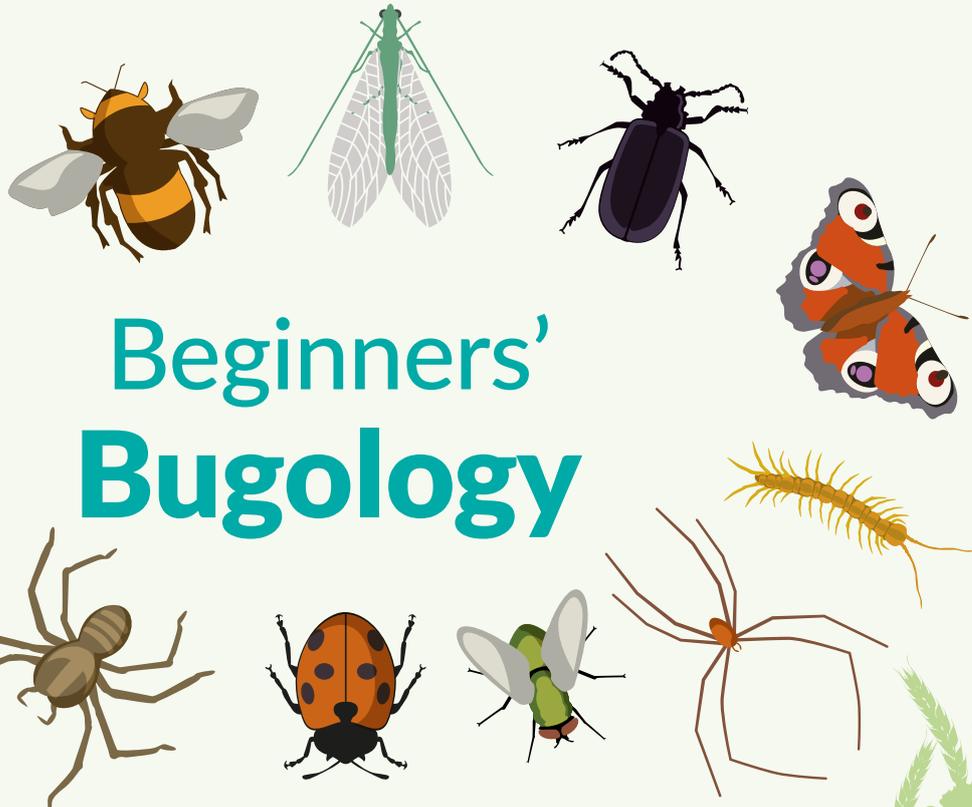


**BACK  
FROM THE  
BRINK**



# Beginners' Bugology

A guide to familiarise you with  
farmers' friends around fields

## Do you want to know more?

You can find lots of resources about farmland wildlife, for all ages and abilities, at [plantlife.org.uk](http://plantlife.org.uk) including more about magnificent meadows on the Meadows' Hub [meadows.plantlife.org.uk](http://meadows.plantlife.org.uk). You can find out more about invertebrates by visiting [buglife.org.uk](http://buglife.org.uk).

Try developing the skills you've learnt about cornfield flowers by downloading the [Rare Arable Flowers App](#) or keep track of your wildlife sightings on [iRecord](#).

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# Who are farmers' friends?

Farmers' friends are beneficial invertebrates that help pollinate plants, improve soil health for growing crops and can help control other species which may have a negative effect on crops. Watching them on farmland fields can help to understand how important and diverse they are.

## What is an invertebrate?

Invertebrates are animals that do not have a backbone. They are the largest group in the animal kingdom. They come in all shapes and sizes, and live pretty much anywhere that you can imagine.

Here are some of the different body shapes to get you started on your Bugology journey:

### Insect

3 body parts



Spider  
2 body parts



Harvestmen  
1 body part

Woodlouse & Millipede  
Body made of segments



**97%**  
of all animals are invertebrates!

## Hoverfly Hunt

Hoverflies are one of the unsung heroes of our countryside - they are super multi-tasking invertebrates! Adult hoverflies are really good pollinators and some larvae are fast-munching aphid predators.

There are over 280 different species of hoverfly in the UK, many of which look very similar. Find a sunny patch with some flowering plants and take time to look for these.

### Did you know

Predatory hoverfly larvae can eat up to 1200 aphids in 6 weeks!

Hoverflies can look very similar to other flying insects. Can you think of any others that are similar?

Have a go at counting how many you see.



Tiger hoverfly



Long hoverfly



Marmalade hoverfly



Great pied hoverfly

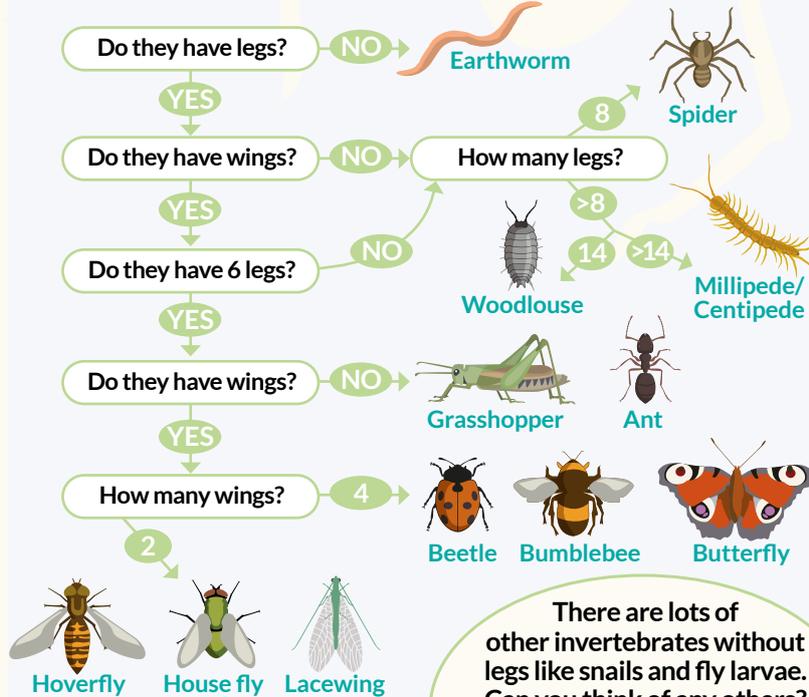
## Count the number of legs and wings

Farmers' friends are invertebrates. Some have no legs, but generally they have six, like bumblebees and beetles, eight legs like spiders or many more legs like woodlice and millipedes.

### Bugology

The study of insects or other bugs. Also a cool name for entomology (en-tuh-mo-luh-jee)!!

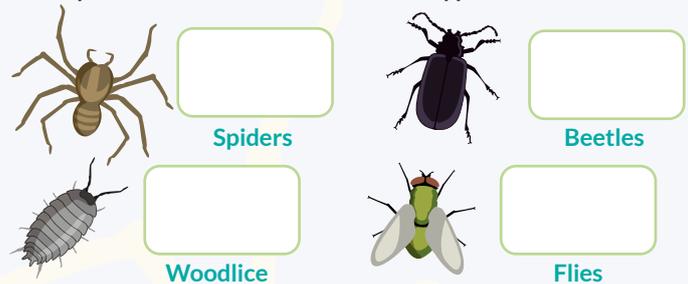
Look around the habitat you are in and use the chart below to find out what type of friend you have found.



There are lots of other invertebrates without legs like snails and fly larvae. Can you think of any others?

## How Many?

Decide on a stretch of path where you are going to investigate what invertebrates you can find there. Can you see any farmers' friends like those below? Why not try counting how many you can see? Use the box for a 'tally' chart of the number of each type of invertebrate.



### Did you find anything different?

Draw a picture of it here and fill in where you found it and what it was feeding on. If you don't know what it is called, give it a new name.

	Invertebrate type	<input type="text"/>
	No. of body parts	<input type="text"/>
	No. of legs	<input type="text"/>
	Name	<input type="text"/>
	Favourite food	<input type="text"/>
	Lives in	<input type="text"/>

# Who are the beneficial friends?

Different species of invertebrates do specific jobs. Groups of farmers' friends are called **predators**, **parasitoids**, **pollinators** and **composters**. While wandering on the paths around farmland and fields use the images below to try and find the same or similar looking species.

## Predators

Predators consume the adults and larvae of other invertebrates that live on an arable farm that can damage crops.



7-spot ladybird larvae



Common lacewing



Mellet's downy-back beetle



Red-legged robber fly

## Parasitoids

Parasitoids prey on the larvae of 'pests' and basically eat their way out of the other insect which kills the pest.



Rove beetle



Parasitoid wasp



Ichneumon wasp



Platygaster species

## Pollinators

Pollinators come in all shapes and sizes and help plants to reproduce, encouraging seed production.



6-spot burnet moth



Thick-legged flower beetle



Tiger hoverfly



Red-tailed bumblebee

## Composters

Composters live or overwinter in the soil, eating detritus and breaking down organic matter.



Flat-backed millipede



Earthworm



Woodlouse



Springtail

## What do they actually do?

The following examples will help you to understand their role on your Bugology journey.

**While you are out and about why not stop at some flowers or plants, take time to observe and see if you can record any live action!**

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**Aphid eaters** - predatory ground beetle likes to munch on cereal aphids in crops.



©Cath Shellswell

**Pollen transporter** - Bumblebees are important pollinators carrying pollen between plants of the same species.

©Chris Moody - CC BY-NC 2.0



**Body snatcher** - Blue Rove beetle parasitise bean seed flies.



©Matt Shardlow

**Cool composters** - earthworms eat decaying matter, improving soil for healthy crops.

**Can you spot the difference between the species below and identify which group they belong to?**

**Draw a line to match the group to the image:**

Shieldbug

Beetle

Fly

Bumblebee



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