

Do you have **the bug** ?



A fascination and enthusiasm for the mini-marvels of this world...

seven Nov 2022



in association with



...for stories from the insect nation.

Do you have the bug?

Are you a professional entomologist
Do you study them for a living
Is it an amateur interest
Do you find them fascinating
Are you just curious and want to know more.

This magazine is for you.

If you would like to contribute to the
magazine, you would be most welcome to
write something and/or send in some images
(photographic or illustrative).

You would be credited.

If I have misidentified any of the species or any
information is incorrect, please let me know.

admin@stroudnature.org (Steve)



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As I begin this issue, the UK is in the middle of its second heatwave of 2022. We have just been through the driest July on record. It's been a great summer in the Stroud Nature garden for insects, but this prolonged drought is I fear having an effect on plants and insects as we make our way through August. Plants that last year provided nectar to the end of the month are going over far quicker.

I have to thank some of the old resilient faithfuls – the fennel, the marjoram and the wild carrot. These continue to be alive with a variety of species, keeping my daily explorations of the garden rewarding and sometimes exciting. Below a Conopid Fly on the marjoram. First time seen in the garden (06.08.22). Feature to follow in later issue.



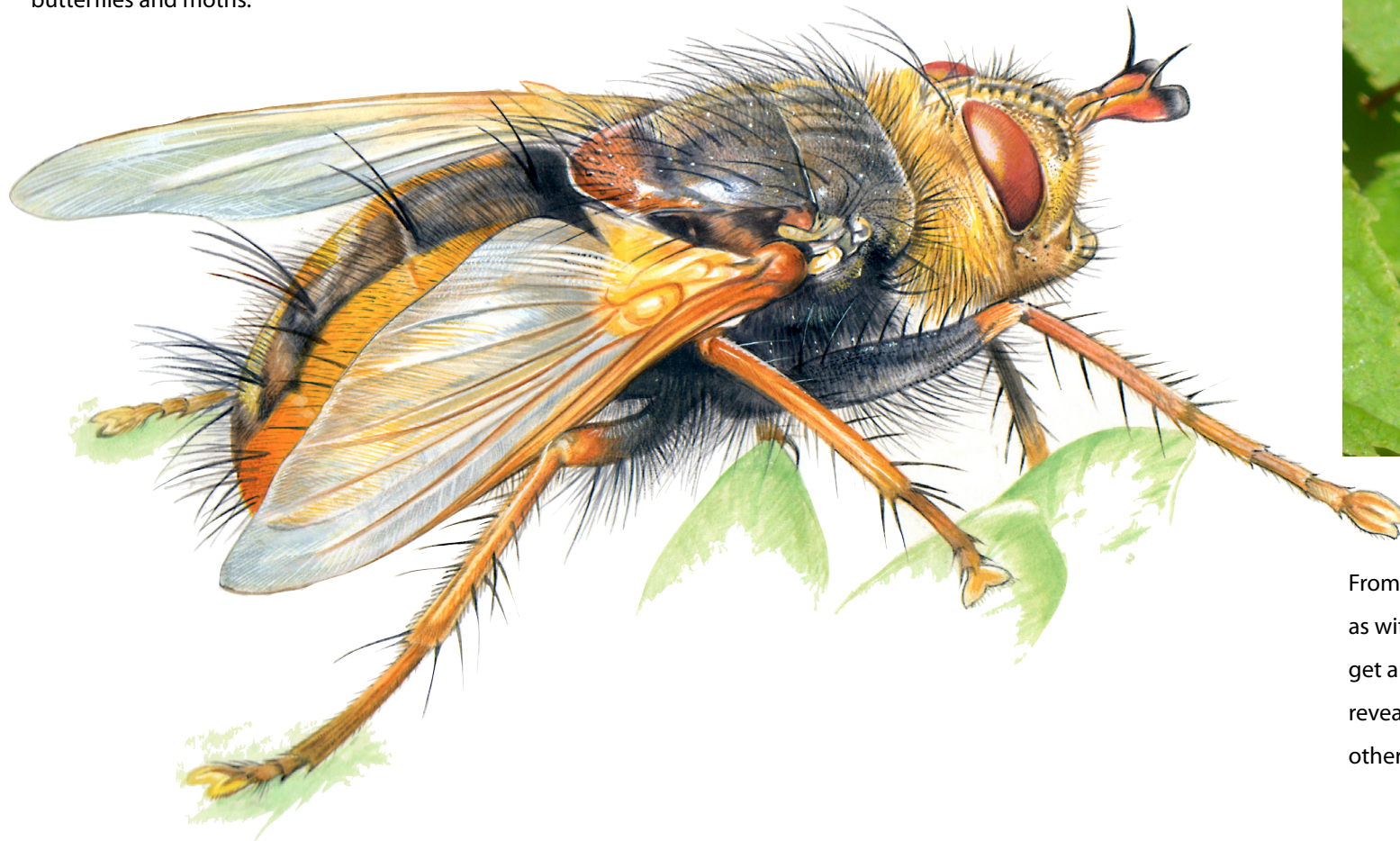
Tachinidae:

Tachina Fera

Tachinid flies are characterised by their hairy, bristly appearance. *Tachina Fera* is no exception.

The larvae of tachnids are internal parasites of caterpillars and other young insects. *Tachina Fera* parasitises the larvae of butterflies and moths.

This species inhabits woods and various moist habitats and can often be found on waterside plants, particularly umbellifers. It will visit gardens where the planting and conditions suit. It can be found from April to September, although this will be two broods. April/May to June and Mid July to September.



Front cover



From above, *tachina fera* might not get a second look. But as with so many flies and insects, it's always worth trying to get another view, like the main illustration left. This often reveals features and characteristics that you would otherwise miss

Flies

Tachinidae species are easily confused with those of other groups such as Caliphoridae (blow-flies) and Muscidae (house-flies). Here are a few flies from all three groups to confuse you further.

But don't worry. Next time you see a hairy, bristly fly, maybe you might look again. You may begin to appreciate some of their finer points. These flies have all been photographed in the garden.



Tachinidae: *Phasia hemiptera* - female



Tachinidae: *Eriothrix rufomaculata*



Tachinidae: *Minto rufiventris*



Muscidae: Noon fly
Mesembrina meridiana



Calliphoridae: Flesh fly - *Sarcophaga camaria*



Calliphoridae: Greenbottle
Lucilia caesar



Calliphoridae: Bluebottle - *Calliphora vomitoria*



The Gardener

This garden in Stroud is just a five minute walk from the town centre and has provided the inspiration for two recent Stroud Nature projects.

Garden Guardians and *Do You Have The Bug* were both conceived because of the garden. They were a direct result of my ambitions for the garden. At that time, we had been in a new home just over a year. South facing, very private, with a range of trees and shrubs around its borders, it needed reviving after years of general neglect.

I had not been the most enthusiastic of gardeners up until this point, but now saw an opportunity to create a garden for wildlife, that I could use to launch these projects. The pandemic and the growing appreciation nationwide of the importance of our private spaces as sanctuaries for wildlife, added a sense of urgency to things.

We have done a lot. It has been done on a pretty tight budget, it is as sustainable as we can make it.

From the spring of 2019 until the present day, I have been exploring it almost daily, weather permitting. Between March and September, I have been recording with the camera, the species of insect that live here, visit regularly or just pass through every now and then. I am now going through all of the images to confirm identification.

The images



Brimstone Moth



Orange-tailed Mining Bee (female)



Parent Bug



Hoverfly: Volucella inanis



Click Beetle playing dead

To date I have images of around 285 different insect species seen in the garden. Some are very definitely 'garden insects' which I would expect to find them around the garden. But there have been plenty of surprises. That is not to say that these less familiar species are not found in gardens up and down the country. I do not know. I have not explored anyone single area so thoroughly in the past.

Everyday, weather permitting, I spend time in the garden, camera in hand. I try and do this in the morning, the middle of the day and later in the afternoon. These are my morning tea breaks, my lunchtimes, my afternoon tea breaks.

I can only show a fraction of the insects seen. The criteria for the ones I have chosen; some species are like old friends appearing at the same time each year in the same area of the garden, on the same plants. This I find comforting. Others were exciting discoveries and some are simply wonderful, quirky, odd!

While some species may be present throughout the summer, I have found it useful to break down the choices into three periods - March/April, May/June, July/August.

I appreciate that insects are still around during September and October. However, the number of species is far less and most have already been seen during the months before.

March/April



First image of 2022. Drone Fly (although very dark)



Potter Wasp (*Ancistrocerus parietum*)



Dark Edged Bee Fly (*Bombylius Major*)



Ashy Mining Bee (*Andrena Cineraria*)



Red Mason Bee (*Osmia Rufa*)

The **Drone Fly** and the **Bee-fly**. It is good to see them each spring. They are often the first species seen around the garden.

Drone flies hibernate over winter, so this will likely be an individual from the previous year. Bee flies emerge fresh from their pupation, a new generation feeding on the same plants as their parents. Plants such as Ground Violet and Lungwort. Both need to make the most of any spring sunshine to warm their bodies and you will often find them sunning themselves on low bare walls, on stone slabs or gravel surfaces which reflect heat that they can also absorb.

A number of solitary bees are on the wing in the spring. Several species of mining bee are associated with our gardens. One of the most distinctive is the **Ashy Mining Bee**. Female Ashy-mining bees excavate small tunnels in the earth to make their nests.

The **Red Mason Bee** will make use of any suitable hole in a vertical situation, natural or man made. On the left, this is a garden shed and this is one of half a dozen individuals making use of holes in vertical walls of the shed.

A number of solitary wasps were seen all year round in the garden. As a general rule, all wasps are continuously on the move, never staying still for very long and can therefore be difficult to identify. The **Potter Wasp** was captured earlier in the morning soaking up the sun. It is predatory and I was to witness this species capturing a range of insects throughout the year.

March/April



Hoverfly: *Helophilus pendulus*



Cockchafer



Gooden's Nomad bee



Orange-tip



Esperia Sulphurella

We have two 'ponds' in the gardens. The first is a traditional pond, not large (2m by 1.5m) excavated, lined and planted. The second is the lower half of a loft emersion tank, cut at angle and sunk into the ground. I can always find the hoverfly **Helophilus pendulus** at both, generally sunbathing on waterside plants. We had two pairs in 2022.

Looking more like a wasps, **Gooden's Nomad bee** is one of three different nomad bee species that visit the garden. They move quickly around the garden from plant to plant when not looking for the homes of other bee species in which to lay their eggs.

The **Cockchafer** larva was one of three we discovered buried in the soil as we went about our gardening. They were covered up with soil where we found them or somewhere else in the garden. Come May, we could expect to hear the flying adults hitting the conservatory windows, drawn by the light.

The **Orange tip** butterfly is one of those iconic spring species. They show a preference for damp habitats including those close to rivers, streams and canals. All three run close to the house.

This Micro Moth, **Esperia sulphurella** was out in the warm weather in late April. A day flying moth, it is generally on the wing in May and June. A common moth throughout the UK in woodland, hedgerows and gardens. Its larvae feed in the decaying wood of deciduous trees.

May/June



Thick-legged Flower Beetle: *Oedemera nobilis*



Honeysuckle sawfly: *Zaraea fasciata*



Hoverfly: *Leucozona lucorum*



Soldier Fly: *Oplodontha viridula*



Honeysuckle sawfly: *Zaraea fasciata*

Thick- legged; Thick-thighed; Swollen-thighed; Thick-shinned. Take your pick. **Oedemera Nobilis** is a gorgeous little beetle with is iridescent green metallic body and one of our most active pollinators. We have had several pairs in the garden during 2022, feeding on a wide range of plants. The female lacks the swollen hind legs.

Field guides tell you that the hoverfly **Leucozana Lucorum** is a species of woodland rides, woodland edges and hedgerows with its first springtime brood being more abundant than its later summer one.

This **Honeysuckle Sawfly** was only seen once, sunbathing early morning at the base of a honeysuckle. I knew it was a sawfly, but was unsure which species until I checked my references later.

Soldier flies are often overlooked, maybe being mistaken for hoverflies. Many of the commoner garden species are very small. They do not fly as much as hoverflies and spend a great deal of time sunbathing. The **Common Green Colonel** was one of several species visiting the garden this year.

You look and then you look again before you realise that the **Wasp Beetle** is a beetle. We have plenty of old, rotting wood in the garden (tree stumps, natural trellis' and fences). These provide a home for the larvae of the beetle.

May/June



Hoverfly: *Xanthogramma Pedissequum*



Moth: *Curren Clearwing moth*



Spotted Crane-fly



Black-striped longhorn Beetle



Spotted Bush-cricket

There are some hoverflies that can confuse our perceptions of what a hoverfly looks like. The three UK species of *Xanthogramma* do just that. **Xanthogramma Pedissequum** is predominantly a grassland species, but can also be found in woodland rides and gardens.

All Britain's resident clearwing moths fly by day. The caterpillar of the **Curren Moth** feeds on wild black currant and red currant, occasionally goseberry. The image shows a female adult, which has three abdominal rings, the male having four.

People may be familiar with the more common crane fly (tipula oleracea), which flutters around in our homes and is sometimes called a 'daddy long-legs'. The **Spotted Cranefly** (*Nephrotoma appendiculata*) has a much more interesting and striking colouration.

The **Black-striped Longhorn Beetle** (*stenrella melanura*) is small, 10mm maximum length, excluding the antennae. Here it is feeding on *Astrantia*, but if I want to spot one at any time, the first place I look is on the ox-eye daisies.

The young cricket nymph seems more aptly named than its adult form. The **Spotted Bush Cricket** is a common visitor to gardens, though often missed during the day as it hides, motionless amongst the vegetation. Come dusk and at night, they are more active and attracted by light and will come into the house.

July/August



Big Headed Wasp



Downland Bee-fly

CLICK IMAGE FOR A VIDEO



Tachnid Fly; *Eurithia anthropilia*



Banded General : *Stratiomys potamida*



Tumbling Flower Beetle

Throughout July and into August, a lot of my attention focused on an area of wildflowers planted three years ago and in particular, the Wild Carrot, an absolute magnet for a wide variety of insect species.

This was not lost on predators like the **Big Headed Wasp**. I only observed two individuals. They were usually seen on the wild carrot and the fennel. I found one nesting in an old section of tree trunk at the other end of the garden.

The tachinid fly **Eurithia anthropilia** on Wild Carrot. Tachinds are a particularly hairy/bristly family. *Tachina fera* is the species on the front cover. This species is found in a variety of habitats between July and September.

The **Downland Bee-fly**. A surprise visitor to the garden. A rare species in the UK, although it is increasing in numbers on the local Cotswold Commons. Rodborough Common, where I have seen it, is just a 15 minute uphill walk from the house. This was one of four that stayed around for almost a month and it favoured the wild carrot.

The **Banded General** is a species of soldier fly. It frequents wet and marshy areas where it is fond of umbellifers. I saw it just the once on the wild carrot (an umbellifer).

First time I had seen a **Tumbling Flower Beetle**, so I had to research what it was. *Varrimorda villosa* will tumble away from predators. Feeds on daisies and umbellifers, as here on the wild carrot.

July/August



Tachnid Fly: Phasia hemiptera



Robber Fly: Dioctra Linearis



Conopid Fly; [CLICK IMAGE FOR A VIDEO](#)



Median Wasp:



Tachnid Fly: Phasia hemiptera

I thought it was a hoverfly at first, but **Phasia Hemiptera** is one of a small group of small tachnid flies. Striking up close, with its large red eyes, orange on the sides of the thorax, contrasting with black and gold/ochre elsewhere. A parasite of bugs (Green Shield and Forest).

Only saw the Robber Fly, **Dioctris Linearis** on one occasion. Motionless in the dappled shade of a honeysuckle in the morning sun, where it stayed for five minutes before flying off.

We spotted two species of **Conopid Fly** this year. First sighting was one hovering with intent and taking interest in a common wasp on some fennel (see video). Conopid flies are parasites of a number of other kinds of insects of bugs, bees and wasps!

This **Median Wasp** was spotted on the flowering head of an echinops, which it defended from all other comers. The species arrived in the UK in the 1980s. This individual is a black phase of the wasp. It is larger than the Common Wasp, which in its more common phase it resembles. Red on the thorax and legs help to identify it.

I have heard a couple of individual grasshoppers singing over the past two years in an area of rough grass sandwiched between the willdflower area and the herb garden. This is the **Common Field Grasshopper**. The local grassland commons around Stroud hold a number of diffrent species of grasshopper.

Somewhere in the world

A new series of pages that looks at insect species outside of the UK.



Masked Devil

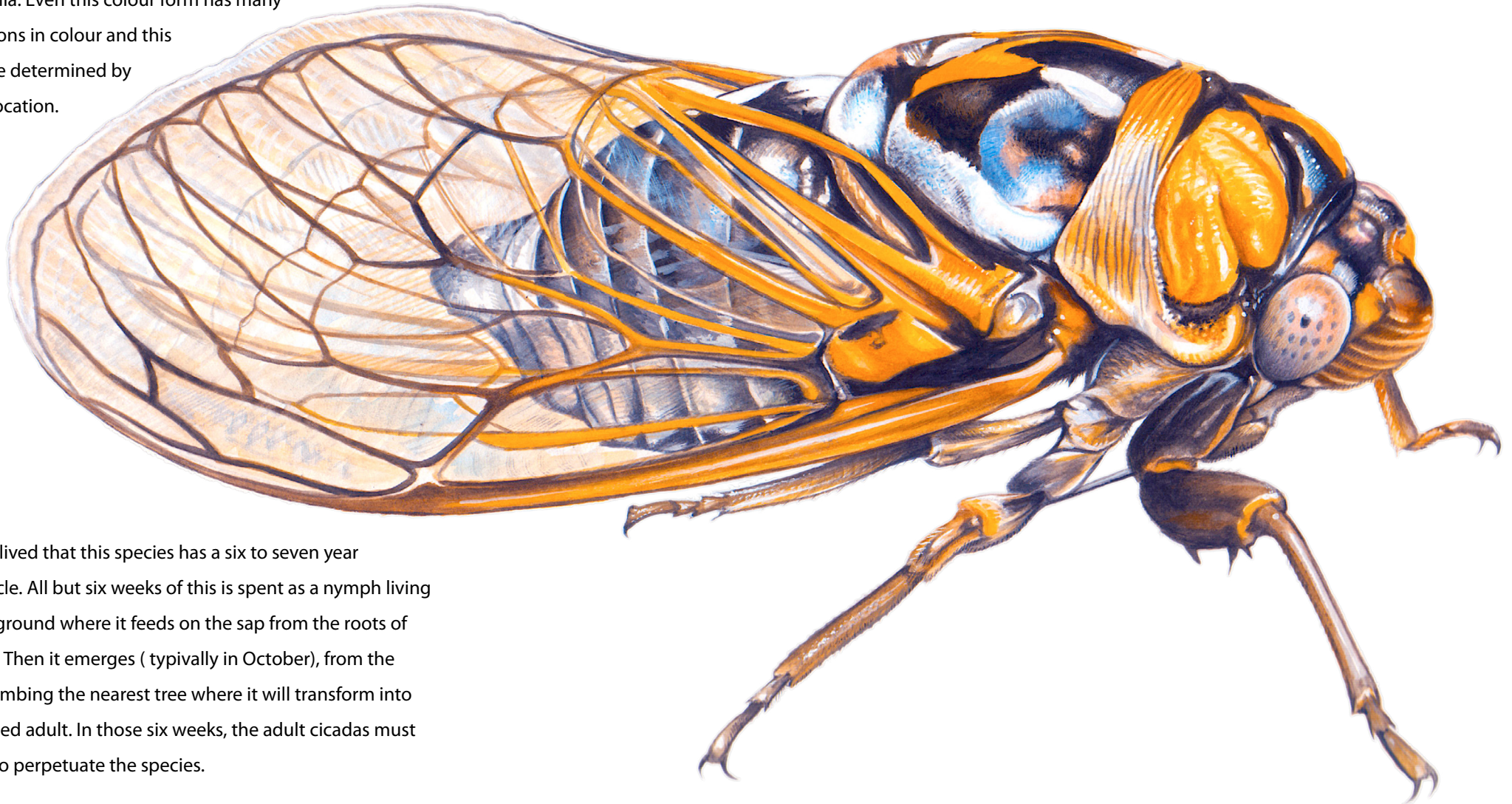
Cyclochila australasiae

A different colour form of the Great Green Cicada (there are others). They all inhabit the coastal regions of South-eastern Australia. The species is familiar to many living in this area of Australia. Even this colour form has many variations in colour and this may be determined by their location.

It is believed that this species has a six to seven year life-cycle. All but six weeks of this is spent as a nymph living underground where it feeds on the sap from the roots of plants. Then it emerges (typically in October), from the soil, climbing the nearest tree where it will transform into a winged adult. In those six weeks, the adult cicadas must mate to perpetuate the species.

It is the males that sing loudly from the tree canopy, usually eucalyptus, in order to attract a female. They really are loud! *Cyclochila australasiae* can produce nearly 120 decibels at close range. To put that in perspective: an electric drill = 94dB; an ambulance siren = 109dB; a chain saw = 110dB.

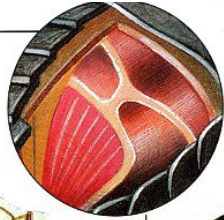
Cicada



Cicadas

TYMBALS

The drum-like *tymbals*, located on either side of the first abdominal segment, are 'clicked' in and out alternately by powerful internal muscles, producing a stream of buzzing or chirruping sounds.



EYES

In addition to a pair of compound eyes, many species of cicada also have a cluster of three simple, light-sensitive spots on the top of the head called *ocelli*.



MOUTHPARTS

The mouthparts are formed into a sharp, hollow tube adapted for piercing plant stems and roots, and sucking up sap. The tip of the tube is equipped with sensory cells for detecting food.

WINGS

An adult cicada has two pairs of wings, which can span up to 20cm in certain species. The wings have a characteristic pattern of veins that do not extend to the wings' outer edges. In most cicada species, the wings are transparent.



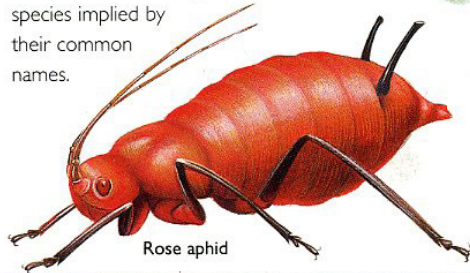
CREATURE COMPARISONS

Cicadas, aphids and leafhoppers are all insects that use their mouthparts for sucking up sap. Whereas cicadas feed on a whole range of plants, many leafhoppers and aphids feed only from specific

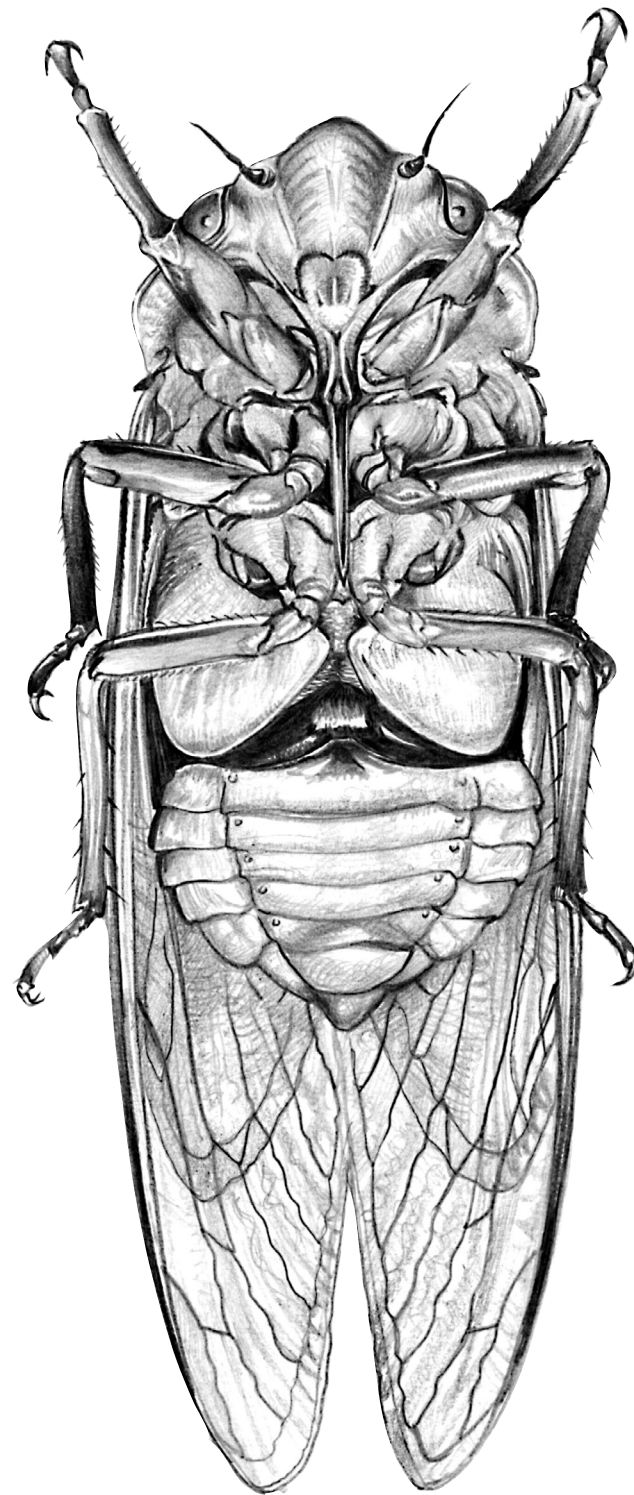
plants. For example, the rose aphid and the rhododendron leafhopper both feed on the species implied by their common names.



Rhododendron leafhopper



Rose aphid



Newly emerged from its nymph shell, an adult cicada. It is still pale in colour.



Photo: Joel Roberts



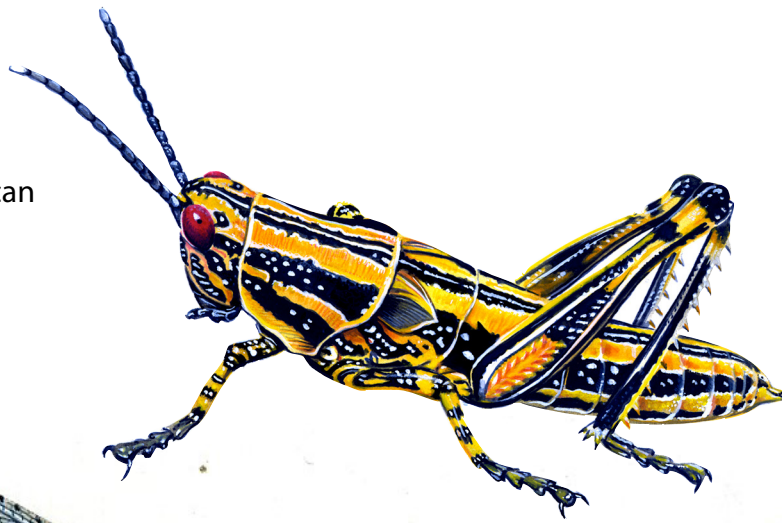
The exoskeleton of the nymph remains attached to the tree trunk, those claws dug into the bark. Not the same species as that shown left.

Photo: Joel Roberts

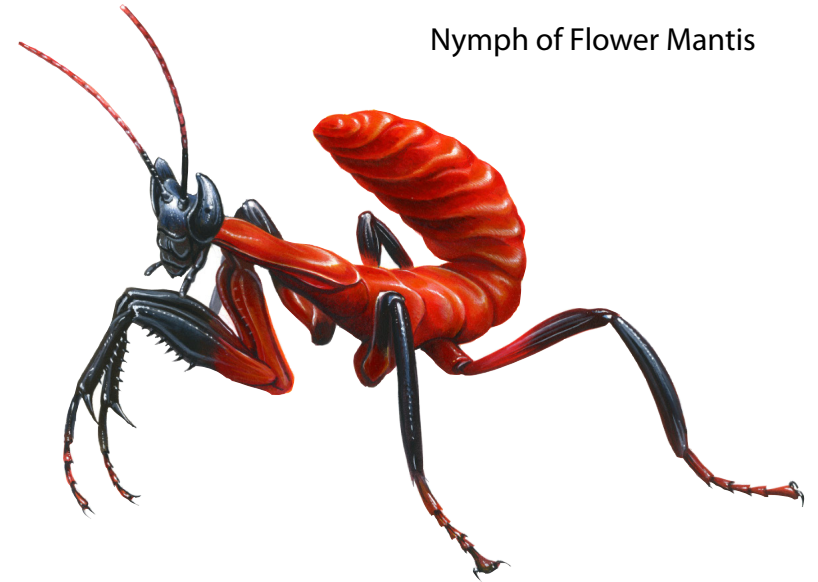
Nymphs

A significant number of insects undergo several changes as they grow, each time shedding their exoskeleton to emerge in a larger variant of their previous form

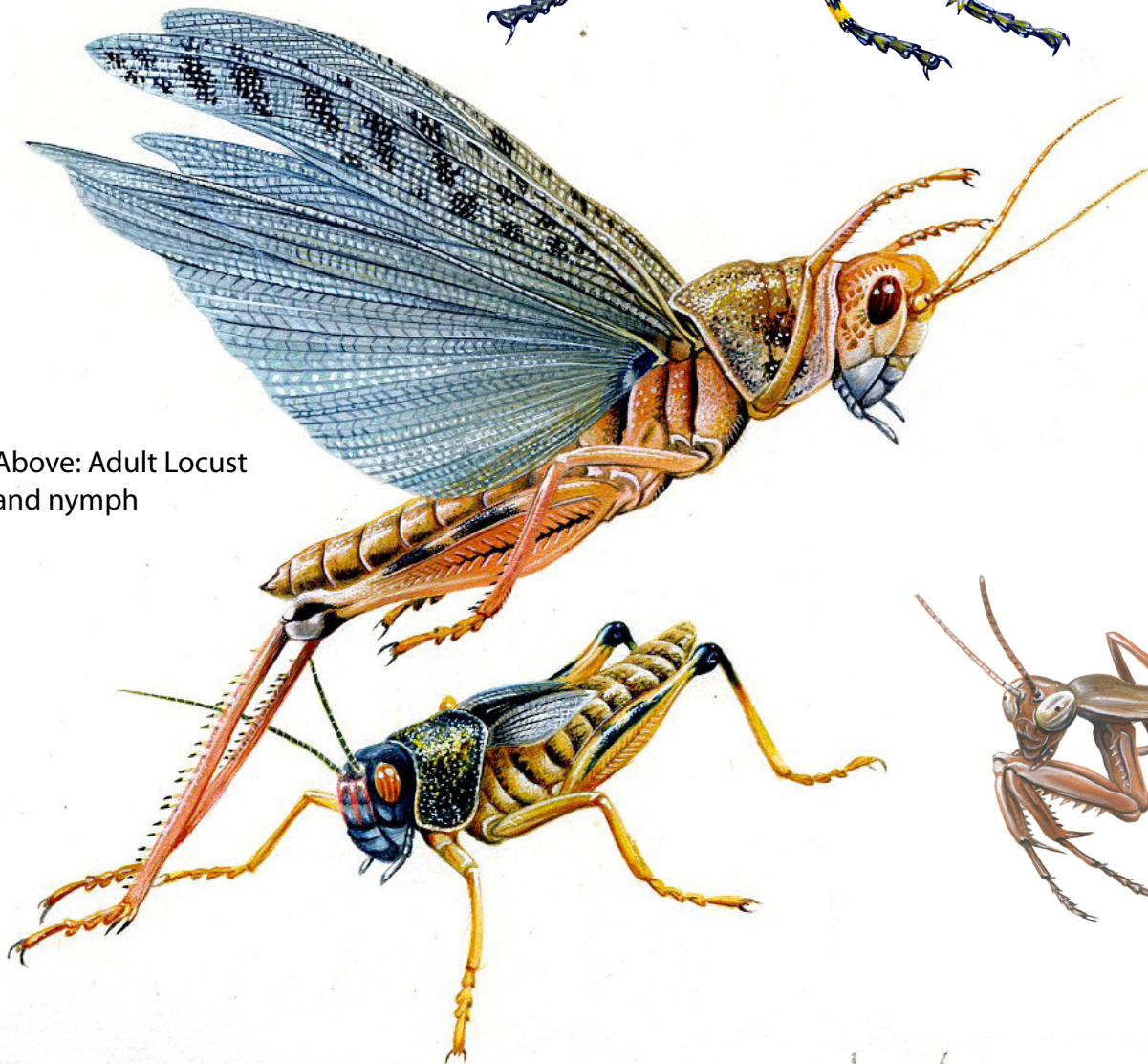
Nymph of the Mexican Grasshopper



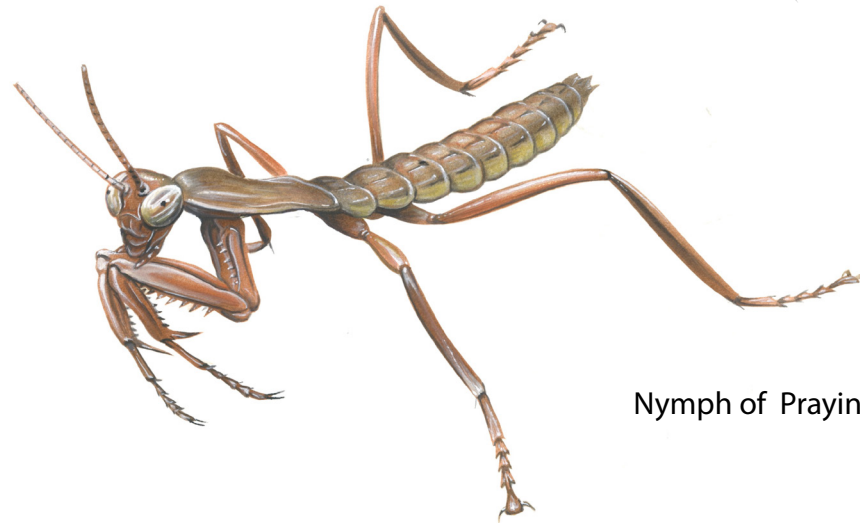
Nymph of Flower Mantis



Above: Adult Locust and nymph



Nymph of Praying Mantis



INSECT NATION



Copper: Small copper

Mason and potter
Assassin and Robber
Admiral and footman
Skipper and boatman
Digger and miner
Nomad and Rover
Horse and soldier
Cutter and forester
Hebrew and quaker
Damsel and dragon

Emperor and Cardinal
Mountain and chalk-hill
Meadow and wood
Marsh and heath
Copper and brass
Malachite and marble
Ermine and lace

Each has a place
In the insect nation

Marbled White

The Marbled White. A species synonymous with unimproved limestone grassland and chalk downland. where it is especially attracted to plants like Knapweed, Wild Marjoram and Field Scabious. You can find it in parks, gardens and other more urban areas where the right flowers and grasses exist.

It is found across most of central and southern England, some areas of South Wales and in North Yorkshire, although scarce in southern Yorkshire and Lancashire.



Marble

'a type of very hard rock that has a pattern of lines going through it, feels cold, and can be polished to become smooth and shiny'

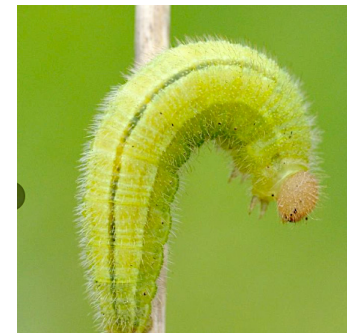
Distinctive and unmistakable in its black and white pattern, although the amount of black can vary across individuals.



It can be found in large colonies that emerge in the latter part of June.

Tall grassy mounds are the ideal habitat for the caterpillar (right).

When ready it will find a place at base of the grassy stems to pupate.



Butterfly Conservation/Bob Eade

Lacewing

An apt name for this insect. Common in gardens and parks and in our own homes,. Mainly nocturnal and readily comes to light sources at night.

Here drawn to the light inside a conservatory. One of several resting on the glass on the evening this one was photographed.

Should you disturb one in the garden during the day, they will flutter off to seek the safety on the underside of a leaf or similar.



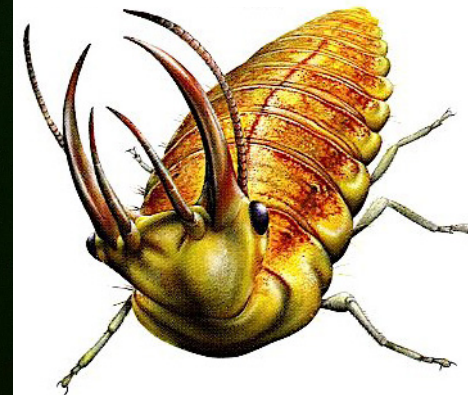
Lace

'Lace is a delicate fabric made of yarn or thread in an open weblike pattern, made by machine or by hand'

Although a species that is found on streamside vegetation, especially in woods, this lacewing also found its way into the house at night.

Osmylus fulvicephalus is brown bodied, with a chestnut red head.

It is identified by its larger size and spotted wings.



*Common Lacewing Larvae.
A voracious predator of aphids.*

Stonefly

Common Yellow Sally

Isoperla grammica

This is the adult stonefly recently emerged from a stream as a nymph, before undergoing the transformation into its winged form.



Stone

This stonefly is found over much of England and Scotland, where healthy fast flowing rivers and streams exist.

The River Frome and its smaller tributaries flows through the Stroud Valleys. Clean and fast flowing, they are a the ideal habitat for stonefly.

Its nymph lives beneath the stones on the bed of the river or stream, where it is generally safe from fish such as Brown Trout, unless washed out by stromger currents.

There is one animal that specialises in finding it when hidden, the Dipper. Swimming under water, it turns over the stones over to find it, returning to a boulder or tree stump in the river or bankside to feed on on it.

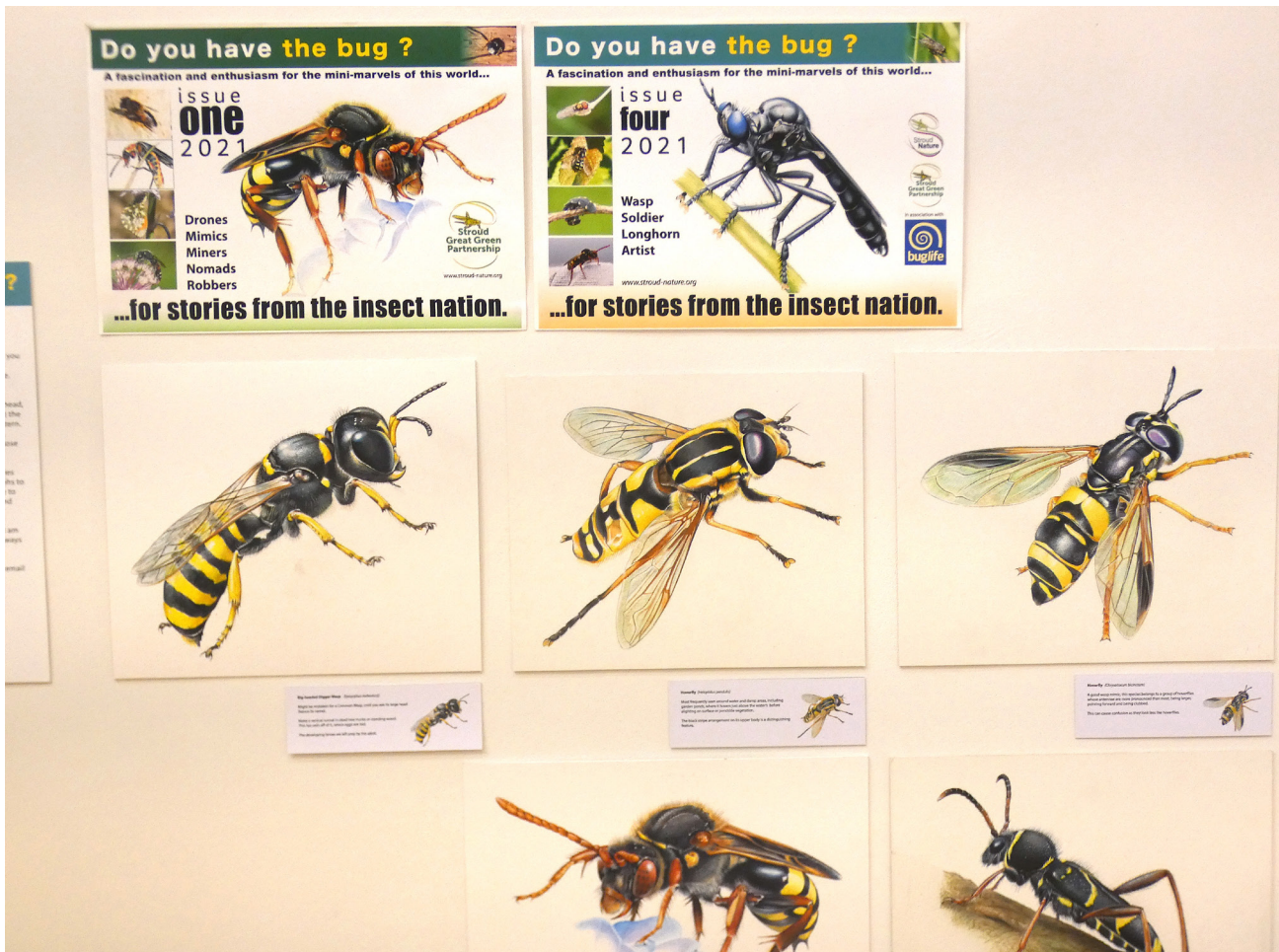


[CLICK FOR A BIGGER IMAGE OF THE DIPPER](#)

Outside

In July of this year, I held an exhibition as part of the Stroud Festival of Nature 2023, at the Museum in the Park, Stratford Park, Stroud. The exhibition was titled 'Outside' and used works of art, illustration and photography to open people's eyes to the nature on their doorsteps.

Insects featured quite heavily, including some of the illustrations that have featured in the previous six issues of the magazine (left).



The exhibition was a great success, measured by the number and variety of people that visited it, their responses to me personally (I tried to be present as often as possible) and to the comments written down as they left. I sold several pieces.

CLICK ON THE IMAGES BELOW. A SMALL SELECTION



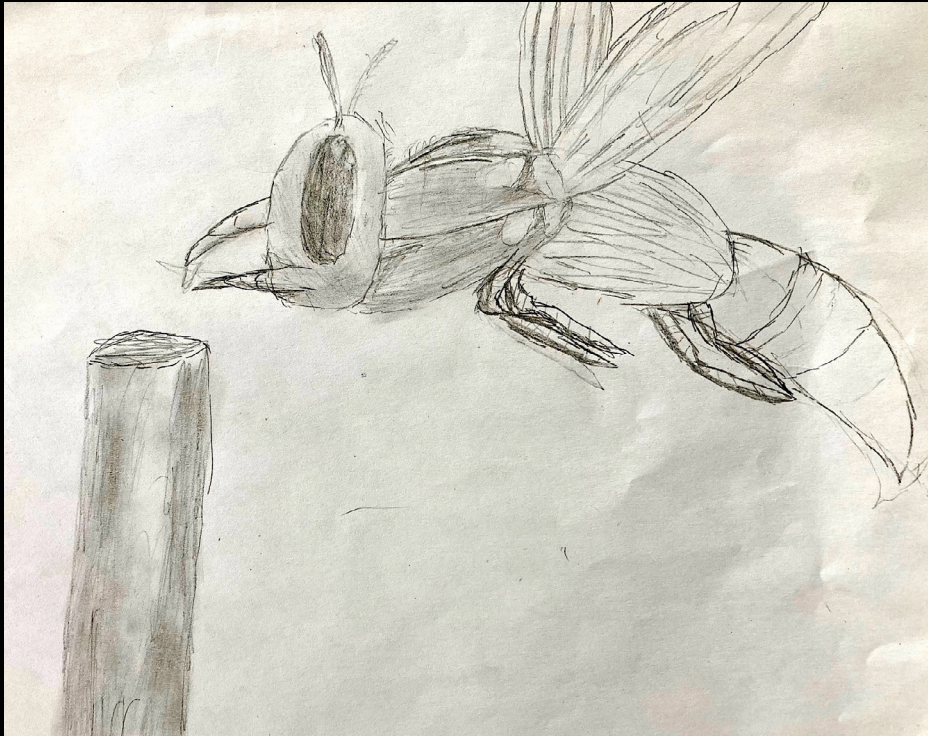
Photographic images of some of the night flying insects in the garden.

Throughout the exhibition, families were able to sit down, surrounded by images of flora and fauna and engage in colouring and drawing activities. I was so impressed by the drawings of three brothers, that they just had to get a place in the next issue of the magazine.

Here they are.

My thanks to Anna.

Finn, aged 5

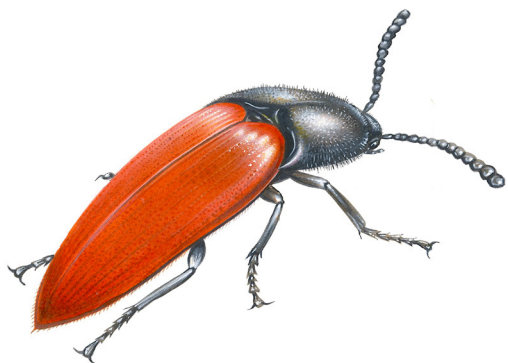


Felix, aged 11

Rupert, aged 9



Quiz



This beetle takes its name from a sound it makes. What sound?



This fly emerges in swarms around 25th April which is known as _____



Is this a Sailor Fly, Soldier Fly, Army Fly or Marine Fly



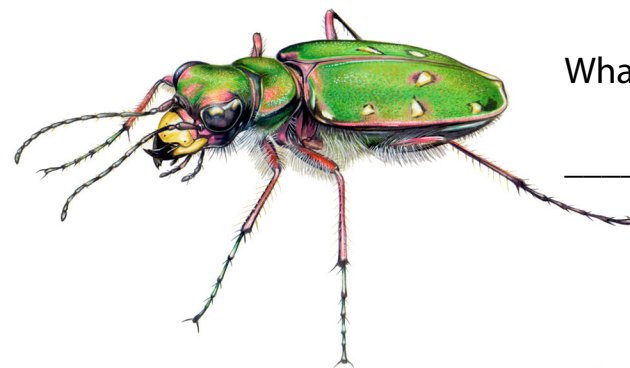
Which part of its body does the Water Scorpion breathe through? _____

This is a quiz used at the Big Stroud Nature Festival in the Park on 3 July 2022 for visitors. They had to find the answers around the festival stalls and could then claim a prize - a brand new original bug poster and fold out leaflet (see following pages).

How many can you answer before looking at the answers on the following pages.



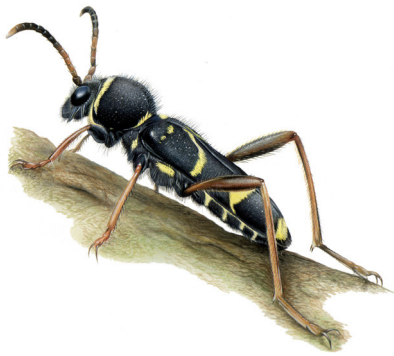
This hoverfly looks like a _____



What does this beetle feed on?



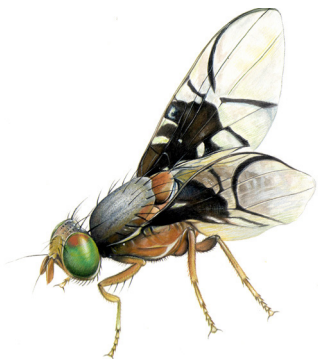
Is this dragonfly a skimmer, a darter or a chaser?



A Wasp mimic but is it a fly, a beetle or a weevil?



The young water dwelling young of the Mayfly are also called.

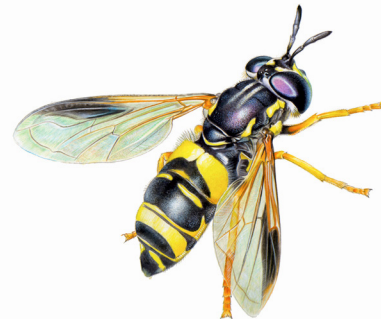


This tiny fly gets its name from its wings. Any guesses?



This is actually a species of bee. It doesn't have a home but lays its eggs in the nest of mining bees.

It's called a _____ Bee.



A wasp, a bee or a hoverfly?



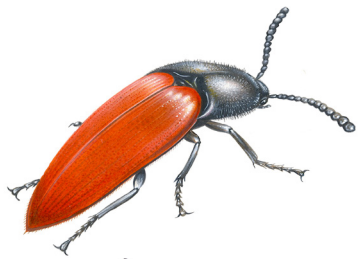
This is a wasp. Any idea what it is called? Use your head!



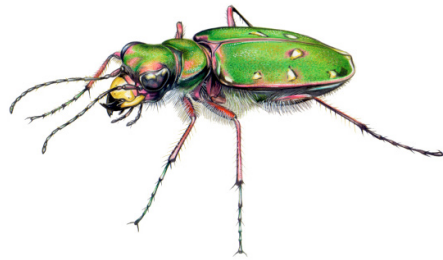
One way to tell crickets from grasshoppers is _____



This Painted Lady spends its summer in the UK. It migrates to and from



**Click
(Click Beetle)**



**Ants
(Green Tiger
Beetle)**



Nomad Bee



**St. Mark's Day
(St. Mark's Fly)**



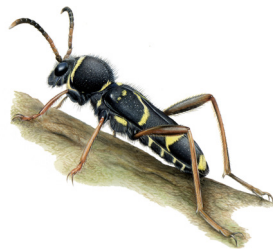
**A skimmer
(Broad Bodied
Skimmer)**



**Hoverfly
(Chrysotium
bicinctum)**



**Soldier Fly
(Four-barred Major)**



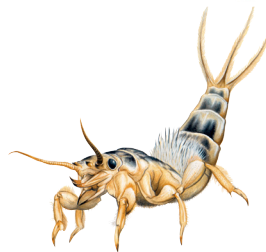
**Beetle
(Wasp beetle)**



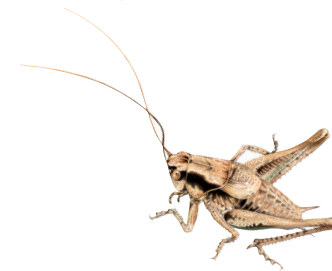
Big Headed Wasp



It's tail



A dun



**The very long
length of their
antennae**



**Hornet
(Volucella Inanis)**



Picture-wing Fly



Africa

Do you have the bug was conceived and is written and illustrated by Steve Roberts on behalf of Stroud Nature CIC. Unless stated otherwise, all photography is original to the magazine.

Stroud Nature CIC are organisers of the annual Stroud Festival of Nature and coordinate the Stroud Great Green Partnership, a network of local and regional wildlife and conservation organisations. We come together to plan the festival and look at collaborative projects in the Stroud District.

We are members of the Gloucestershire Local Nature Partnership and delivery partners for the Cotswold Canals Connected project restoring the Cotswold Canals.

Stroud Nature also produces its own printed and online resources and engages audiences in wildlife related activities.

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Garden Guardians

www.stroudnature.org



Click on the image above to download the 2022 leaflet

Do you have the bug

www.stroud-nature.org



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Check out the **Do you have the Bug Poster** on the next page.

The leaflets and the poster (A3) are available in limited quantities if you would like some to use or share.

Do you have **the bug**

