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The Observer Here be dragonflies, thriving in Britain as never before

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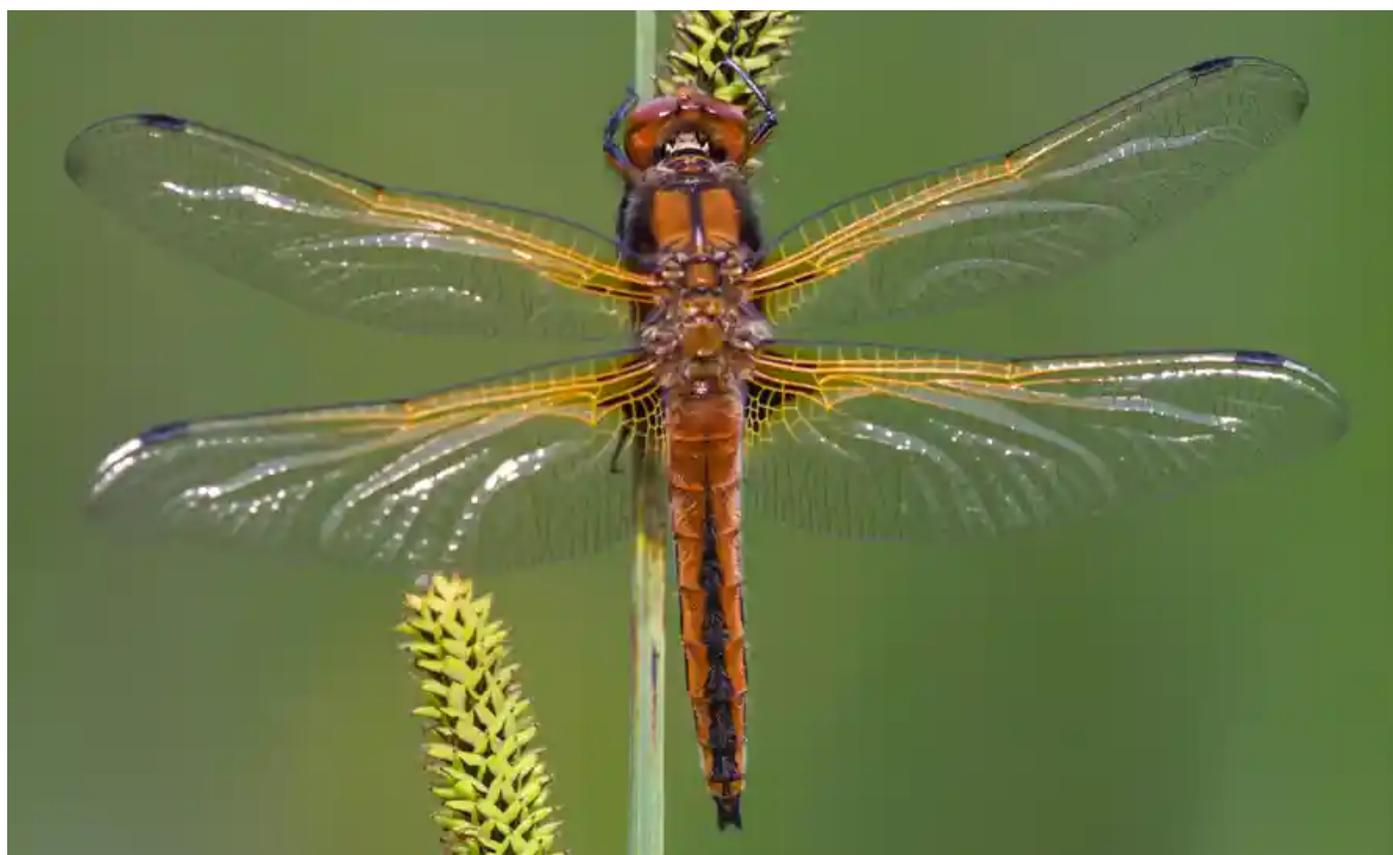
As the sun finally emerges from behind a cloud, I catch sight of a pair of dragonflies, yoked together in a mating position to rival the *Kama Sutra*. Yet this copulating couple, performing in a watery ditch on Canvey Island in Essex, are no ordinary members of their family. They are southern migrant hawkers: a species virtually unknown in the UK until a decade or so ago.

The southern migrant (also known as blue-eyed) hawker is just one of half-a-dozen “[dragons and damsels](#)” to have gained a foothold in Britain since the turn of the millennium. Together, they’ve brought the total number of UK species close to the 50 mark.

The new arrivals include the lesser emperor dragonfly, a duo of jewel-like damselflies - willow and southern emeralds - and the dainty damselfly. This tiny insect was lost from Britain in the 1953 East Anglia floods, but has now recolonised a few sites in Kent.

More are poised to follow: there have been breeding attempts by the vagrant emperor, some of which fly here all the way from north Africa; while four other continental species have been seen in the UK for the first time during the last 25 years.

Other species, once confined to the warmer south and east, are rapidly expanding northwards and westwards. As its name suggests, the migrant hawker used to be mainly a seasonal visitor to the UK; it now breeds over much of England and Wales, and I regularly see it in my Somerset garden at this time of year. Another species extending its range, the scarce chaser, has recently colonised the drains and ditches of the nearby Avalon Marshes.



▲ The scarce chaser or *Libellula fulva* has been extending its range. Photograph: Oliver Smart/Alamy

But while the possibility of seeing these new species is exciting for naturalists, we do have to temper our delight a little. There can be no doubt that their **northward surge** across the Channel is driven by current climate changes, and in particular the very warm weather of the past three springs and summers. So, what might be good for them - at least in the short term - is a timely warning to us.

As dragonfly expert Dave Smallshire, co-author of *Britain's Dragonflies* and *Atlas of Dragonflies in Britain and Ireland*, points out: "While about half a dozen species appear to be in decline, 20 species have increased; the overwhelming reason being climate change".

Until quite recently, a passion for Odonata (the scientific group which comprises dragonflies and damselflies) was confined to a handful of experts. Indeed, until 1937, when scientist [Cynthia Longfield](#) produced her pioneering book *The Dragonflies of the British Isles*, these familiar insects did not even have common English names, and were always referred to using scientific ones.

Longfield - whose passion and expertise earned her the nickname Madame Dragonfly - began the slow process of creating vernacular names for each species. However, it was not until long after the second world war that the terms hawkler, chaser, darter and skimmer were finally widely accepted. Several of these names are getting increasingly unsuitable, as species such as scarce chaser and Norfolk hawkler become more widespread.

Towards the end of the 20th century, birders like me began to take an interest in dragonflies and damselflies, which are often visible on hot summer days when birdlife can be hard to find. At the same time, other naturalists were also becoming fascinated by these charismatic creatures. As a result, there is now a network of experts all across the country, recording changes in range and noticing new arrivals.

Trends over the past half-century are currently being analysed, using more than 1 million records gathered by these citizen scientists. Given that some species can only be told apart from one another by tiny differences in pattern, or, in the case of the common and scarce emeralds, by the shape of their anal appendages (yes, really), then expertise is certainly required.

For the beginner, dragonflies and damselflies are, fortunately, relatively easy to tell apart. Dragonflies are generally much larger than their slenderer cousins, and many species sport distinctive patterns and colours. When perched, a dragonfly holds its wings out at right angles to its body - looking rather like a first world war biplane - whereas damselflies either hold their wings tight along their abdomen, or, in the case of the emeralds, at a 45-degree angle. Contrary to popular belief, neither are able to sting you, though dragonflies are fearsome predators of other insects, including their smaller relatives.

**“ Dragonflies are very mobile, so they are ideally placed to take advantage of changes in the climate
Jonathan Willet, wildlife guide**

With so many exciting new species colonising southern Britain, we should not ignore what is happening at the other end of the country. In Scotland, dragonfly expert and wildlife guide Jonathan Willet has noticed some significant changes over the past two or three decades. “Species that were once very rare and localised are getting much commoner and more widespread,” he tells me.

For example, until quite recently the southern hawkler was known from just a few scattered sites; now it is found across much of the country, as far north as Aberdeenshire. He says:

“Dragonflies are very mobile, so they are ideally placed to take advantage of changes in the climate, including a run of very mild winters.”

Scotland’s rather limited dragonfly fauna has also been boosted by new arrivals, including the emperor and the migrant hawkler, both of which have now managed to cross the border.

It’s not all good news for Scotland’s dragonflies and damselflies. Warmer, drier summers are likely to cause some habitats to dry out, which could reduce numbers of northern specialists such as azure hawkler, white-faced darter and northern emerald. Having been around for at least 300 million years, dragonflies are pretty adaptable but the rapid pace and unexpected consequences of the climate emergency means that some might struggle to cope.

Dragonflies and damselflies certainly respond to changes in climatic conditions very rapidly, but they are not the only insects doing so (see below). Last summer, I caught up with the long-tailed blue butterfly, a Continental European species which invaded Sussex that year. This year I watched a large tortoiseshell butterfly - a species which disappeared as a British breeding species following the second world war - feeding on a buddleia bush on the Isle of Portland in Dorset.

As with the mating pair of southern migrant hawkers, however, the thrill of seeing these new species was tempered by the knowledge that their colonisation is somehow ‘unnatural’, as it is being driven by anthropogenic climate change. Several butterfly and moth species are also close to colonising the UK.



▲ A female willow emerald damselfly, *Chalcolestes viridis*. Photograph: Ullstein Bild/Getty Images

Return flights

Large tortoiseshell

This larger cousin of the familiar small tortoiseshell vanished from the UK in the mid-20th century but recently it has started to appear at several sites in Dorset.

Long-tailed blue

One of the world's commonest butterflies, this species has been arriving in good numbers in summer along the Sussex coast.

Camberwell beauty

First identified in Camberwell in 1748, this butterfly occasionally turns up in the south-east.

Jersey tiger

Classified as 'nationally scarce', this strikingly patterned day-flying moth is seen in good numbers across southern Britain.

Death's-head hawkmoth

Made famous by *The Silence of the Lambs*, this huge and impressive hawkmoth, sporting a skull and crossbones on its thorax, is seen more and more often.

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