

# *Caterpillars Count!*

CITIZEN SCIENTISTS TRACKING THE PHENOLOGY OF BIRD FOOD



## Arthropod ID slideshow



# Arthropod ID

**What kind of food is available to foliage gleaning birds?**

Learn how to identify common foliage arthropods to **ORDER**.

E.g., caterpillars vs beetles vs flies vs spiders, etc.



# Beetles

Look for the straight line where the wing casings meet!



Ladybird beetle larva



# True Bugs

Look for the “X” on the back formed by overlapping wings!

And sometimes pointy “shoulders”



Nymphs don't have wings yet, so won't show the “X”

# Leafhoppers, Planthoppers, Cicadas

Usually a wide head relative to body.  
Hoppers have wings folded tentlike over back and hop!



Cicadas have large membranous wings





# Aphids and Psyllids

Yellowish, orangish, greenish, or whitish in color.

Usually <5 mm and often <2 mm.

Aphids have rounded, pointy “butts”.



# Grasshoppers, Crickets and Katydid

Large hind legs for jumping. Hind wings when open spread like fans.



# Spiders

Abdomen distinct from the rest of the body



vs.

# Daddy longlegs

Head and abdomen appear to be part of a single round “body”

Long legs!





# Bees, Wasps

Two pairs of wings (they might be hard to see when folded on back), with hind wings smaller than front wings.

Wasps have a narrow waist.



VS.

# Flies

Only 1 pair of wings, often held out to the sides.

Some may mimic bees or wasps in color and shape.



# Caterpillars

May be camouflaged—keep an eye out!

Also note whether it's

in a silk tent,



in a leaf roll,



or hairy or spiny



# Other Identification Resources

- Bugguide.net
  - Insectidentification.org
  - Discoverlife.org
  - Inaturalist.org
- 
- And take the Caterpillars Count! online arthropod quiz:  
<https://caterpillarscount.unc.edu/arthropodQuiz/>



## BEES AND WASPS



2 pairs of wings,  
narrow waist!

## CATERPILLARS

Some have good camouflage! Keep an eye out!



## APHIDS & PSYLLIDS

most < 5 mm, and often < 2 mm

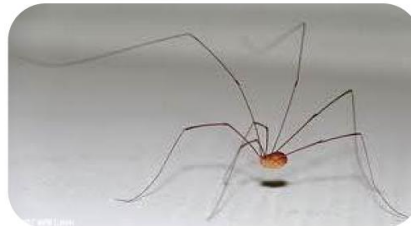


## FLIES

Only 1 pair of wings!



## DADDY LONGLEGS



The head &  
abdomen  
appear to  
be part of a  
single round  
"body"; 8  
long legs!

## LEAFHOPPERS, PLANTHOPPERS, CICADAS



## BUTTERFLIES & MOTHS

The adult forms of our caterpillar friends!



## SPIDERS

8 legs; abdomen distinct from rest of body



## TRUE BUGS

Look for the 'X' on the  
back formed by overlapping wings!



## BEETLES

Look for the straight line  
where the wing casings meet!

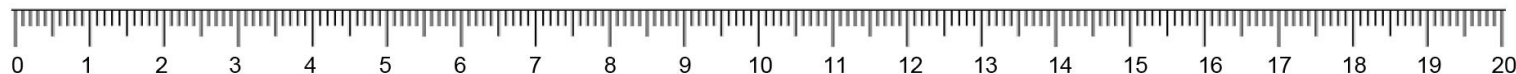


Ladybird beetle larva

## GRASSHOPPERS, CRICKETS, KATYDIDS



## ANTS



1 cm = 10 mm

## BEES AND WASPS

**Order:** Hymenoptera (excluding ants)

**Identification:** 2 pairs of wings with hind wings smaller than front wings with few cross veins.

**Notes:** Beware of flies mimicking bees and wasps in color pattern!

## CATERPILLARS

**Order:** Lepidoptera

**Identification:** 3 pairs of legs close to the head, 2-5 pairs of stubbier false ‘prolegs’ toward the rear.

**Notes:** May be fat like a hornworm or long and skinny like an inchworm, hairy like a gypsy moth caterpillar, or highly camouflaged to resemble leaves or twigs (or even bird poop!).

## APHIDS & PSYLLIDS

**Order:** Hemiptera

**Suborder:** Sternorrhynca

**Identification:** Green, yellow or whitish in color, usu. <5 mm and often <2 mm.

**Notes:** Aphids are common garden pests sucking plant juices from leaves and stems!

## FLIES

**Order:** Diptera

**Identification:** Only one pair of wings! Wings are membranous with conspicuous veins.

**Notes:** Shape and color highly variable; look out for bee and wasp mimics!

## DADDY LONGLEGS

**Order:** Opiliones

**Identification:** 8 long legs; The head (cephalothorax) and abdomen appear to be part of a single round “body”.

**Notes:** Also called “harvestmen”.

## LEAFHOPPERS, PLANTHOPPERS, CICADAS

**Order:** Hemiptera

**Suborder:** Auchenorrhynca

**Identification:** Usu. a wide head relative to the body. Hoppers have wings folded tentlike over the back and are good...hoppers. Cicadas have large membranous wings.

## BUTTERFLIES & MOTHS

**Order:** Lepidoptera

**Identification:** Four large wings covered by scales. Antennae tend to be club-shaped in butterflies and feathery in moths.

**Notes:** The adult form of our caterpillar friends!

## SPIDERS

**Order:** Araneae

**Identification:** 8 legs; The abdomen is distinct from the rest of the body.

**Notes:** Spiders are great hunters and many species do not build a web, like jumping spiders.

## TRUE BUGS

**Order:** Hemiptera

**Suborder:** Heteroptera

**Identification:** Semi-transparent wings overlap so as to make a triangle or ‘X’ shape on the back. Often obvious pointy ‘shoulders’.

**Notes:** Don’t say ‘bug’ unless you mean it!

## BEETLES

**Order:** Coleoptera

**Identification:** One pair of membranous wings that are only visible in flight covered by a pair of hardened wings that cover the abdomen.

**Notes:** Look for the straight line down the back of the abdomen!

## GRASSHOPPERS, CRICKETS, KATYDIDS

**Order:** Orthoptera

**Identification:** Jumping hind legs; Hind wings, when open, spread like fans.

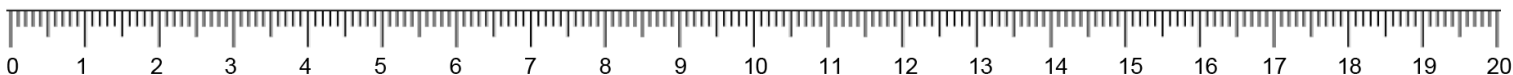
**Notes:** Antennae can be short or long!

## ANTS

**Order:** Hymenoptera

**Family:** Formicidae

**Identification:** Elbowed antennae and a narrow waist.



1 cm = 10 mm