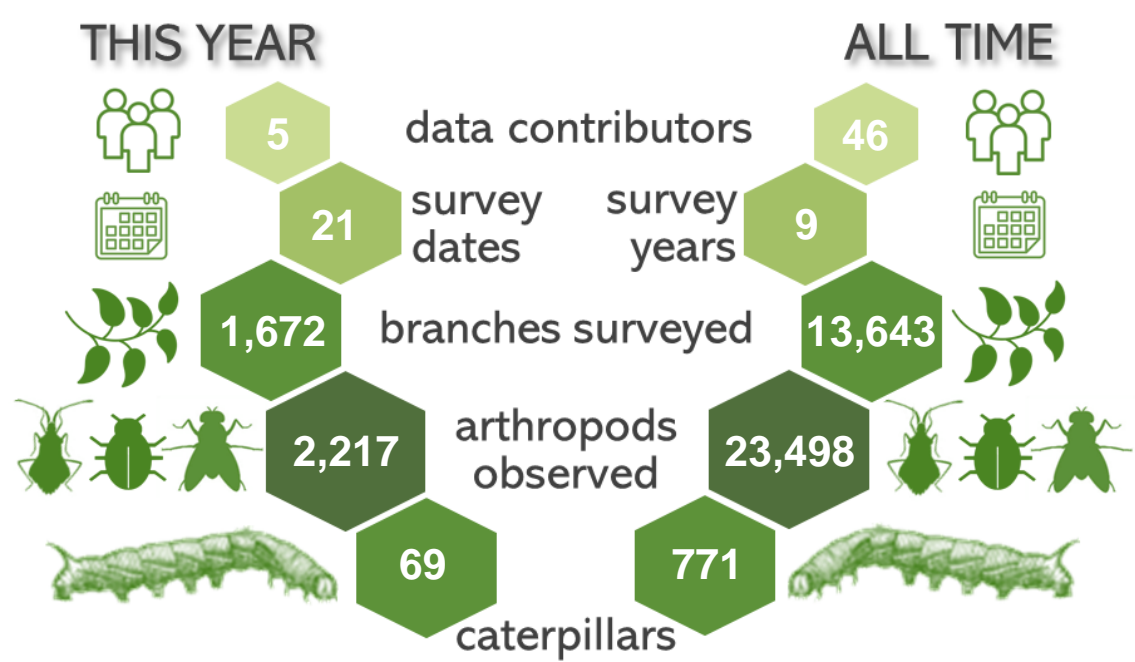




NC Botanical Garden, 2023 Summary



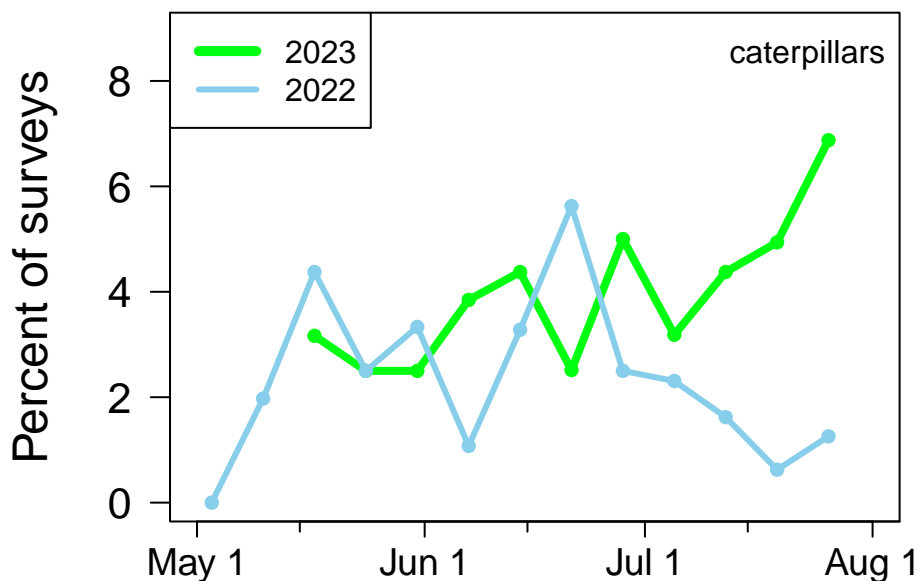
The 1,672 total surveys conducted at NC Botanical Garden this year ranks 2nd out of the 79 sites that participated in 2023.

Top Participants of 2023

User	Surveys	Arthropods	Caterpillars	% Caterpillars
A Hurlbert	169	252	10	5.92
E Howie	373	540	20	5.09
I Edwards	553	795	23	3.98
I Goulden	135	164	4	2.96
T Montgomery	442	466	12	2.71

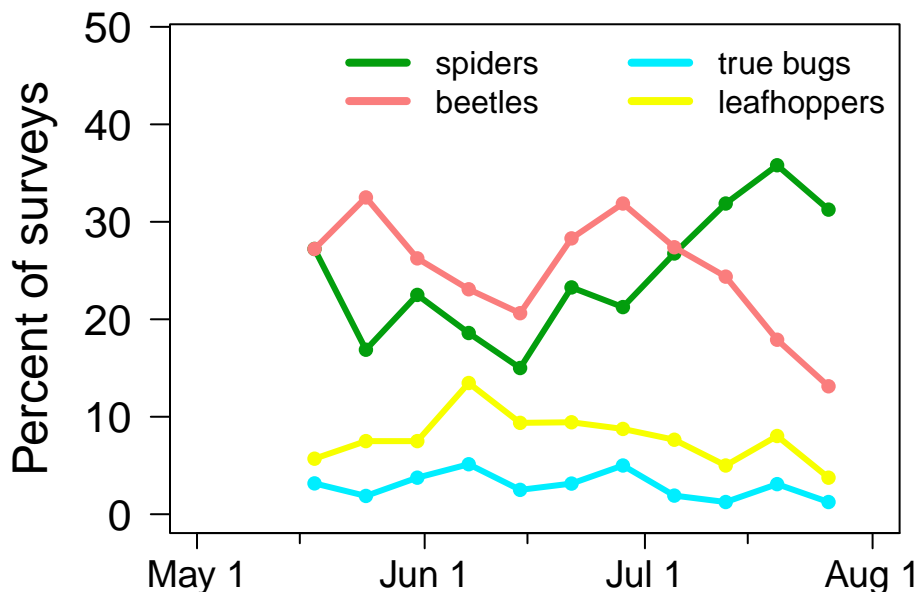
Caterpillar Phenology

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 2023**, caterpillar occurrence peaked at **6.9%** of surveys on **26 July**. Do you see other peaks as well? How does the pattern compare to the previous year?



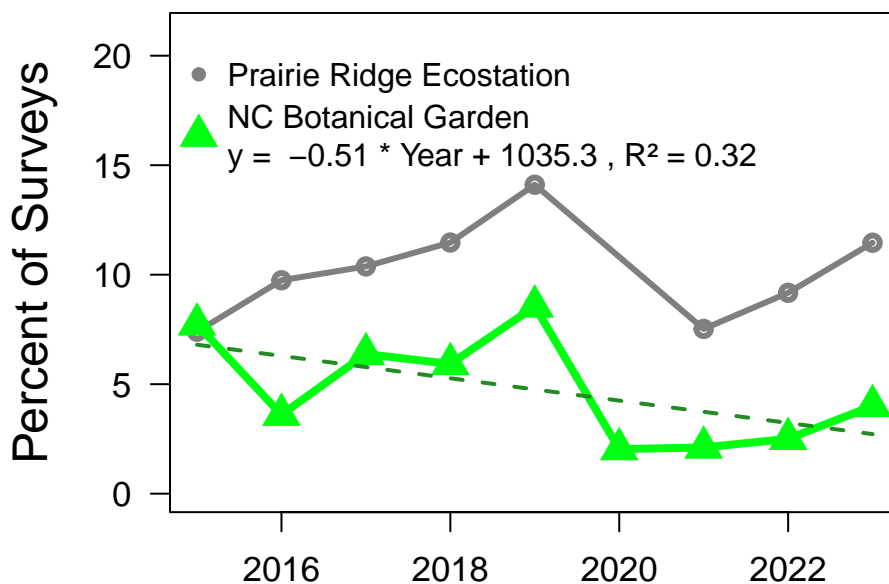
Other Arthropod Phenology

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



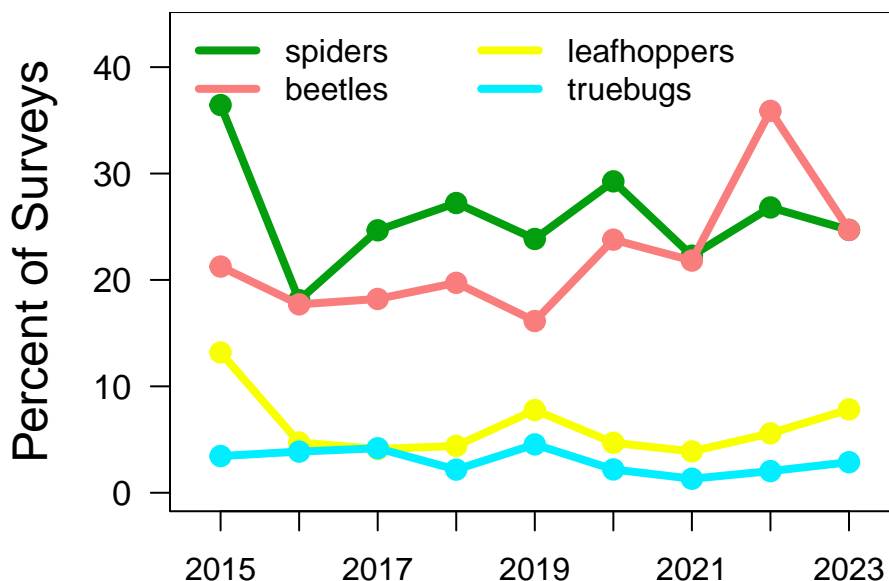
Arthropod Trends

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, **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?

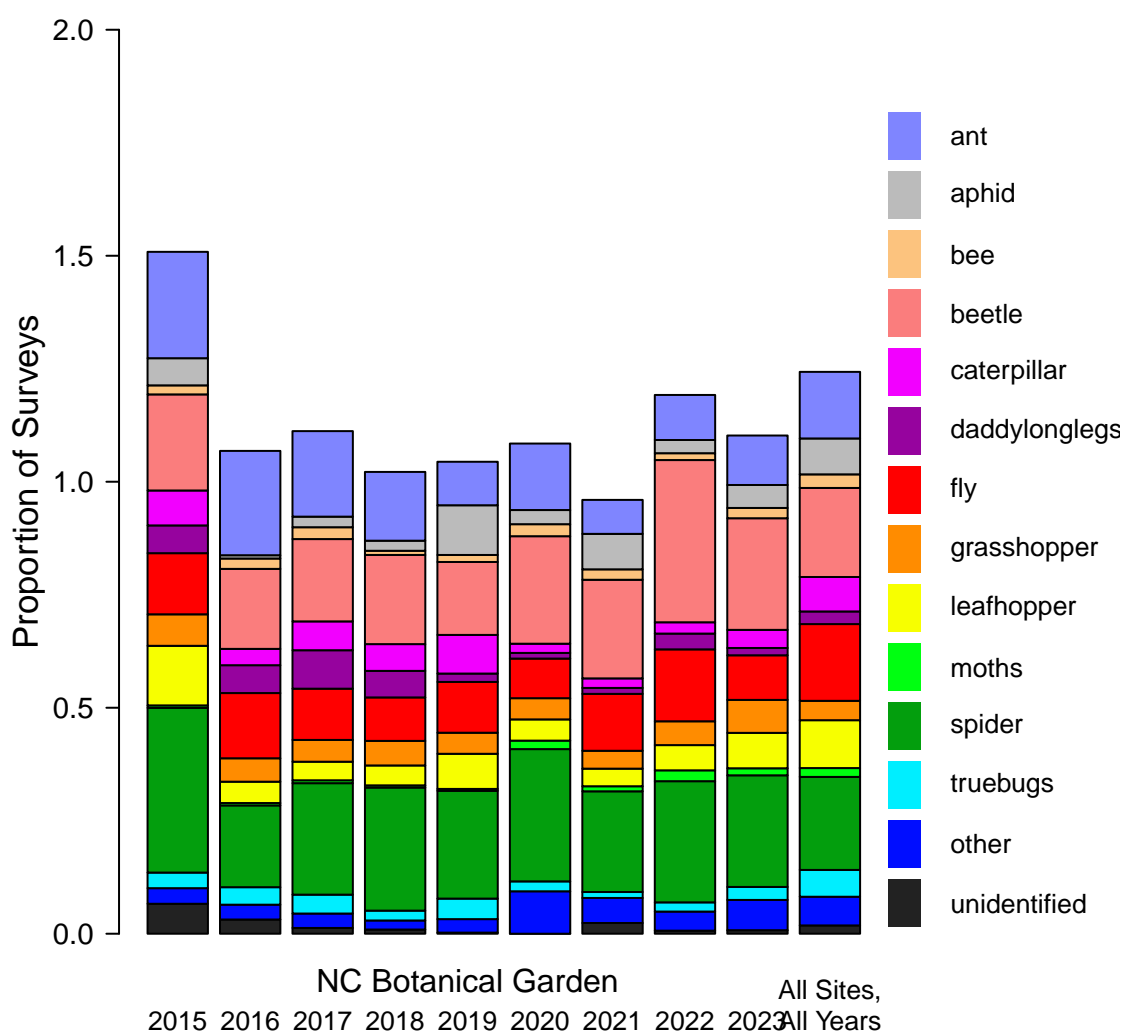


You can explore trends for more arthropod groups, and compare trends at different sites, on your site's Trends Page. See also our November 2021 newsletter for more on how to interpret these trends.

Site Arthropod Composition

Some arthropods are more commonly encountered than others. The graph below portrays the 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*).

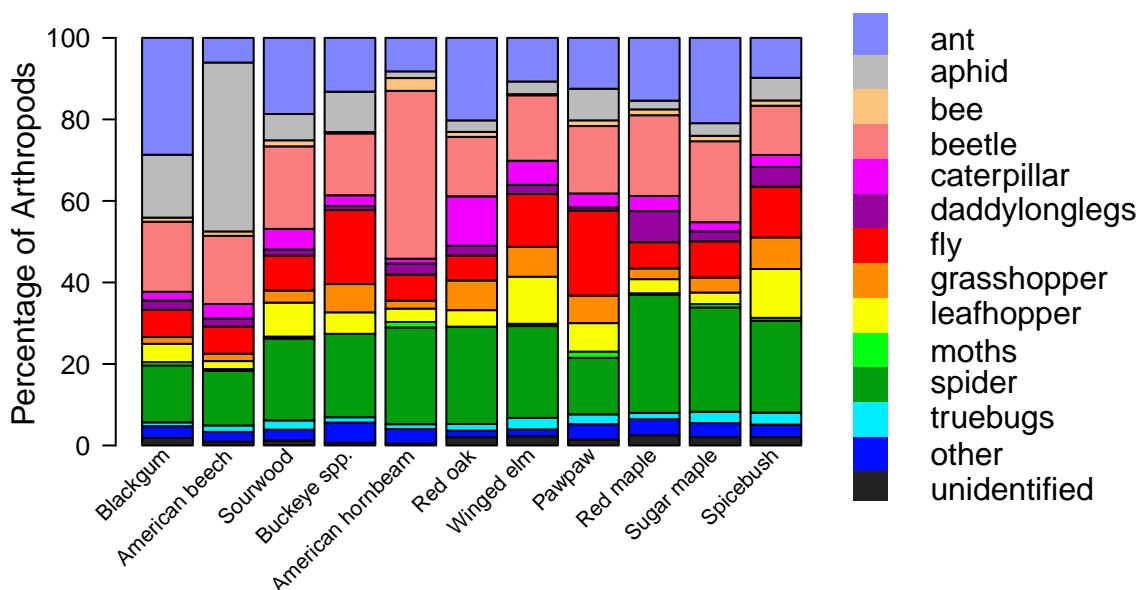
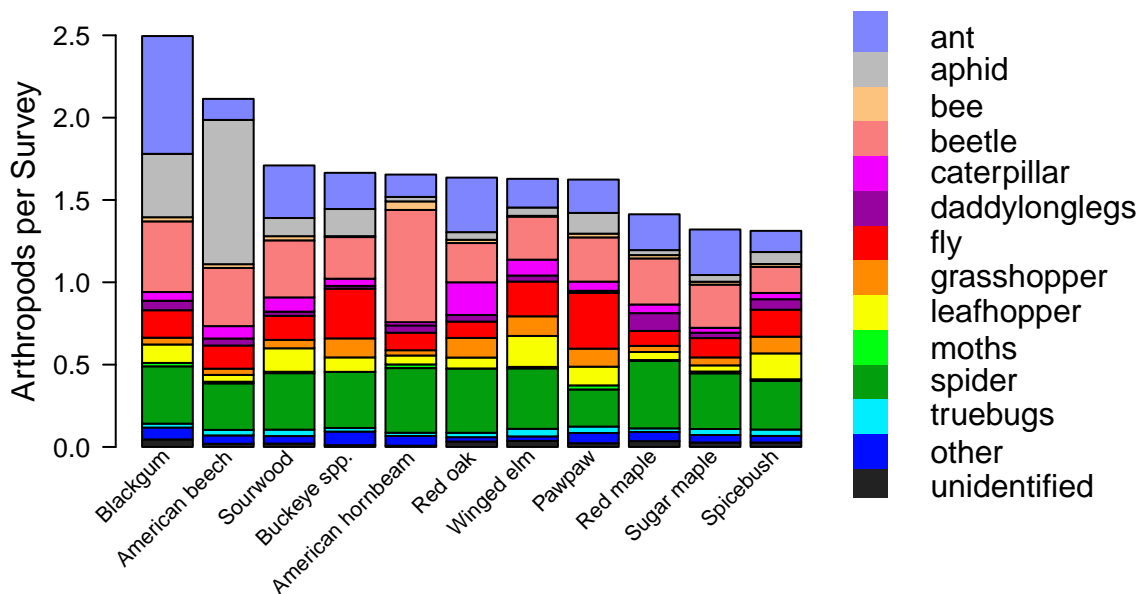
- What are the most common arthropod groups found at your site?
- Has that varied by year?
- Is anything noticeably different about **NC Botanical Garden** compared to all other participating sites?
- If arthropod photos were submitted as part of your site's surveys, check the last section of this report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

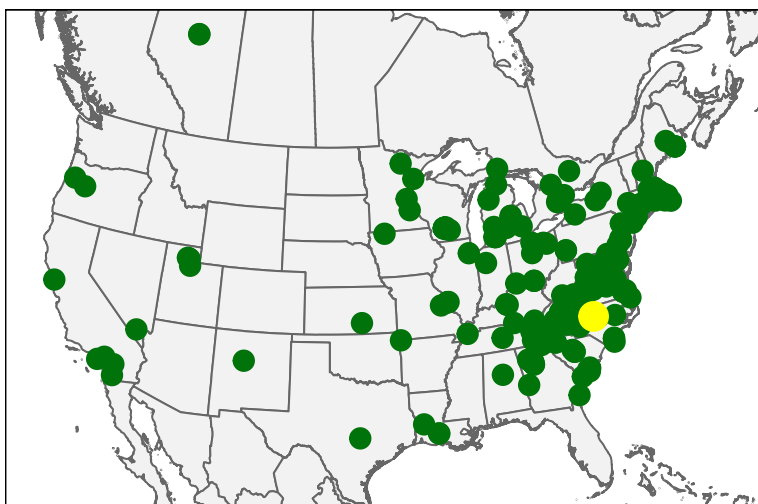
- Which plant species supports the most arthropods per survey?
- Which plant species supports the most **caterpillars**?
- Are any plant species dominated by just one or two types of arthropods?
- Or do they support a diversity of arthropod types?



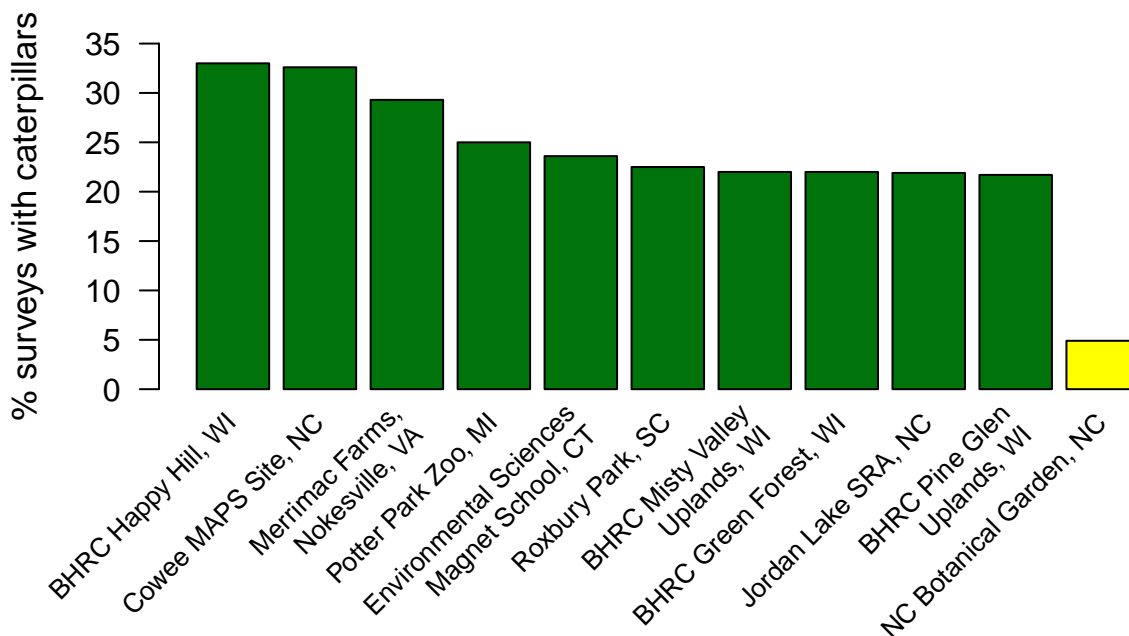
This bottom panel shows, of the arthropods found on a given plant species, what proportion were from each taxonomic group. At most, only the top 25 plant species are shown.

Broader Patterns

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



Across all surveys ever done at **NC Botanical Garden**, caterpillars have been found **4.9%** of the time, which ranks **89th** 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

1608 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 **91** unique species. Taxa seen for the first time this year are marked with a *.

Caterpillars

Depressariidae

Antaeotricha schlaegeri

Erebidae

Halysidota tessellaris

Hypena sp.

Hyphantria cunea

Orgyia leucostigma

Geometridae

Epimecis hortaria

Hypagyrtis unipunctata

Gracillariidae

Phyllonorycter sp.*

Incurvariidae

*Paraclemensia acerifoliella**

Limacodidae

Acharia stimulea

Nepticulidae

*Ectoedemia nyssaefoliella**

Noctuidae

*Acronicta increta**

Acronicta americana

Acronicta retardata

Colocasia sp.

Morrisonia confusa

Notodontidae

Peridea basitriens

Cecrita biundata

Cecrita guttivitta

Lochmaeus bilineata

Macrurocampa marthesia

Moths, Butterflies

Blastobasidae

Blastobasis sp.*

Crambidae

Anageshna primordialis

Tortricidae

Proteoteras sp.*

Spiders

Anyphaenidae

Anyphaena sp.

Wulfila albens

Araneidae

Araneus marmoreus

Eustala sp.

Larinioides sp.

Mangora placida

Metepeira sp.*

Neoscona sp.*

*Micrathena gracilis**

*Micrathena mitrata**

Micrathena sagittata

Verrucosa arenata

Clubionidae

Castianeira sp.*

Corinnidae

Trachelas sp.*

Philodromidae

Philodromus sp.*

Salticidae

Colonus sylvanus

Hentzia sp.

Lyssomanes viridis

Paraphidippus aurantius

Tetragnathidae

Leucauge venusta

Tetragnatha sp.

Thomisidae

Tmarus sp.

Misumessus oblongus

Uloboridae

Uloborus glomosus

Stenotrachelidae

Grasshoppers, Crickets

Gryllacrididae

Camptonotus carolinensis

Gryllidae

Hapithus sp.*

Cyrtoxipha columbiana

Oecanthidae

Oecanthus sp.

*Neoxabea bipunctata**

Tettigoniidae

Scudderia sp.

Trigonidiidae

Cyrtoxipha sp.*

Phyllopalpus pulchellus

True Bugs

Alydidae

Coreidae

Acanthocephala declivis

Acanthocephala terminalis

Leptoglossus fulvicornis

Leptoglossus oppositus

Lygaeidae

Lygaeus turcicus

Miridae

Neolygus sp.

Pentatomidae

Banasa sp.*

Podisus maculiventris

Reduviidae

Sinea sp.

Pselliopus barberi

Zelus luridus

Leafhoppers, Cicadas

Acanaloniidae

Acanalonia bivittata

Acanalonia conica

Cercopidae

Prosapia bicincta

Cicadellidae

Osbornellus sp.*
 Graphocephala coccinea*
 Oncometopia orbona*
 Oncopsis nigrinasi*
 Flatidae
 Flatormenis proxima
 Metcalfa pruinosa
 Ormenoides venusta
 Issidae
 Thionia sp.*
 Membracidae
 Platycotis vittata
 Telamona ampelopsidis*
 Tropiduchidae
 Pelitropis rotulata

Beetles

Buprestidae
 Agrilus obsoletoguttatus
 Cantharidae
 Rhagonycha sp.
 Cerambycidae
 Analeptura lineola
 Chrysomelidae
 Cryptocephalus sp.
 Demotina modesta
 Coccinellidae
 Harmonia axyridis
 Cupedidae
 Tenomerga cinerea*
 Curculionidae
 Aphaerastus taeniatus
 Cyrtopistomus castaneus
 Heilipus squamosus*
 Magdalis armicollis
 Odontopus calceatus
 Pseudocnecorhinus bifasciatus
 Pseudoedophrys hilleri
 Elateridae

Melanotus sp.*
 Hybosoridae
 Germarostes sp.
 Lampyridae
 Photinus sp.
 Mordellidae
 Mordellistena sp.
 Falsomordellistena hebraica*
 Glipa oculata
 Staphylinidae
 Palaminus sp.
 Tenebrionidae
 Strongylium crenatum

Bees, Wasps

Chrysididae

Ants

Formicidae
 Formica fusca
 Camponotus americanus*
 Camponotus castaneus
 Camponotus pennsylvanicus
 Camponotus snellingi
 Camponotus subbarbatus
 Nylanderia sp.
 Brachyponera chinensis
 Prenolepis imparis*

Flies

Cecidomyiidae*
 Chironomidae*
 Culicidae
 Psorophora ferox*
 Dolichopodidae
 Condyllostylus comatus
 Condyllostylus siphon
 Gymnopternus sp.*
 Amblypsilopus dorsalis*
 Keroplatidae

Macrocera formosa*
 Lauxaniidae
 Homoneura sp.
 Minettia sp.
 Limoniidae
 Epiphragma solatrix*
 Rhagionidae
 Rhagio sp.*
 Sarcophagidae*
 Syrphidae
 Tipulidae

Other observations

Collembola
 Tomocerinae
 Ixodida
 Amblyomma americanum
 Mantodea
 Stagmomantis carolina
 Neuroptera
 Chrysoperla
 Chrysopidae
 Leucochrysa*
 Odonata
 Calopteryx maculata
 Argia tibialis
 Opiliones
 Leiobunum
 Leiobunum vittatum
 Plecoptera
 Nemouridae
 Polydesmida
 Oxidus gracilis
 Stylogmatophora
 Pallifera
 Philomycidae

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!