

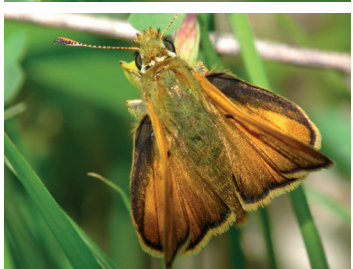
Do you have **the bug** ?



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



issue
two
2021



Saints
Workers
Skippers
Cardinals



...for stories from the insect nation.

Do you have the bug?

Do you like insects
Do you study them for a living
Is it an amateur interest
Do you find them fascinating
Are you just curious



This is the second issue of 'Do you have the Bug'
It is written for those who have the bug and
those who are just beginning to catch the bug.

We want as wide an audience as possible to
enjoy its pages. We want people to share it with
others.

We welcome your feedback.

The magazine is UK focused. It has been inspired by
observations and studies of insects in and around the
town of Stroud in the Gloucestershire Cotswolds.
This does not restrict us in what we want to include in
the future. In fact we hope to include an international
section in later issues.

There will be four issues of the magazine each year.
While some aspects of the magazine will be
seasonal, so that we can highlight the things you
might see around you, we will also widen the stories
to bring you other tales from the insect nation. Quite
simply because there are some wonderful and
extraordinary things happening there and without the
insect nation, so much of what we know would not
exist, so critical are insects and invertebrates in general
to the successful functioning of ecosystems
throughout the world.

We welcome contributions from others.

Stories, images, photographic or illustrative.
We ask that any copy is engaging and inclusive.
All contributions will be credited.

Contributions to this issue

Images sent to us by a keen entomologist,
inspired by his father's books on insects and an
old collection of pinned butterflies.

We have a feature by another amateur
entomologist who combines his knowledge with
the day to day maintenance of a 56 acre public
park.

The magazine has been put together by Stroud
Nature, a member of the Stroud Great Green
Partnership. Almost all of the images, illustrative and
photographic, originate from the partnership.



Great Green Bush Cricket

The partnership has evolved out of the Stroud Nature
Forum established to develop and plan the
annual Stroud Festival of Nature. This forum of local
and regional wildlife and environmental organisations
are now utilising their considerable knowledge and
skills to contribute to this and other SGGP resources,
providing information and images.

Illustration is a key component of the magazine and is
all original, much produced specifically for the
magazine. We hope you enjoy exploring its pages and
let us know what you think.

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Part two: Insect Nation

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It's interactive

You can go straight to a page by clicking on the page number in the contents list.

Clicking on buttons and images will take you to other information, facts and images, including full page blow-ups of some of the illustrations used in the magazine.

Try the link below to check out a common honeybee



This is one of four illustrations available to purchase as a high quality A3 colour print. Details at the end of the magazine.

Wasp Beetle

Front cover

Clytus arietis

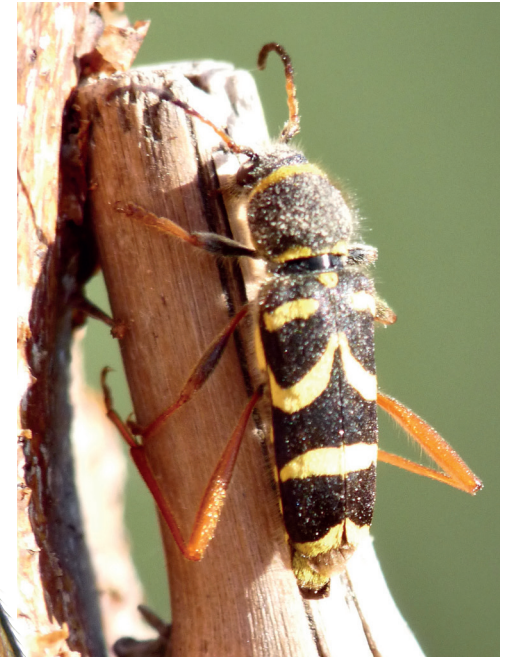
In the Stroud Nature garden, the branches and woody stems that result from seasonal cutting and pruning of trees and shrubs, are used to create fences and pole supports for climbers and other plants. As they dry and then begin to peel and crack, these offer excellent places for the female beetle to lay its eggs.

We have regularly observed them scuttling along, antennae waving, investigating the timber. Otherwise you may spot them feeding on the tops of umbelifers.

As its name says, this beetle looks like a wasp. It is a member of the longhorn beetle family.

Many of the longhorn beetles possess very long antennae, often longer than their bodies. There are exceptions and the Wasp beetle is one.

Their larvae will feed and grow within these old, decaying or rotting timbers. When they do emerge as adults, their lives will be short - just two months from May until July.



One day in May ...or June or July ..

Mayfly *Ephemera danica*

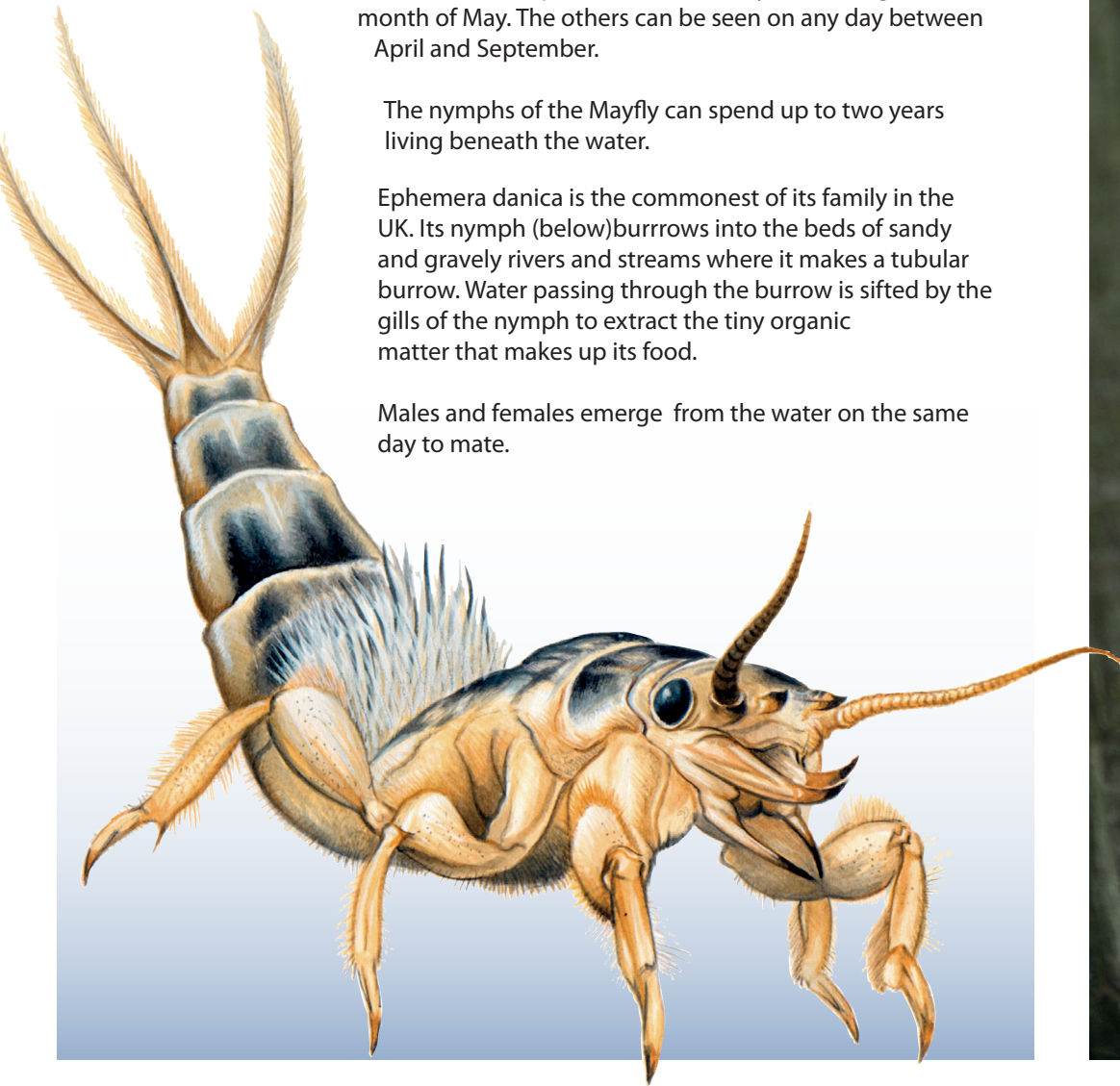
Most of us believe that the Mayfly is called the Mayfly because the adult is only seen during the month of May when the water living nymphs emerge and moult (twice) into adults and the dance of the May fly begins along our rivers and streams.

However of the 51 species in the UK, only one emerges in the month of May. The others can be seen on any day between April and September.

The nymphs of the Mayfly can spend up to two years living beneath the water.

Ephemera danica is the commonest of its family in the UK. Its nymph (below) burrows into the beds of sandy and gravelly rivers and streams where it makes a tubular burrow. Water passing through the burrow is sifted by the gills of the nymph to extract the tiny organic matter that makes up its food.

Males and females emerge from the water on the same day to mate.



This male *Ephemera danica* appeared in the garden, resting on a fence post on 27 May 2019. Although its main flight period is in May, it can be seen at any time between April and November.

Male may flies are called spinners, the females are known as duns. Both emerge from the same river at the same time and may be part of huge mating swarms. Mating is carried out in flight above. Once mating has taken place, the female flies upstream and descends to the surface of the water to release her eggs

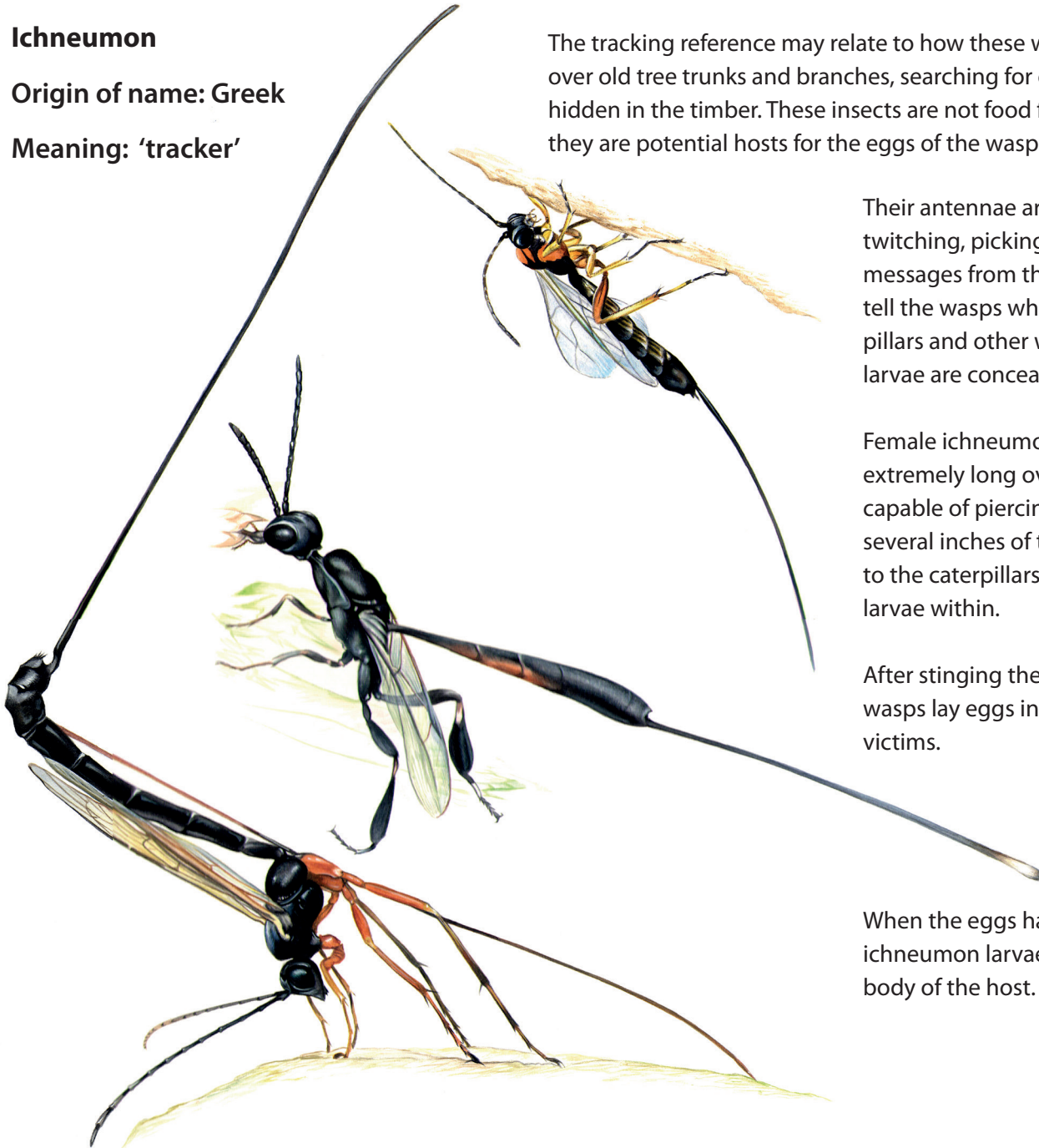
She will lay her eggs over several visits to the water, dipping the tip of her abdomen onto the surface or settling on the surface for brief periods. She may be carrying over 8000 eggs. Once all of the eggs have gone, she is exhausted and falls to the surface, her life all but spent.

Ichneumon wasps

Ichneumon

Origin of name: Greek

Meaning: 'tracker'



The tracking reference may relate to how these wasps scuttle over old tree trunks and branches, searching for other insects hidden in the timber. These insects are not food for the wasp, they are potential hosts for the eggs of the wasp.

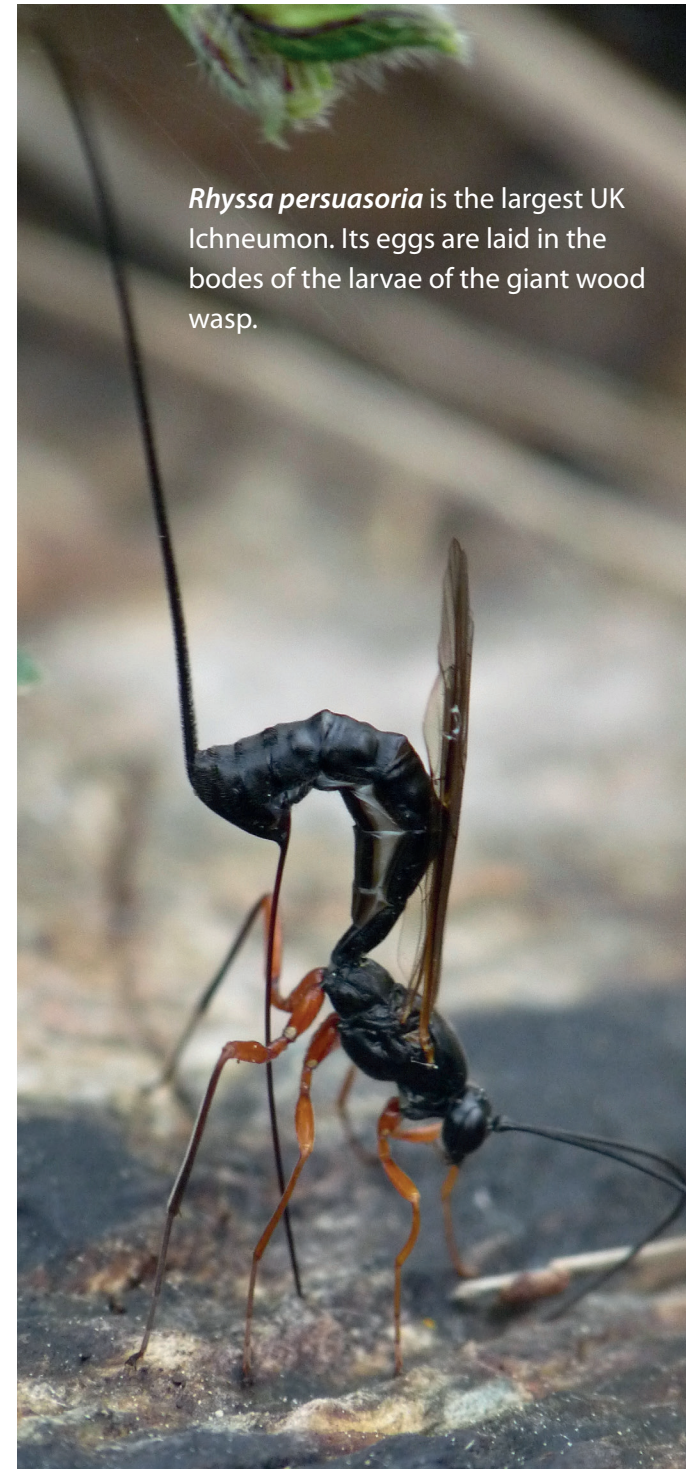
Their antennae are constantly twitching, picking up chemical messages from the plants that tell the wasps where caterpillars and other wood living larvae are concealed.

Female ichneumons have extremely long ovipositors capable of piercing through several inches of tree trunk to the caterpillars and other larvae within.

After stinging their prey, the wasps lay eggs in the helpless victims.

When the eggs hatch, the ichneumon larvae feed on the body of the host.

Rhyssa persuasoria is the largest UK Ichneumon. Its eggs are laid in the bodes of the larvae of the giant wood wasp.



‘I am safe if I don’t move’

Butterflies at rest

Green Hairstreak

Callophrys rubi

If you watch these gorgeous little butterflies long enough, you realise how they position their bodies so that their wings follow the line of the leaves around them.

Resting with their wings closed, the iridescent green of their underwing reflects and refracts the light, making them difficult to distinguish from the leaves. Until the moment they take flight, revealing the orange-brown upperwings.



‘I am safe if I don’t move’

Brown Argus

Aricia agestis

A habit shared by
other members of
the Blue family

In the setting sun, a pair of Brown Argus
assume their sleeping position.
Face down, wings pointing up to
resemble the leaves or shoots of the
grass on which they rest.

Sometimes you may find half a dozen
on a single stem



Dingy Skipper

Erynnis tages



Later in the day or early in the
morning among the grasses
and flowers of a limestone
grassland, a Dingy Skipper
hugging the top of a plant,
wings wrapped around it.

This suggests that this is how
the butterfly slept overnight,
confident it could not be
distinguished from the plant
on which it rests.

INSECT NATION



Mason and potter
Assassin and Robber
Admiral and footman
Skipper and boatman
Digger and miner
Nomad and Rover
Horse and soldier
Cutter and forrester
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

INSECT NATION

The Cardinal

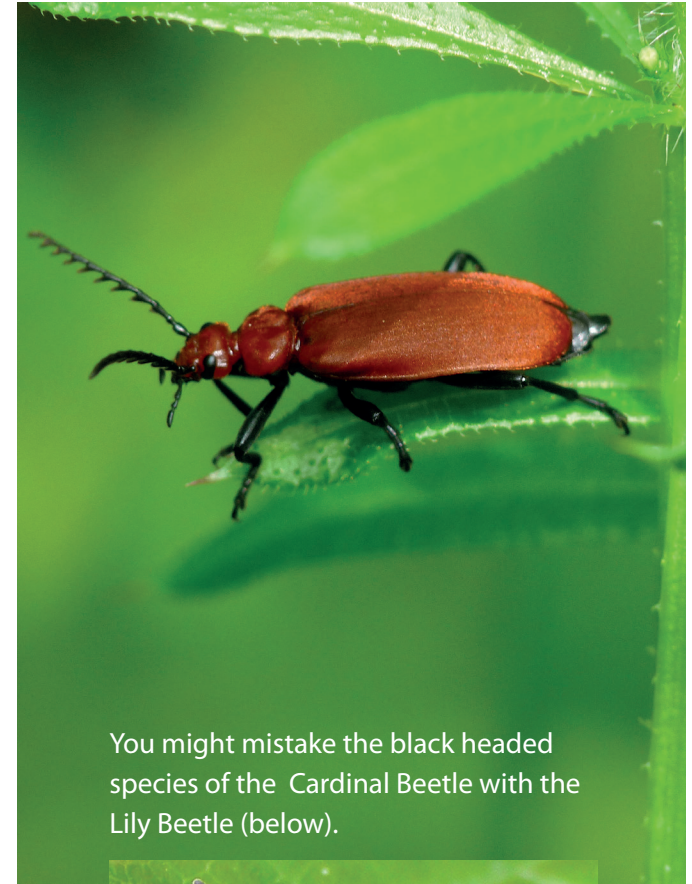
Cardinal Beetle

There are three species of Cardinal Beetle you may come across in the UK. All three have bright scarlet red bodies (wings cases and thorax). The head of *Pyrochroa serraticornis* (below) is also red. The heads of *Pyrochroa coccinea* and *Schizotus pectinicornis* are black.

Aside from the colour, the distinguishing feature are the hooked antennae

PREDATOR

The adults are often found on flowers and old tree stumps and trunks. The larvae live under the bark and are also predatory on other insects.



You might mistake the black headed species of the Cardinal Beetle with the Lily Beetle (below).

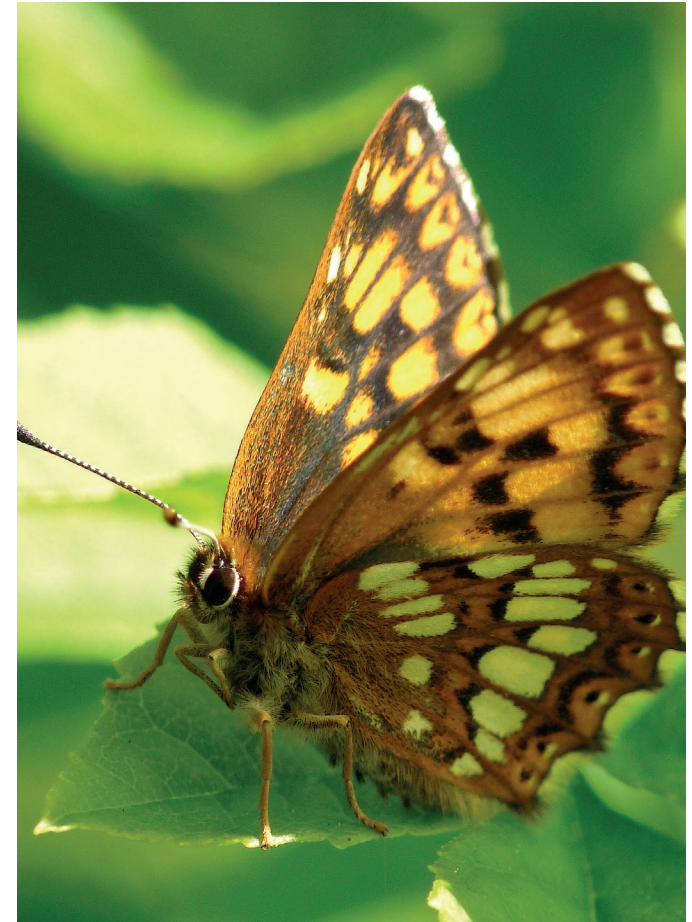


INSECT NATION

The Duke

Duke-of-Burgundy

These are the highwaymen, the bandits of the insect world. You can easily miss them, passing very close to where they sit motionless on the stems of plants. They will choose the higher stems among the scrub and grasslands they inhabit. Here



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INSECT NATION

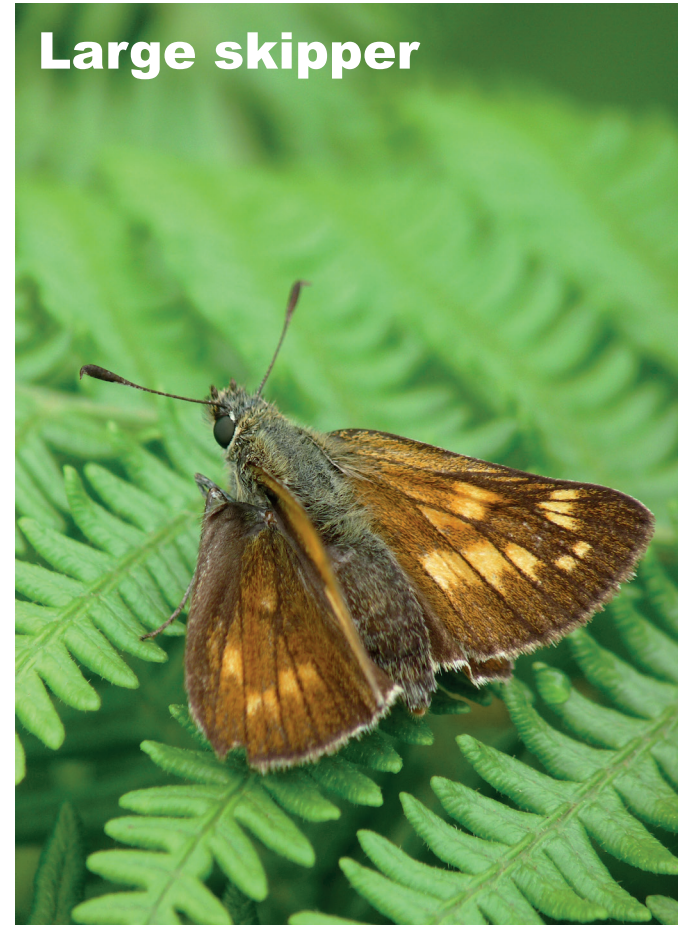
Small skipper

The skippers have a moth-like appearance



The Skipper

Large skipper



The flies are often seen on the very tips of stems, often on the seed heads. The perfect vantage point, but also helps to disguise their presence.

INSECT NATION

The Skipper

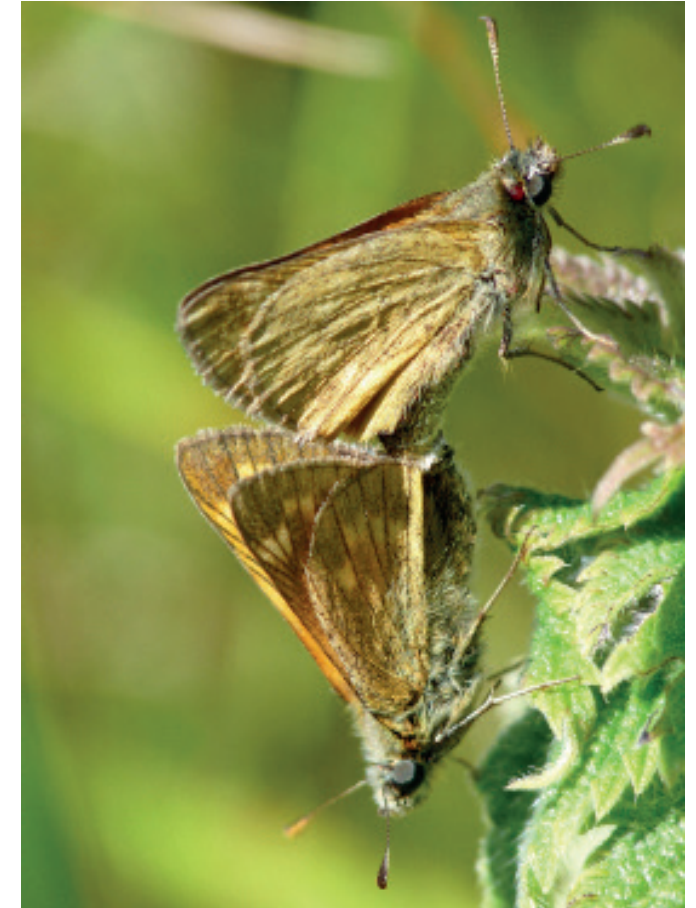
Dingy skipper

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Here a Robber-fly has caught an Empid fly, itself a predator of smaller insects. There are just under 30 species of Robber-Fly in the UK. Many are small and not very easy to tell apart.



INSECT NATION

The boatman

Water boatman (aka backswimmer) 14mm

Greater water boatman
(*Notonecta glauca*)

There are four species of water boatman found in the UK.

Three species of Greater water boatman and the Lesser water boatman.

Of the Greater water boatman, *Notonecta glauca* will be the most familiar, being common in ponds and lakes.

Water boatman are voracious predators of other aquatic life, including other insects, tadpoles and small fish.

Watching them swimming on their backs, it's easy to forget that they do have wings, in case you wondered how they manage to find the pond in your garden. They are strong fliers.

The Lesser water boatman, *Corixa punctata* is around 10mm in length and swims the right way up, revealing the striated pattern on its back. It is not predatory and feeds on algae and detritus on the bottom of the pond.



A less familiar and imposing view of the boatman to show its piercing mouthparts. Should you need to handle one, do so with care. Those mouthparts can pierce the skin.

INSECT NATION

An Italian garden

Early September 2017. A one week holiday with the whole family and partners in the Bay of Poets in Italy. The first full family holiday and the first foreign holiday for many years and probably the last.

I was already scanning the vegetation and ground as we made our way from the hire car, cases in hand to the villa overlooking the bay. Some colourful bugs on one of the succulents. A cryptic coloured grasshopper startled into a short flight, exposing pale blue wings, a dragonfly zipping past. I knew where I would be spending some of my 'spare' time.

When its warm and sunny around the Mediterranean, the days are longer, the insects active from dawn until dark. So on the first morning and every subsequent morning, I was up before 7 and out into the garden, camera and binoculars in hand.

The garden was terraced, grassy and scrubby supported by low stone wall with olive and fig trees, succulents and various sweet smelling herbs and shrubs. It merged into the surrounding land which was exactly the same.

These two pages give a very quick flavour of some of the insect life around the villa.

A glorious week with all the right ingredients. Family, sun, sea, food, location.... and insects.

Below. In the bright sunlight, casting deep shadows on the rocky, stoney ground, not always easy to pick out grasshoppers that do not want to be seen. This *Oedipoda germanica* only gives itself away when it flies revealing a flash of red on its wings



Below. Geotrupus species of Dung Beetle



The tourist

Below. An italian Locust (*Calliptamus italicus*). This species does not readily swarm in the same way as the Migratory Locust, but will do so in certain regions under certain conditions. Love the larger eye and the sewing machine like lines along its femur.



Below. Paper wasp - Polistes Dominula on its nest. Just the one. The breeding season over.



INSECT NATION

The tourist

An Italian garden

When it came to the true bugs, it seemed that Italian fashion this year was all about strong patterns in bold colours.



Graphisoma italicum. Also available in red



Eurydema ventralis



Lygaeus equestris



Ricina speculum

An Asian planthopper that was accidentally imported into Europe from the Far East. The planthopper was first observed in Liguria, Italy in 2009. In Asia it is a pest of several crops.



Two-tailed Pasha on fig



Common Swallowtail.

Send in your insect holiday snaps.
Anywhere in the world

WORLD NEWS FROM THE INSECT NATION

Fastest insect on six legs

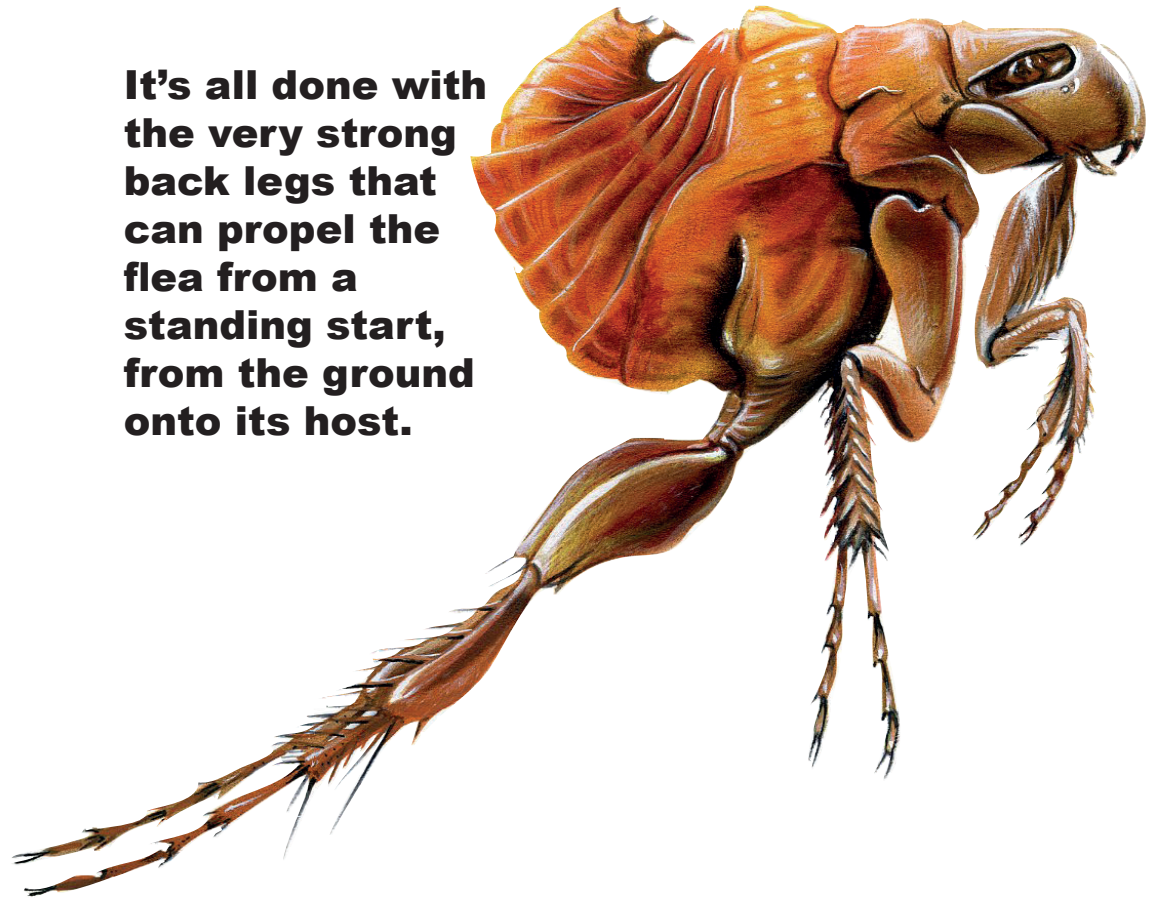


Tiger Beetles are officially the fastest runners in the world.

Tiny the flea beats previous jumping record by 2mm

Cat fleas no bigger than this .
are known to jump _____
If the flea were a human being,
this would be like jumping _____

It's all done with
the very strong
back legs that
can propel the
flea from a
standing start,
from the ground
onto its host.



WORLD NEWS FROM THE INSECT NATION

We have the bug



A Hoverfly
(*Volucella zonaria*)
16.09.2020
WWT, Slimbridge
Photo: Roger Leeke



Scarce Chaser
(*Libella fulva*)
26.06.2020
WWT, Slimbridge
Photo: Roger Leeke



A Rare Beefly
(*Villa cingulata*)
16.06.2020
Gloucestershire,
locale info restricted
Photo: Roger Leeke



Hornet
(*Vespa crabro*)
16.09.2020
WWT, Slimbridge
Photo: Roger Leeke

Readers contributions

Roger Leeke - Stonehouse, Gloucestershire

I have had a lifelong interest in Natural History. This was due in part to my Fathers' encouragement. He had a good library of insect & botanical books, he also bought me an old cabinet full of British butterflies when I was twelve.

I worked at the Natural History Museum on the Diptera section for three years in my early twenties and then worked as a laboratory technician at various Botanical institutions for a number of years.

My interests are now in printmaking - particularly linocuts, digital macro photography, digital graphic artwork, microscopy and collecting as many books as possible on these subjects.

Digital photography has proved very rewarding for me and I love to go out to local sites particularly the WWT Slimbridge and the various Commons on my doorstep to find, photograph and record our local natural treasures.

We have a remarkably rich and varied fauna and flora here in Stroud and I would recommend anyone to get out and enjoy it.

We are hoping to include contributions from our followers and partners in all issues. Photographs, artworks and stories are all welcome.

Wasp Beetle

Front cover

Clytus arietis

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