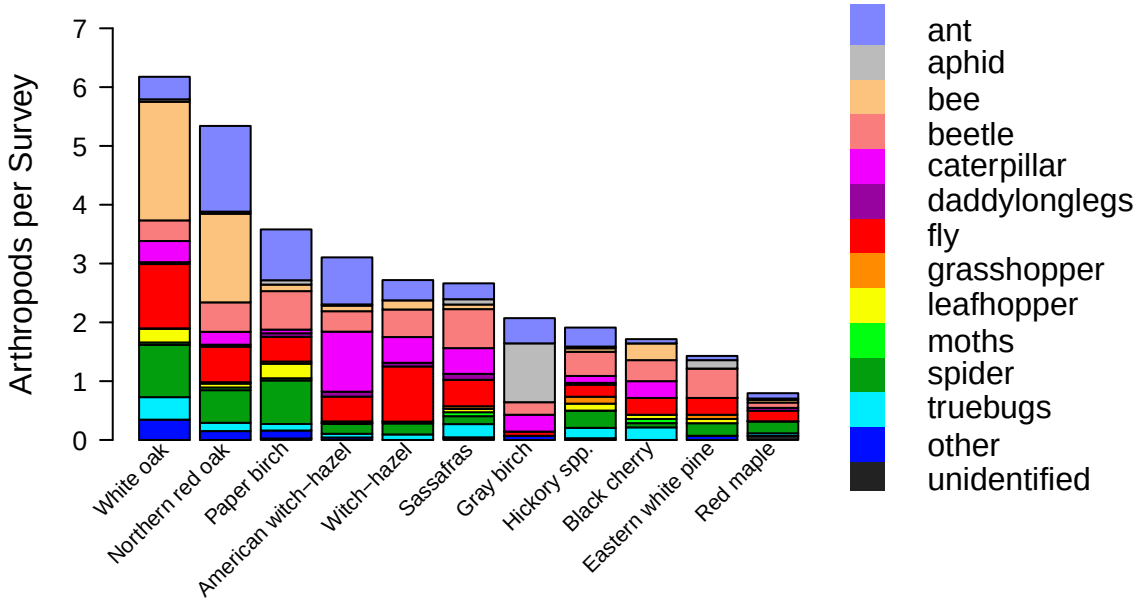
- What are the most common arthropod groups found at your site?
- Has that varied by year?
- Is anything noticeably different about **EwA at the Fells** compared to all other participating sites?
- If arthropod photos were submitted as part of your site's surveys, check the last section of this report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

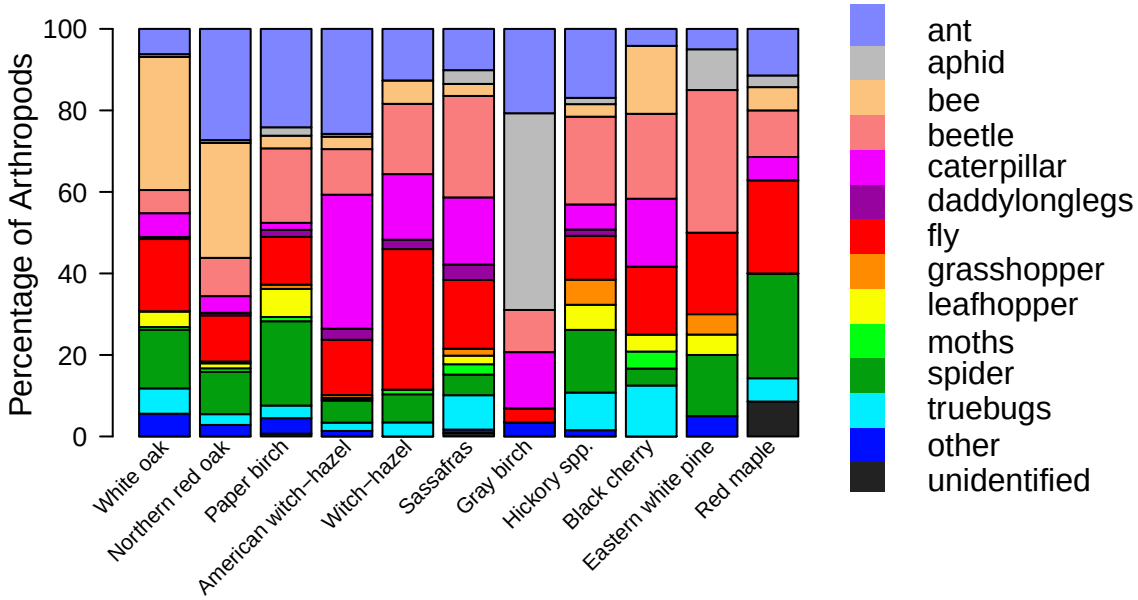


Arthropod Composition by Plant Species

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?

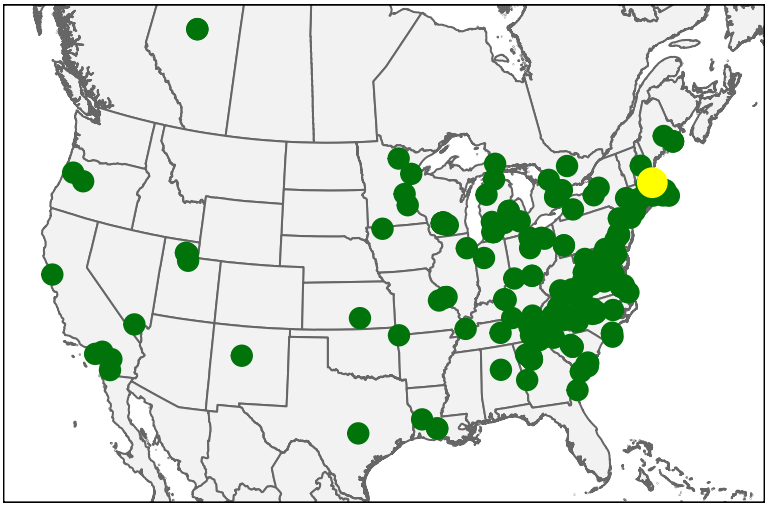




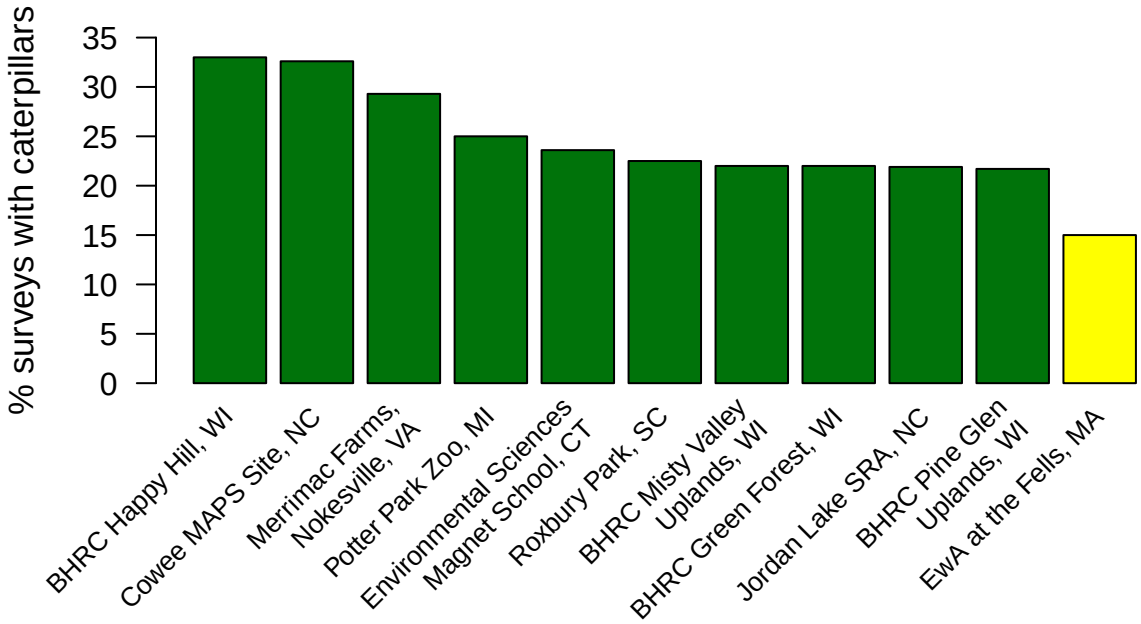
This bottom panel shows, of the arthropods found on a given plant species, what proportion were from each taxonomic group. At most, only the top 25 plant species are shown.

Broader Patterns

Thanks to participants like yourself, ***Caterpillars Count!*** observers have now submitted a total of **265,734** arthropod observations–including **18,521 caterpillars**–from **219** different sites.



Across all surveys ever done at **EwA at the Fells**, caterpillars have been found **15%** 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

2511 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 **75** unique species. Taxa seen for the first time this year are marked with a *.

Caterpillars

Depressariidae
- Machimia tentoriferella*

Erebidae
- Halysidota tessellaris
- Lymantria dispar*

Geometridae

Gracillariidae
- Cameraria sp.*
- Phyllonorycter basistrigella

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
- Marmara sp.
- Phyllocnistis sp.

Oecophoridae
- Mathildana newmanella
- Promalactis suzukiella

Tortricidae
- Argyrotaenia alisellana
- Olethreutes fasciatana

Spiders

Agelenidae

Anyphaenidae
- Anyphaena sp.
- Wulfila sp.

Araneidae
- Araniella displicata
- Mastophora sp.

Dictynidae
- Emblyna sp.

Hahniidae

Linyphiidae
- Florinda sp.
- Pityohyphantes sp.

Mimetidae
- Mimetus sp.

Philodromidae
- Philodromus sp.

Salticidae
- Hentzia mitrata
- Synemosyna formica

Tetragnathidae
- Tetragnatha sp.
- Leucauge venusta

Theridiidae
- Theridion sp.
- Parasteatoda tepidariorum

Thomisidae*

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

Artematopodidae

Attelabidae
- Synolabus bipustulatus

Buprestidae
- Agrilus sp.
- Brachys aeruginosus

- Brachys ovatus
- Cantharidae
  - Podabrus sp.*
  - 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
  - Limonius quercinus*
- Lampyridae
  - Ellychnia corrusca
- Lycidae
  - Leptoceletes basalis
- Melandryidae
- Mordellidae
  - Mordella marginata
  - Mordellistena trifasciata
- Mycetophagidae
  - Litargus tetraspilotus
- Scirtidae
  - Contacyphon sp.
  - Scirtes tibialis
- Scraptiidae
  - Anaspis sp.
- Tenebrionidae

Bees, Wasps

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

- Agromyzidae*
- Asilidae
  - Efferia aestuans
- Bibionidae
- Cecidomyiidae
- Ceratopogonidae
- Chaoboridae
  - Chaoborus punctipennis
- Chironomidae
- Chyromyidae
- Culicidae
- Dolichopodidae
  - Condylostylus caudatus
  - Chrysotus sp.
  - Dolichopus sp.
  - Gymnopternus flavus
- Hybotidae
  - Platypalpus sp.
  - Stilpon sp.*
- Lauxaniidae
  - Homoneura sp.
  - Minettia sp.
- Limoniidae
- Phoridae
- Rhagionidae
  - Rhagio mystaceus
- Sarcophagidae*
- Sciaridae
- Tipulidae
- Liviidae
- Rhaphidophoridae

Other observations

- Blattodea
  - Ectobius pallidus
  - Ectobius
- Neuroptera
  - Chrysoperla
  - Chrysopidae
  - Coniopterygidae
- Odonata
  - Lestes
  - Pachydiplax longipennis*
  - 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!