



Whitchurch Nature Notes (7) Minibeast Miscellany



In the summer time, when the days are warm and sunny, we can enjoy being outside in our gardens and local green spaces, watching the natural world. The warmth and sunshine bring out many little creatures to either impress us with their beauty, fascinate small children or to annoy us with their stings!

Most of the queries and photos that I have received as Nature Editor from the Whitchurch community in the last few months have been about insects and spiders. I suppose this is not very surprising because there are thousands of different species just here in Britain - approximately 24,000 insect species and 650 spider species.

Insects, like all animals, are classified using a hierarchical system of classification. Insects belong to the 'phylum' of Arthropods and so do spiders (which are **not** insects). So, I could have called these notes 'Arthropod Miscellany' but I didn't want you to stop reading!



In April, Tim Hardwick emailed me as follows "I went to Lidl in Wallingford yesterday and in the car park by the trees there was a massive swarm of what I think were male **St Mark's flies**, all hovering and dangling in the air. Apparently, this fly is so named because it is often abundant around St Mark's Day, April 25th. A bit early this year!"

Bibio marci or St. Mark's fly is a very common, long, shiny, black fly that can be found in large numbers during the spring around woodland edges, fields and wetlands. It has a very short adult life cycle, being in flight for

approximately only one week. The majority of their time is spent as larva in the soil. During autumn and winter, larvae feed on rotting vegetation which they chew with their strong mouthparts. In springtime the males emerge first and the females a few days later. After mating, females lay their eggs in the soil and die soon afterwards. Swarms of St. Mark's flies may be annoying in the early spring, but they are very useful creatures, feeding on plant nectar, and making them important pollinators of fruit trees and crops.

A mystery fly - a few weeks later, Ben Gosling, who lives in Manor Road, sent me this photo (on right) with the following query "I wonder if you would be able to identify a particular flying insect that inundates our house every evening at this time of year, and our neighbours, and I'm sure lots more in the village. I just measured one and it was about 12mm in length".

I did a bit of research but was rather stumped, so I sent the picture to the experts on iSpot who identified it as a type of **wood gnat** *Syvicola fenestralis*. This is a medium sized gnat of 6 to 10 mm length and has well marked wings, dark wing tips, with 3 dark stripes on the top of the thorax. It is often found near to buildings and also indoors at times and the larvae are found in decaying matter.

This is a good example of a rather unfamiliar flying visitor which is not obvious like a housefly or wasp, but nevertheless is interesting and beautiful in its own way (and, fortunately for Ben, does not sting either!)



Bees and their lookalikes - throughout the summer months, there are numerous types of bees on the wing, as well as other flying insects which mimic bees, sometimes making identification tricky.



Beginning with the **honey** bee (*Apis mellifera*) - did you know they originated in southern Asia? These indefatigable creatures are continually at work, building up their colonies and their honey and pollen stores. According to the Royal Entomological Society, it takes bees about 10 million nectar-collecting trips (see left) to make one pound of honey!

A well-formed colony may number more than 50,000. If the bees feel that they are getting over-crowded in their hive, they will swarm, and this swarm will consist of the queen and a large number of the workers. They will usually come to rest in a tree until the 'scouts' have found a suitable new nest site.

Of course, a local bee-keeper get to hear about the swarm and may come to remove them and put in an empty hive. A bee swarm may look very alarming, but there is really no danger at all. If you do ever see one, don't panic - contact the local Beekeepers Association instead!

The photo on the right was taken in July by Wendy Ferguson. It was in a lime tree in her garden in Swanston Field. The likelihood is that they were part of a colony that had occupied a large bird box since 2018 and had outgrown their nest site. The swarm disappeared after a few days.



There are many species of insects which mimic bees, to protect themselves from predators wary of being stung. Most bee-lookalikes are in fact **hoverflies**, which cannot sting.

In July, Laura Lucas sent me this nice shot (on left) of a bee-like visitor on a buddleia flower in her garden, again in Swanston Field. I decided it was a ***Volucella pellucens*** (with no easy English name!). These hoverflies have a broad, mainly black body, but the front part of their abdomens have a wide, pale yellow band, giving them the appearance of a bee or wasp. Their two wings are transparent, like most flies, but the leading edge is amber, with a brown patch on each wing.

Many of the hoverfly species are very important as plant pollinators, just like the insect they are mimicking. If you are trying to distinguish between bees or flies, remember to try and count their wings – bees have two pairs and flies only one pair.

Another type of fly that looks like a bee is the aptly-named Bee Fly. There are several types of bee-fly but the **Large Bee-Fly** or **Dark-edged Bee-fly** (*Bombylius major*) is the most common in the UK. Bee-flies are parasitic and lay their eggs in the nests of their hosts - solitary mining bees and bumblebees. They do this by hovering over nests or burrows and dropping or flicking their eggs into the nest. Before they deposit their eggs, they coat them in soil or dust. This adds weight to the eggs and may also be a form of camouflage. Once the larvae hatch, they will crawl further into the nest/burrow and feed on mature bee larvae, eventually killing them. Therefore, the abundance of the bee fly depends upon the abundance, and conservation, of its host species.



Bee flies are excellent fliers and can whirr their wings to warm their flight muscles when temperatures are low. Once in flight, they can keep their temperature up by either flying high to absorb direct heat from the sun, or by flying low to absorb ground heat. When cold, they will perch vertically, pointing upwards until the temperature rises. They can remain perched this way for up to a week. Bee flies feed on nectar, using their proboscis to do so. They hover close to plants and rest. This great photo of a Large Bee-Fly, taken by El Hardwick in April, clearly shows the insect holding onto the flower with its long legs and drinking the nectar with its proboscis. They are easily mistaken for bumblebees but are not so benign!

Some of the most beautiful flying insects we often see here in Whitchurch belong to the order *Odonata* - the **dragonflies** and **damselflies**. The proximity of the Thames means that we may see them in our gardens, even where there is no pond.

This impressive female Broad-bodied Chaser (*Libellula depressa*) pictured on the right is a common dragonfly in the south of England but even if it is common, I was pleased to see it in our garden during May.

Dragonflies and damselflies undergo incomplete metamorphosis. Unlike other winged insects, such as butterflies, dragonflies do not have a pupal stage and transition straight from a larva to an adult. This transition, the final larval moult, takes place out of water.



The larvae climb up emergent vegetation, although some may walk several metres over dry land before finding somewhere suitable to emerge. After finding a secure support, they redistribute their body fluids, pushing the thorax, head, legs and wings out of the larval skin. There is then a pause of about 30 minutes to allow their legs to harden enough for the next stage, when the abdomen is withdrawn. The wings, and then the abdomen, are expanded and start to harden. This process leaves behind a cast skin, called an exuvia, and the whole process lasts between one hour (Damselflies) to three hours (Dragonflies).

This photo (on left) was taken beside Keith Brooks's garden pond and clearly shows two exuvia. It is remarkable how life-like they still appear. However, if you look closely, you can see the hole in the skin behind the head where the adult emerged.

This summer seems to have been a successful one for the **Scarlet Tiger moth** (*Callimorpha dominula*). This very colourful day flying moth (on right) has bright red hind-wings which it uses to frighten away hungry birds. On the ground, it can defend itself from predators such as lizards by secreting two blobs of poisonous, bright yellow liquid from behind its head. I found this amazing fact particularly interesting because we do see common lizards on our terrace walls, very close to where Scarlet Tiger moths make their home in a patch of low-growing comfrey.



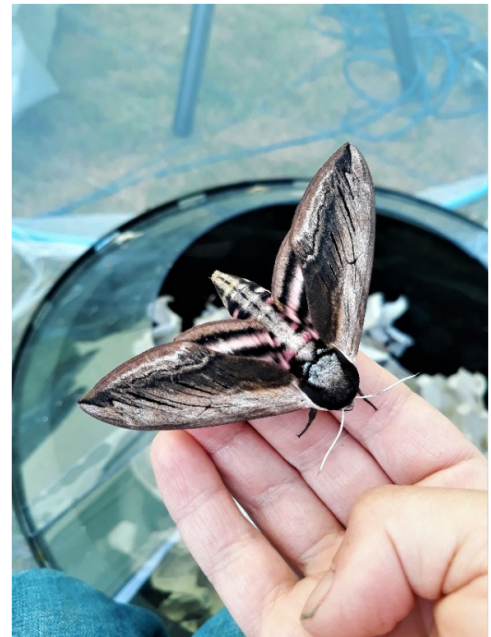


In early July, Rosemary Pearce of Eastfield Lane sent me this shot (on left) of a moth for me to identify. It was resting on their boundary fence in broad daylight. This was a **Privet hawk-moth** (*Sphinx ligustri*) which is one of the impressive group of hawk-moths that we find in the UK. They are recognisable by their large, torpedo-shaped bodies and long, narrow wings, held back like a jet plane.

The privet hawk-moth is the largest of our resident hawk-moths, with dark brown-and-cream wings, and a pink and black-banded body. It has a wingspan of up to 12cm.

This photo on the right gives you an idea of just how large they are. Lorna (our daughter) had caught this specimen overnight in her moth-trap (visible in the background) and she was counting and then releasing the moths early the following morning. Don't worry – no moths are killed in the process!

The adults are attractive, but it is the large caterpillars that really catch the eye. They are lime-green with a purple blush, purple-and-white streaks on the side, a pale-yellow spot on each segment, and a big, blackish hook at the tail end. The caterpillars feed mainly on privet, hence its Latin name *ligustri*.



Beetles are of course classified as insects too, so I am including a fine example of a common, if sometimes unwelcome, garden visitor – the **Rose Chafer beetle** (*Cetonia aurata*). Chris Martin and Tim Hardwick both sent me good pictures of this beetle – here is Chris's photo on the left.

The Rose Chafer is a striking metallic coppery-green with small, creamy-white streaks on its wing cases. The adults eat flowers, nectar and pollen and their larvae feed on decaying vegetation and are often found in composting piles.

Female rose chafers lay eggs underground and, once emerged, larvae continue to live and feed in decaying vegetation underground for several years. They pupate in the autumn but do not appear until the following spring. Although considered a garden pest, it is an important recycler of nutrients, feeding on decaying matter.

Finally, Sarah Dixon has written the following about a spider that should fascinate you

You may have noticed a pretty little spider hiding in a flower in your garden. This will be a female **Crab Spider** (*Misumena vatia*), so named because her long front legs stick out sideways, like a crab. Often white, she can change her colour to yellow, pale green or pink to match her background. The change is not instantaneous but takes several weeks.

Crab Spiders are ambush hunters. She will hide in a flower, blending in with the petals, and when an insect approaches to feed she will pounce. Her hydraulically-operated front legs snap around the insect's neck and she bites into its head, immobilising it. Next, she injects enzymes into its body which liquify it, and sucks out the contents with a tube-like proboscis. She does not spin a web, nor does she wrap the prey up for later consumption.



Crab Spiders specialise in large prey, and a tell-tale sign of their presence is a pile of bumble bee corpses and butterfly wings on the ground. Look up, and you will likely spot a Crab Spider lurking above.

Just a few days ago I was admiring the many butterflies on a buddleia, such a lovely sight of Summer. A particularly fine Peacock butterfly approached, when to my horror it was attacked and killed by a pretty little white spider right in front of my eyes – as you can see from this photo on the left. The whole incident took a matter of seconds – shock and awe! I knew I had to

find out more about this innocent-looking minibeast.

What about the males? They are much smaller than the females and tend to go unnoticed. They spend their time climbing up plants looking for females, eating tiny insects and trying to avoid being eaten by the females.

If you want to spot a Crab Spider just have a look at your flowers, especially those visited by butterflies and bumble bees. But be quick – by the end of August the female will have laid her single batch of eggs and her life will be drawing to a close. Like the cuckoo, in August away she must.

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I hope that this very small selection of arthropods which have been observed in our locality will encourage you to do some more research yourselves. There are plenty of websites and apps to help you with identification and of course many useful reference books too.

I use two particular websites - these are **NatureSpot** and **iSpot**.

NatureSpot is based in Leicestershire & Rutland but is very useful for most creatures found anywhere in the UK. With iSpot, you can send in a photo and get one of the experts to do the identification - I am constantly amazed by the dedication and knowledge of all the professional and amateur naturalists out there. Happy minibeast hunting!

Contributions & photos from *Tim & El Hardwick, Ben Gosling, Wendy Ferguson, Laura Lucas, Rosemary Pearce, Chris Martin, Sally & Lorna Woolhouse, Sarah Dixon*

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