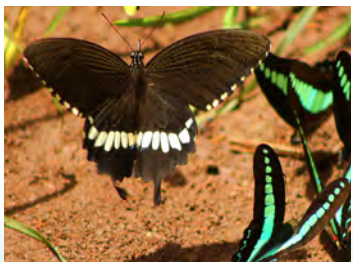


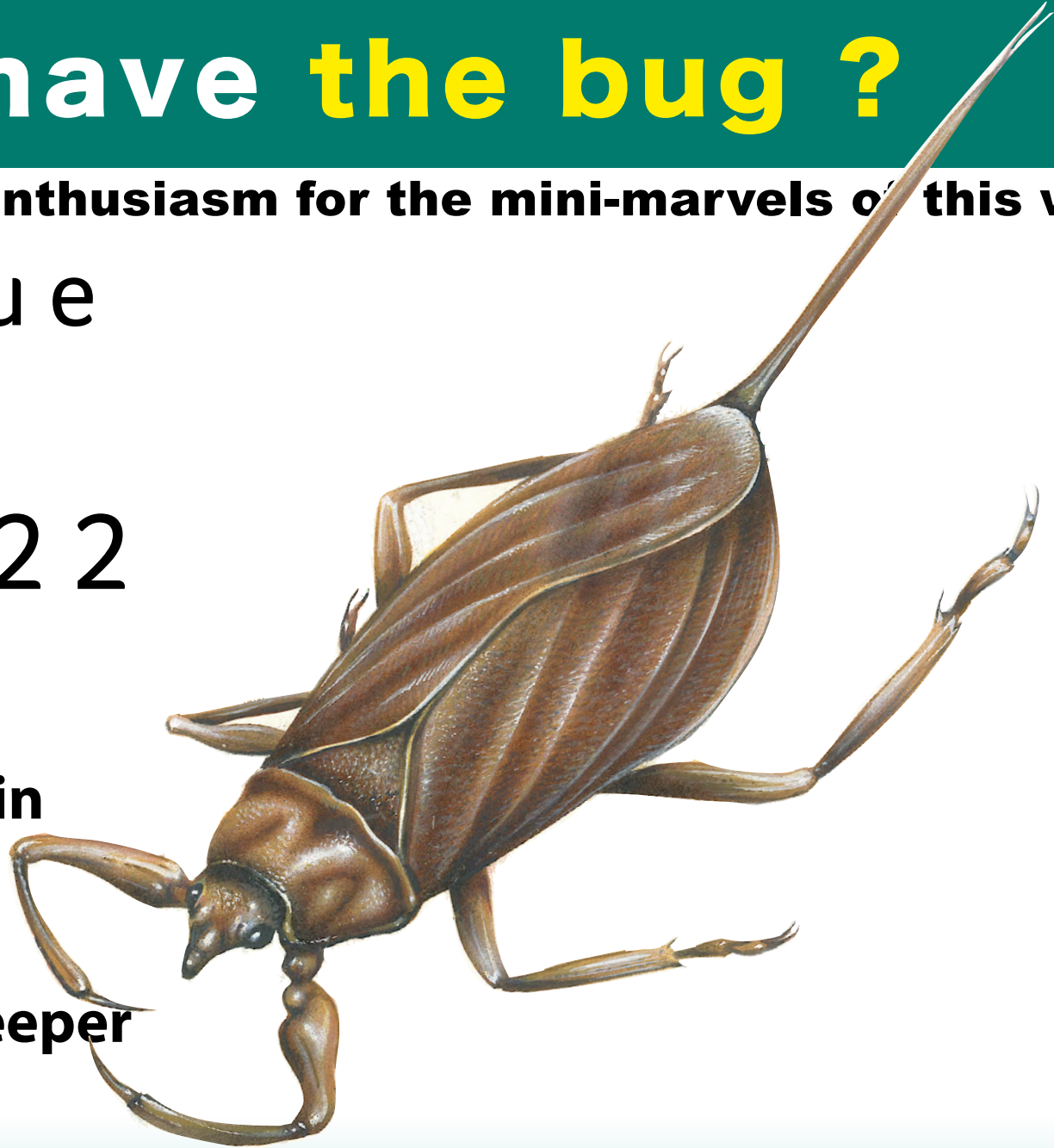
# Do you have **the bug** ?

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



issue  
**six**  
2022

Assassin  
Skater  
Carder  
Gatekeeper



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





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Some of the images in the magazine link to other resources, such as brief movies.

Just click on them to take a look.

Try the one below.

Frantic bumble bees.



Mid-May in the Cotswolds in England. A great time to explore the commons above Stroud for some of the iconic butterfly species of calcareous grasslands such as Dingy Skipper, Green Hairstreak and below, the Duke of Burgundy Fritillary.



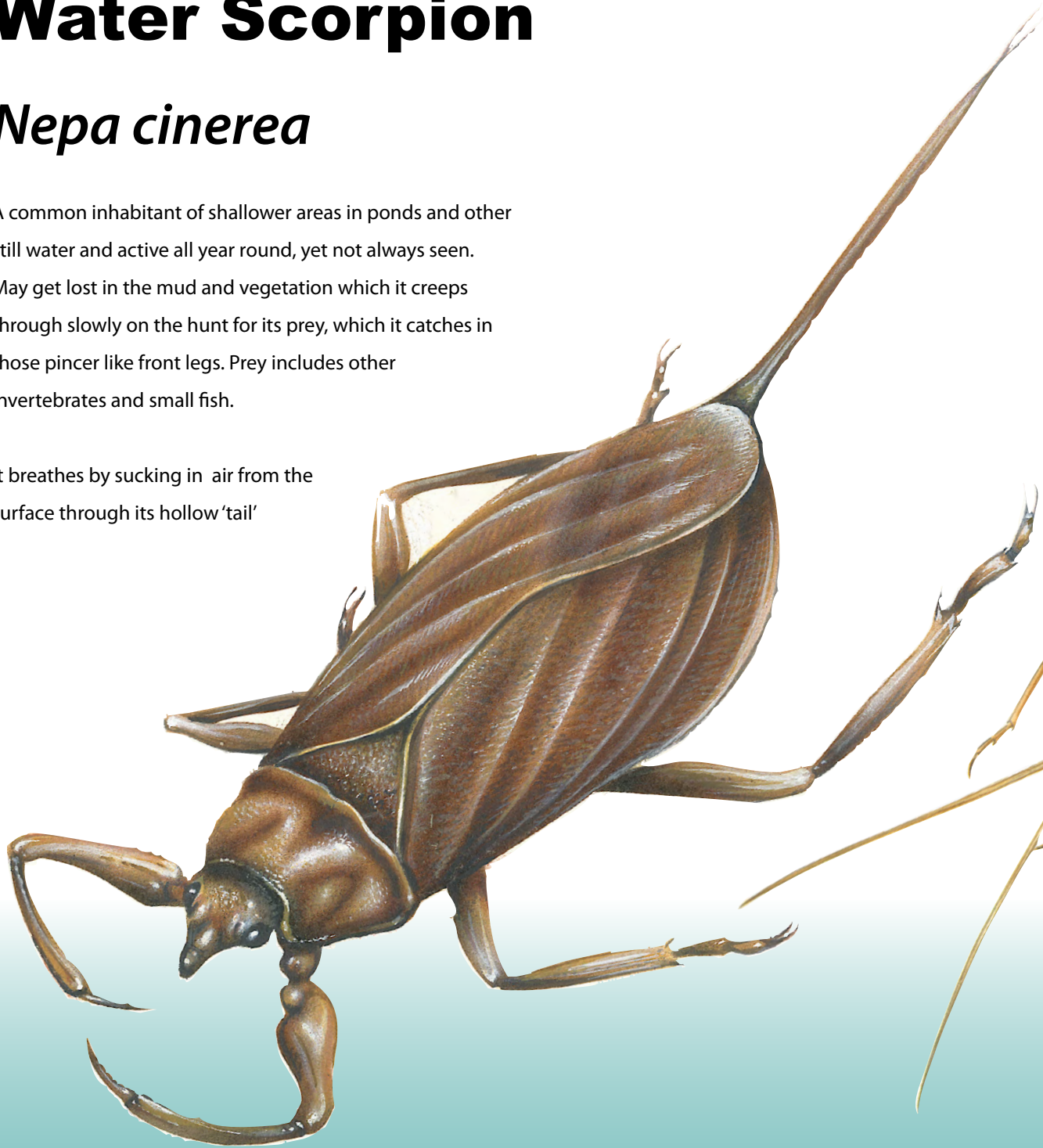
# Water Scorpion

## *Nepa cinerea*

A common inhabitant of shallower areas in ponds and other still water and active all year round, yet not always seen.

May get lost in the mud and vegetation which it creeps through slowly on the hunt for its prey, which it catches in those pincer like front legs. Prey includes other invertebrates and small fish.

It breathes by sucking in air from the surface through its hollow 'tail'



## Front cover

It's easy to overlook the question as to how do water creatures like diving beetles, backswimmers and water scorpions find the ponds they inhabit. They fly to them.



Just like winged beetles, the folded under wings (those that enable the insect to fly), are hidden beneath the hard outer wings - the elytra. Once established in its watery habitat, the Water Scorpion very rarely flies however.



# Downland bee-fly

## *Villa cingulata*

This species of bee-fly was thought extinct in the UK, but has been recorded on a number of sites since 2000. These include some of the Cotswold Commons around Stroud and maybe uniquely, on a patch of wildflower grassland beside the Thames and Severn Canal in the centre of the town, by a keen eyed entomologist.

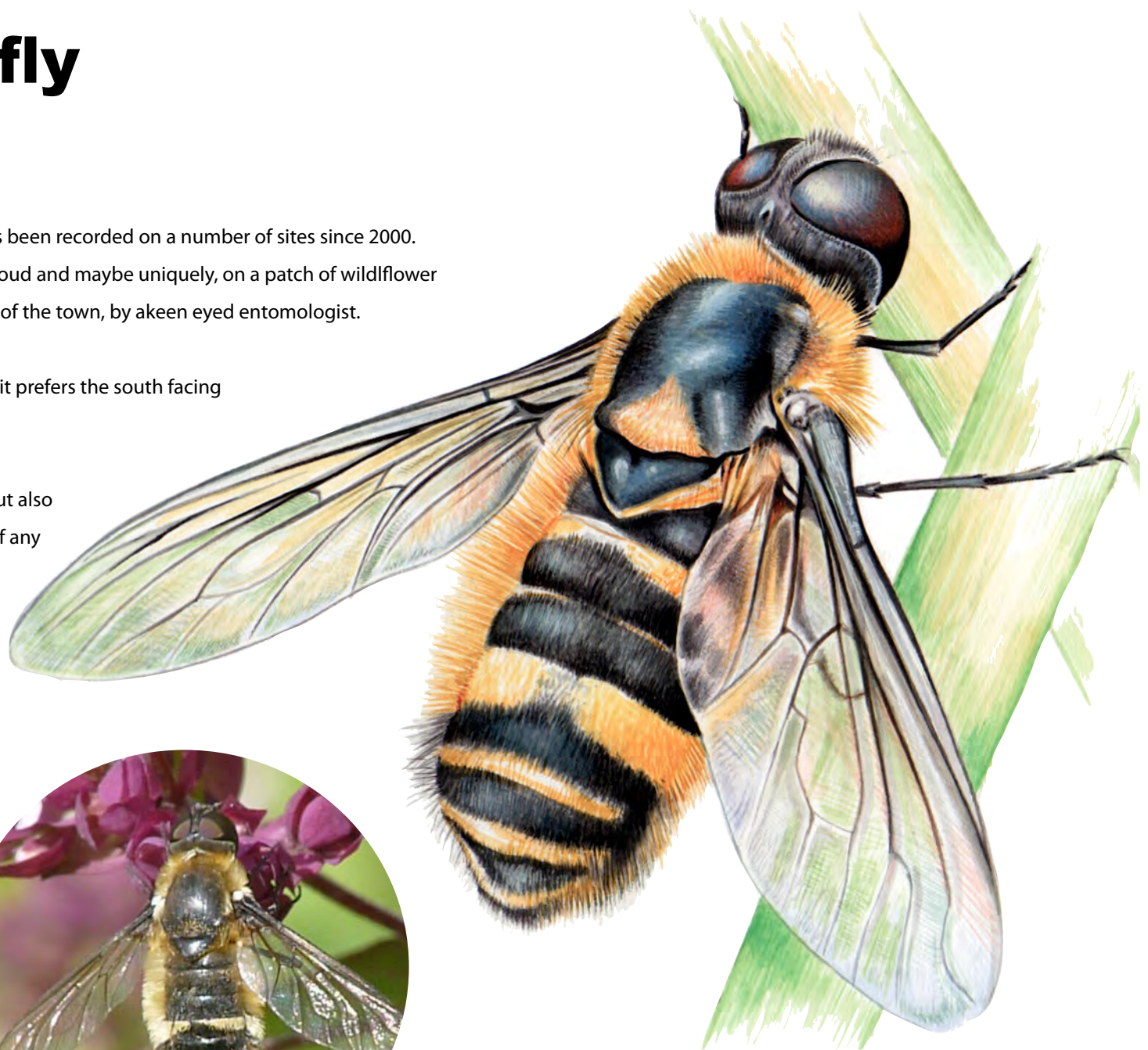
Not a great deal is known about its habits. On the commons it prefers the south facing slopes where it flies and hovers low over the ground.

It might be confused with bees, which it obviously mimics but also with a hoverfly. Its rather chubby, hairy abdomen and lack of any kind of waist, might aid identification.

The video (right) was taken in 2021 on Rodborough Common, above Stroud. This was one of several individuals spotted late in the afternoon.

In 2022, the species has also been seen in a planted wildflower meadow beside the Thames and Severn Canal and a Stroud garden, both five minutes from Stroud town centre.

Its relative *Villa modesta* is a species of mainly shady, coastal habitats. Very similar in shape, but dark and lacking any distinctive abdominal bands. Its larvae are parasites of caterpillars.



**Click on the image (left) to see a short movie**



# 'Dung'

## First arrivals



## A thriving micro-ecosystem

A fresh cow pat. Once deposited among the grasses, it can attract insects within seconds. These are usually the flies and in particular members of two families - the blow-flies and the house flies, some of them familiar around our own homes.

Five different species are visible in the photograph left. While the dung is still a fresh goo, they will lap up its juices.



Meanwhile a whole new cast will arrive to burrow their way into the dung, creating a network of tunnels through it.



# Predators



All this activity on and within the cow dung, attracts the attention of predators. Above, a Rove Beetle , *Ontholestes murinus*, looks poised to strike at a small Sepsid Fly.

I have watched these beetles scouting around the perimeter of a fresh cow pat using the surrounding vegetation as cover for an ambush, occasionally darting across the surface of the cow pat.



Other predators are drawn to the dung, like big cats to a waterhole. Left a Wolf Spider



# More unexpected visitors



It might just be chance that these grasshoppers (Stripe Winged on left and Common Green on right) have found their way through the grasses to the dung. However I have regularly seen grasshoppers on cow pats. They too may be taking in some of the nutrients from the dung.

Similarly, it's not uncommon to find species of butterfly on the dung, their tongues unfurled as they feed.



Momentarily, this dried dung provides a perfect background for this grasshopper nymph to camouflage itself.





One other species of fly associated with dung is the Yellow Dung Fly (of course). Males often swarm over the surface of the fresh cow pat. They like horse dung as well.

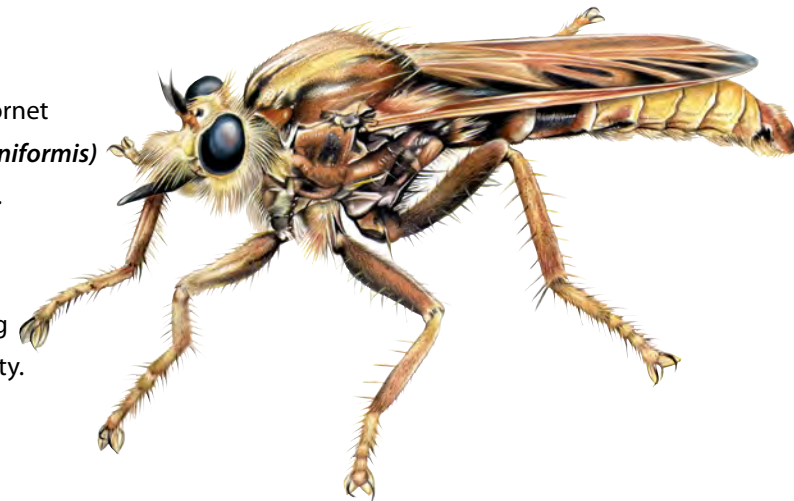
It is a predatory species, feeding on other flies that are attracted to the dung. Its larvae develop within the dung. The male is shown here. It is smaller, yellower and more numerous than the greyer females.



Not directly associated with dung, some species of robber flies will take advantage of it when it attracts others to feed. I have observed several waiting patiently in a cordon around a fresh cow pat. As small flies and other insects pass to and from their feeding, the robber flies pounce.

The larvae of the large Hornet Robber Fly (*Asilus Crabroniformis*) develop inside cow dung.

As adult hunters they will no doubt exploit other insects drawn to the dung if they remain in the vicinity.





# Ground Beetles



A large family of beetles which are generally very similar to each other. Many are nocturnal, though there are a few daylight species. Even the daylight species are not easy to see. They scuttle along the ground among the vegetation, the dark leaf litter or other dark places.

This is *Harpalus affinis* and a bit of an exception to the rule. It is a daylight species but often seen running across the ground over soil and bare ground.

The male above has a metallic sheen of green, blue, maroon or black. The female is dull black. While the larvae are predatory, the adults feed on seeds of grasses, daisies and umbellifers.



This tiny beetle is ***Notiophilus palustris***. It is only a few millimetres long (6mm at the most) and easily overlooked. Its large eyes are a help in identification. It has a bronzey appearance.

This individual was spotted running along the stones capping a low garden wall, before stopping for a while in the sun. It is carnivorous and feeds on tiny springtails and mites among the leaf litter.



## The Violet Ground Beetle

Once seen, never forgotten, for although this is a black beetle like so many others, the bright violet sheen around the elytra and the thorax identifies it.

It is common in many habitats, including gardens and can be found around buildings and sometimes inside at night, when it emerges from its daytime hiding places to hunt. It is the gardeners friend, for among its favourite prey are slugs.







The **Black Clock Beetle (*Pterostichus concinnus*)** is a large beetle, up to 20mm in length. It has a glossy black appearance and black or red legs. The red legged variance is *concinnus*, the black *madidus*.

This species is classified as nocturnal, hiding under stones and grassy tussocks. although this individual was seen in daylight, feasting on a grasshopper. on the edge of a stoney path in the grass. Maybe it was being opportunistic. It will feed on caterpillars and slugs and is common in a variety of habitats such as grasslands, arable land and gardens.

**Click on the image (right) to see a short movie**





# INSECT NATION



The Drinker  
(Drinker moth larvae)

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

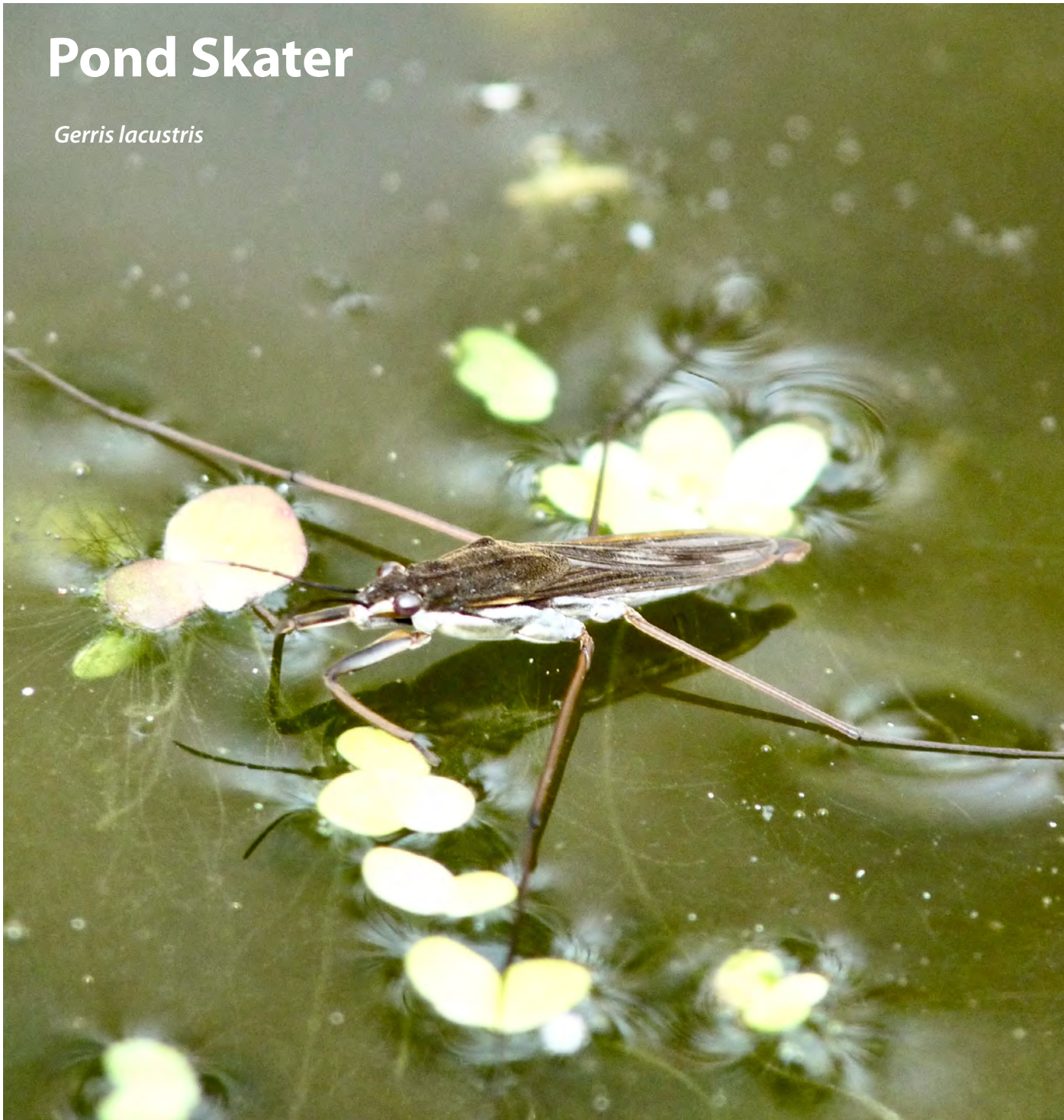
Each has a place

In the insect nation



# Pond Skater

*Gerris lacustris*



## The Skater

Stationed on the pond's perimeter  
The skater patiently waits  
In anticipation that at any moment  
She will be called to skate

She does not see the aphid  
Falling from on high  
Dislodged from an overhanging stem  
By something brushing by

But sensitive antennae touch the surface  
They twitch as the aphid strikes the water  
Vibrations from the wriggling insect  
Lead the skater to the slaughter

No escape from the surface film  
On which the skater glides  
No escape from the needle-like mouthparts  
That suck out the insides

No praises from an audience  
No ripples of applause  
Just ripples across the pond once more  
As another victim falls





# Gatekeeper

*Pyronia tithonus*



## The Gatekeeper

This is a butterfly of hedgerows and open woodland, found where trees and shrubs meet open grassland and meadows. This also includes gardens where the habitat is like this. It is a common species across the UK. It is also called the Hedge Brown.

It is particularly fond of Bramble blossom

There is variance in the colour and patterning of the wings. The more vibrant orange-gold shown left can be duller and then there may be some confusion identifying it from the Meadow Brown, a species it is often seen with. The Meadow Brown is larger than the Gatekeeper.



*Meadow Brown*

The female lacks the brown band on the upperwing and the orange is continuous. The pattern on the underwing is distinctive and striking compared to the underwing of the Meadow Brown.



# Wool carder Bee

*Anthidium manicatum*

One of the UK's largest solitary bees. The best means of identification are the yellow markings (spots) along the side of the abdomen and head.

These are better seen on the inset image below. Both sexes have them.



## The Carder

*"A carder - a practitioner of carding, a method of preparing wool for use as a textile"*

Carding is the mechanical process by which wool fibres are disentangled, cleaned and blended to produce a continuous web that can be processed further into a finished cloth. The fibres are passed between cards embedded with metal pins.

The Wool Carder Bee gets its name from this process. The females collect fibres by "carding" (scraping) them from a plant. The female makes the fibres into a ball and then carries them back to her nest. This might be a natural or man-made hole (dead tree, timber structure, bee home). She lines the nest with the fibres. She has a stiff brush of rear-pointing hairs on the underside of her abdomen that she uses to scrape off the plant fibres. This also makes her an excellent pollinator of a range of plants.

Both these images show the bee on the plant Lamb's Ear (*Stachys byzantina*). This perennial has thick, soft leaves and stems that are covered in a fine white woolly texture. These hairs are ideal as nest material.

The Wool-carder Bee is a regular visitor to a number of different habitats where flowers are plentiful. You may find it on the coast, calcareous grasslands, roadside verges and gardens and parks.

Males are highly aggressive when defending their territory and will see off other rivals and other bee species. He also has sharp spines on the tip of his abdomen to back up his threat. These are visible in the inset picture (left).



Tortoise Beetle  
Traditional Airbrush





# Our man in Cambodia

**Joel Roberts**  
**Stroud Nature Director**

When he has not been in his home town of Stroud in the UK, helping Stroud Nature in the organisation and running of the annual Stroud Festival of Nature, Joel has been engaged in environmental and outdoor education work in countries all over the world.

Now he is settling back in the UK and has had a chance to go through his collection of wildlife photographs, more specifically, insect images. He has kindly offered them for use in the magazine.

In issue 2 it was the UAE. In Issue 3, Thailand. In issue 4, Brazil. Issue 5, France. In this issue, some images from Cambodia



Above: the Common Bluebottle butterfly *Graphium sarpedon*



Right: Assassin Bug





Squash Bug



Longhorn Beetle



Weaver Ants





## Do you have the **BUG** ?

**We want to hear from you.**

**We would love you to share your images.**

Here are some gorgeous shots of the Common Blue, submitted by Rene Cason from Gloucestershire. They were taken at Rough Bank in the Cotswolds.

This flower-rich limestone grassland reserve is a wildlife haven boasting rare plants, butterflies and moths and is one of the few sites in the UK where it is possible to see six species of blue butterfly.



'I am recently retired after 42 years at Renishaw where I was lucky enough to travel extensively over the years. Have taken up photography in lockdown (so no images from my travels with work) and have found I really enjoy it. I am interested in photographing wildlife and in particular the amazing countryside we are blessed to live in around here.

I am now a member of Stroud Camera Club and am enjoying visiting Gloucestershire Wildlife Trust sites as well as volunteering with the trust as well.

It's terrific to record images of our wildlife whilst at the same time learning about what we have in this area.

I have a macro lens. However these butterfly images were taken with a telephoto lens using my Olympus OMD E M1 Mk3'.



# Do you have the **BUG** ?

## Background information and contacts

Follow the links on the page to find out about Stroud Nature CIC, publishers of this magazine, about the Stroud Festival of Nature and about the Stroud Great Green Partnership.

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## DO YOU HAVE THE BUG

<https://stroud-nature.org/>



Available now. A leaflet on the insects that share our gardens and outdoor spaces with us. This looks at bees, wasps, flies, beetles, bugs, butterflies and moths.



Visit our sister web site [www.stroudnature.org](http://www.stroudnature.org) to download our latest **Garden Guardians** leaflet.

This will help you become a Garden Guardian, creating a space for wildlife and the family.

