

Invertebrate fun facts:

Zoom 1 – Bumblebee (Garden bumblebee - *Bombus hortorum*)

- Always fun to tell people that the drones (males), can't sting, and that naturalists used to impress and shock people by catching a drone in their bare hands, knowing that it wouldn't sting them. In some bees it is easier to tell males and females apart than in others. It is quite hard with the garden.
- Another good fact is that the Garden Bumblebee bumblebee has a much longer face than many of the other bumblebees, and a very long tongue. It means that it can reach nectar in plants that other bumblebees can't. Sometimes the Garden bumblebee will keep its long tongue out while it flies around looking for nectar, which can help identify it.

Zoom 2 – Peacock butterfly (*Aglais io*)

- You can ask why you think it is called the Peacock butterfly.

Zoom 3 – 4 spot orb weave spider (*Araneus quadratus*)

- You can ask why you think it is called the 4 spot orb weaver
- It is closely related to the common garden spider (*Araneus diadematus*), which is the one most people see sitting in the middle of a lovely round web.
- Spiders use their silk in lots of different ways. The first reason it evolved was to cover up their eggs and protect them. Now spiders have all sorts of different shaped webs. The orb weavers, belong to Araneidae family and spin large, vertical webs that spiral outward on thin strands like spokes on a wheel. While orb webs are beautiful, they're also fairly high-maintenance -- the spiders have to repair their webs at least once a day.

Zoom 4 – Green bottle fly - genera *Lucilia*. (Exact sp. unknown)

- It is a type of blow fly, like a blue bottle too.
- The maggots often consume dead tissue. As a result, they used to be used before antibiotics were common, to clean up dead tissue in wounds.
- Always worth mentioning how we know it is a fly (Diptera): large compound eyes; small or no antennae; one pair of wings.
- You can always point out that actually, they do have a second pair of wings behind their forewings, but that these have evolved to become very small, and are called halteres. The halteres act as a balancing and guidance system, insects that have them to perform their fast aerobatics, by providing rapid feedback to the muscles steering the wings.

Zoom 5 – 7 spot lady bird - *Coccinella septempunctata*

- Why is it called seven spot??
- What type of insect is it? A beetle. How do you know – The way the wings come together to form a T shape, compared to the X or Y shape of bugs.
- Worth mentioning how the Beetles fore wings have evolved to become very hard and act as protection to the hind wings that are used for flying. These hard fore wings are called the Elytra. This protection has allowed beetles to be very successful, by living

in habitats that other insect wouldn't be able to because they are too soft. It is one of the reasons some beetles are very good at burrowing in to things like trees.

Zoom 6 – Leach. – species unknown.

- This one is very difficult and probably best to give clues rather than make participants guess on their own
- E.g. – this invertebrate is not very popular – it sucks the blood of people and other vertebrate animals!
- Leeches have huge appetite. They can ingest amount of blood that is five times bigger than their own weight. Once they are full, leeches will detach from the victim.
- Since they are able to eat a lot in a single meal, leeches can survive without food period of one year.

Zoom 7 – Leopard slug – *Limax maximus* (it means great slug!)

- The second-largest slug in the UK. Its cousin *Limax cinereoniger* is a bit bigger. It can reach up to 20 cm long.
- Quite good to get people to guess its name based on the pattern it has. A lot of people guess right.
- It is nocturnal, feeding at night, and is omnivorous, but also carnivorous. It is a good slug for your garden as it will eat other slug species that eat crops. It pursues it's prey at a top speed of 6 inches per minute.
- The hole on the side of the slug is the pneumostome (or breathing pore), and is used for breathing. Air enters through this opening, into the slugs single lung.

Zoom 8 – Common woodlouse - *Oniscus asellus*

- Always good to ask if they think it is an insect. When they find out it isn't you can ask them what they think it is, or might be related too. Good reason to point out that insects have six legs, and woodlice (which are crustaceans) have fourteen legs.
- Always fun to tell people that woodlice breathe through their legs. Living in a terrestrial environment, woodlice breathe through trachea-like lungs in their paddle-shaped hind legs (pleopods), called pleopodal lungs. Woodlice need moisture because they rapidly lose water by excretion and through their cuticle, and so are usually found in damp, dark places, such as under rocks and logs.

Zoom 9 – Green shield bug - *Palomena prasina*

- Good opportunity to introduce how we can tell the difference between beetles and bugs. True bugs, Hemiptera, have forewings that come together to make an X or Y shape.
- Another difference is that beetles have mouthparts perfect for chewing, whereas bugs have piercing and sucking mouthparts – eg aphids, sucking sap from plants.
- Sometimes fun to get people to guess the name of the bug if they don't know it. What shape is it? what colour is it? voila!
- People might talk about stink bugs, or chust bugs also, alongside shield bugs. These are all names for insects within the Pentatomoidea super family.

Zoom 10 – Common earwig - *Forficula auricularia*

- Not many people get this one, or have even seen one.
- The name "earwig" comes from a false superstition that these insects crawl into human ears and enter the brain; in fact, they are harmless to humans.[1] However, they are considered a pest because of their frightening appearance, foul odor, and tendency to invade crevices in homes and consume pantry foodstuffs.[1]
- They do have wings, but are weak and rarely used.

Zoom 11 – Poplar hawkmoth - *Laothoe populi*

- These are massive, with a wingspan of up to 10 cm.
- Feeds mainly on poplar or aspen, but they don't feed as adults.
- It is a good reason to discuss the differences between moths and butterflies. The best divisive feature is the fact that butterflies have thin antennae and (with one exception) have small balls or clubs at the end of their antennae. Moth antennae can be quite varied in appearance, but in particular lack the club end. The distinction is mainly just to confirm to popular distinctions, however butterflies do form a monophyletic group.

Zoom 12 – Stag beetle - *Lucanus cervus*

- Britain's largest known terrestrial beetle.
- Famed for its antler-like mouthparts and its wrestling style of combat in the competition for a mate.
- Most commonly known for its rapid population distribution decline in the last 40 years. Habitat loss and landscape fragmentation and in turn the loss of dead wood habitats have directly contributed to this fact.
- What type of insect is it? A beetle. How do you know – The way the wings come together to form a T shape, compared to the X or Y shape of bugs.
- Worth mentioning how the Beetles fore wings have evolved to become very hard and act as protection to the hind wings that are used for flying. These hard fore wings are called the Elytra. This protection has allowed beetles to be very successful, by living in habitats that other insects wouldn't be able to because they are too soft. It is one of the reasons some beetles are very good at burrowing in to things like trees.