

British Dragonfly Society Sussex Group Newsletter Spring 2014

No 32



Coming soon to a Wetland near you!

What to look out for in 2014... by Penny Green



The Dainty Damselfly is definitely one to be looking out for in Sussex now; it was recently discovered in north Kent having been absent from the UK since the early 50's when its only colony, in an Essex pond, was washed away in coastal floods and it hadn't been recorded since. In 2010 a few individuals, which were thought to have been blown across from France or Belgium, were found to be breeding on the Isle of Sheppey in Kent by the county dragonfly recorders, Gill and John Brook.

According to the newly published 'Atlas of Dragonflies in Britain and Ireland' (Cham, Nelson, Parr, Prentice, Smallshire & Taylor), the Dainty Damselfly is a warmth-loving species which favours still or slow-flowing waters in sunny positions, so this would include ditches and dykes, and shallow ponds, with rich aquatic vegetation frequently dominated by hornwort species and water-milfoil.

Continued...

Dainty Damselflies by Dave Smallshire

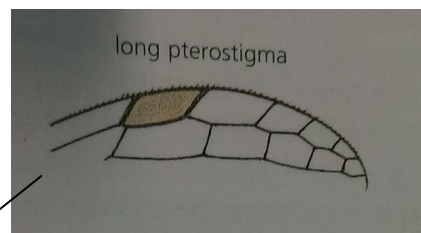
As these damselflies are in the neighbourhood we thought we'd give you some pointers of key features to look out for whilst you're out looking at dragonflies, just in case they have arrived in Sussex. They're very similar to other blue damselflies, so they require very close examination, and a photo! I have used the key features outlined in 'Field Guide to the Dragonflies and Damselflies of Great Britain and Ireland' (Brooks and Lewington) and some excellent photos courtesy of Dave Smallshire to help us on our way...

In flight, the small size and dark appearance of the male can offer a clue, and there is a lemon-yellow colouration on the underside of the head, thorax and abdomen which you can see on perched specimens (although this isn't apparent in these photos!)

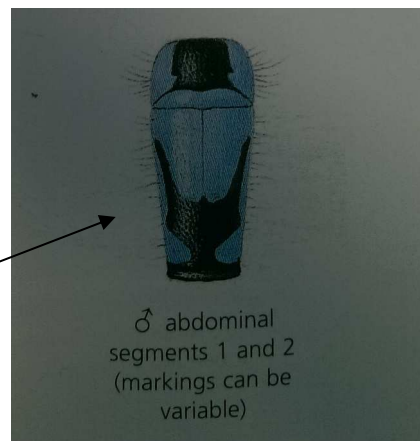
The main (and easiest!) feature to look for is the shape of the pterostigma - this is the cell on the outer wing that is usually thickened or coloured which makes it stand out from other cells.



In the Dainty Damselfly the pterostigma is longer than in other blue damselflies, being almost twice as long as it is wide.



In the male the black marking at the top of segment 2 is typically U-shaped and is generally connected by a narrow stalk to the black ring at the apex of segment 3... however this is much variation in this feature and can look like the markings on Common Blue, Variable Damselfly and Azure Damselfly!



The Dainty Damselfly female's diagnostic feature is the shape of the pronotum. The pronotum is the shield-like plate which you can see just behind the head.



You have to have a good look to be able to see the pronotum though, and this picture doesn't quite show it.

The larval stage of the Dainty Damselfly takes just under a year, and the adults start to emerge towards the end of May with the flight season lasting until the end of July.

So, it's worth taking a second look at any blue damselflies that you see in suitable habitat, taking photos if possible! There is a lot more information in *The Field Guide to the Dragonflies and Damselflies of Great Britain and Ireland*, by Brooks & Lewington, which is definitely worth a look before you go out in the field next.

Thanks go to Dave Smallshire, for the kind sharing of his photos for this article.

Our Garden Pond

2002 - 2013

by John Luck

“Why don’t you write an article about your garden pond” said Hew at one of our regular meetings during 2002. “No problem” I said. And so, Chapter 7 of Dragonflies of Sussex was born, accompanied by a picture of children pond-dipping.



“I hadn’t realised you had 3 wives and 14 children” people said. “I haven’t”, I said. “That’s not my pond and those aren’t my children”. So to put the record straight, here is how our pond looked in 2003, the year after it was created:





In its first year, the pond attracted 9 species with all bar the Migrant Hawker seen ovipositing. The following year, 2 species emerged, firstly on May 11th, a Broad-bodied Chaser and on July 19th, a Common Darter.

The following year, Emperors emerged, after their 2 year larval cycle, beginning on May 19th. I took my breakfast out to the pond and watched the emergence, fascinated:

Although females have appeared at our pond and oviposited, I have never seen a male Emperor. Thus, copulation is happening elsewhere, followed by the female Emperor seeking a suitable site to lay her eggs.

Also, Large Red Damselflies, which might come as a surprise as you would expect them to emerge after year.

Over the years, the vegetation has grown, decreasing the open water, but providing floating vegetation for ovipositing. This is a photo of the pond in 2008:



I have compiled a table of statistics, which demonstrates fairly consistent figures. It will be seen that despite 8 females laying eggs in the 1st year, only 4 species emerged over the 2 year period. Thus, it is likely that the larger larvae are consuming the smaller ones:

Pond Statistics

	Adults	Ovipositing	Emerged
2002	9	8	
2003	6	2	2
2004	5	2	3
2005	9	4	5
2006	6	5	3
2007	8	3	4
2008	7	3	2
2009	6	3	3
2010	6	3	5
2011	7	4	2
2012	5	3	3
2013	8	3	3

Over the 12 year period, 11 different species have been seen with recent sightings of Beautiful Demoiselle, a male in both 2011 and 2013 and last year, a female Black-tailed Skimmer:



It is important to be aware that I am frequently out surveying elsewhere, thus further species may have visited our pond.

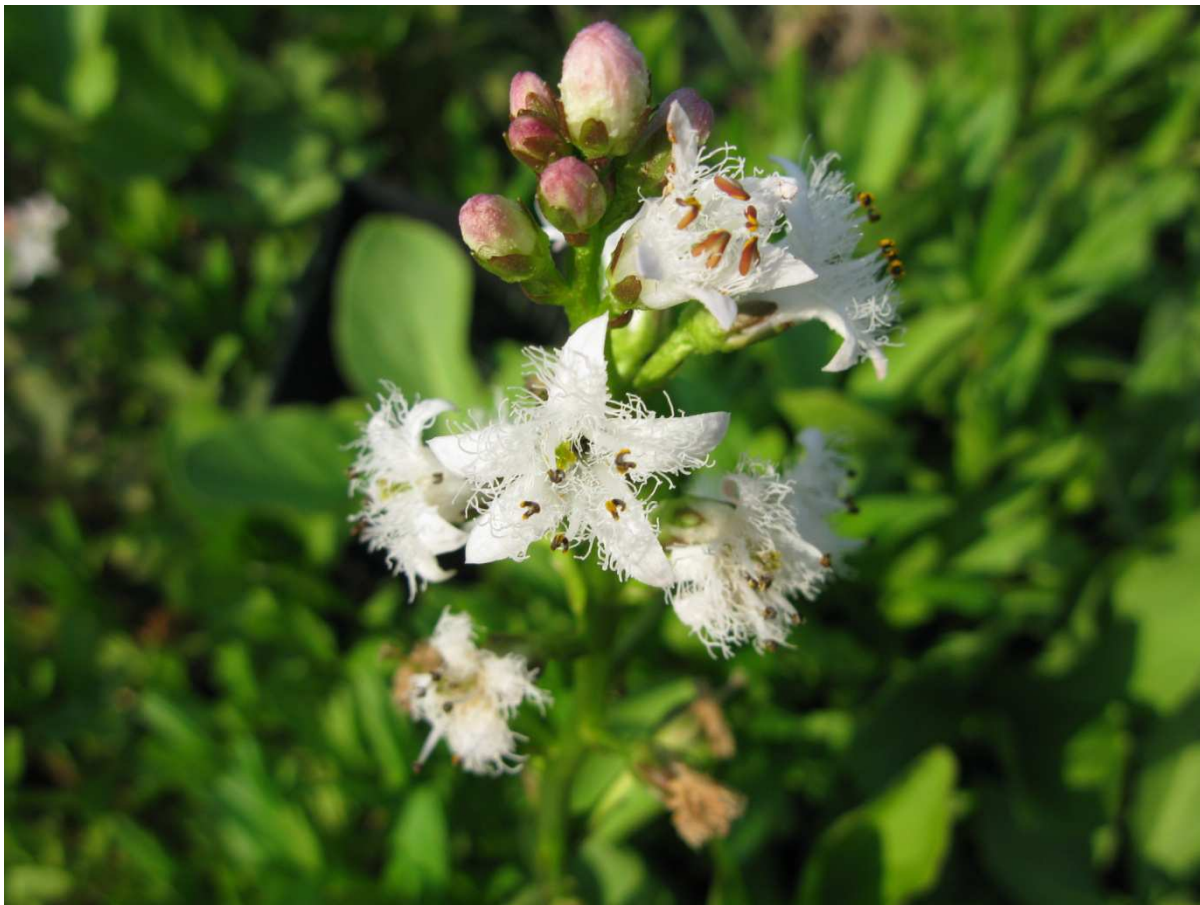
The species may be broken down into:

Every year – Large Red Damselfly, Azure Damselfly, Migrant Hawker and Common Darter:

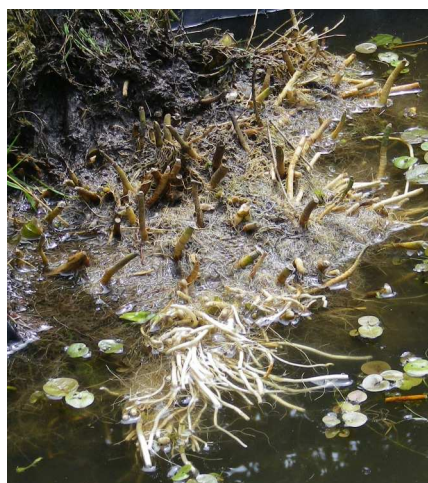
Frequent – Broad-bodied Chaser and Southern Hawker;

Occasional – Blue-tailed Damselfly, Emperor, Ruddy Darter, Beautiful Demoiselle, Black-tailed Skimmer.

In my original article I recommended purchasing various water plants for the pond. Such advice was extracted from the BDS leaflet “Dig a Pond for Dragonflies”, warning against exotic species, which are too vigorous for small ponds. One of the recommended plants was Bogbean, which I happily introduced at the outset. It has a most attractive flower:



However, it is so invasive that it has now taken over our pond, even weaving its way through our lawn and into the pots of the other plants. Medusa would be a more appropriate name:



The Brooklime has migrated to the flowerbed fully 10 yards away:



Thus, if you take my advice, you will treat this plant with extreme caution.

This year, I have created a 2nd pond. This is less deep with shallow edges and will be filled only with rain-water. Plants will occur naturally and will not be introduced.

The very first day after I had filled the new pond with water, imagine our surprise when a pair of mallards landed in the garden and visited both ponds. A remarkable beginning:



More news about how I created the pond and the first year's activity in the next newsletter.

Rooftop Dragonflies

At the V & A

London's first wetland green roof has been taking shape over the summer of 2013 on the roof of the [Victoria and Albert Museum](#). Installed during the heatwave in July, the roof is slowly evolving and this year we hope to see the first dragonflies and damselflies enjoying the water and the vegetation on the roof. The Green roof takes up a small area of the roof 'wilderness' of the V&A, but is already a hit with the museums Honey Bees

GRC worked with the innate characteristics of the existing roof. Down the centre of the roof a central gully, 150mm in depth, ran to either end and drained rainwater off the roof. A dam either end would allow at least a 150mm narrow pond to sit in the gully. Moisture protection layers would capillary water across the rest of the providing moisture for the wet meadow vegetation.

Either side of the main roof, two steep lead pitch roofs dispense their rain water onto the roof. To dissipate the force of this water and to provide an interface between the green roof and the edge of the building a narrow shingle run was installed. The roof was planted with a range of wetland and wet meadow vegetation using seeds and native wildflower plugs.



The wetland green roof is installed and over the winter the wildflower plugs took root. The special seed mix will start to cover the meadows and spring will herald an small oasis of wildlife in the heart of Royal Borough of Chelsea and Kensington. There are plans to feed the wetland roof with water discharged from nearby air conditioning units. This will be of particular importance during heat waves. So storing rainwater, creating nature and reuse of water are all part of the ongoing story of London's first wetland roof. And GRC, with all the partners involved, is looking forward to what is encountered over the coming years and telling the story as it unfolds. Perhaps we can lead by the GRC's example and start to look at alternative urban pond solutions for our Sussex dragonflies.

[DustGRC](#) on Tuesday, November 19, 2013

Dragonfly Migration in the USA

Recently a friend wrote of spotting “thousands of red dragonflies at a beach, all heading south and none stopping for anything.” In late 2013, similar sightings have been reported in Cannon Beach, Neskowin, and other places, from southwest Washington to the central Oregon coast in the USA. This means that dragonfly migration is underway. Although less heralded than the annual migrations of gray whales along the Oregon coast—a phenomenon that now has its own trademarked web site and a corps of hearty volunteers — dragonfly migration is no less spectacular.

Timing and numbers vary year to year, but 2013 appeared to be a major migration. At the onset of autumn cold weather fronts, the main species involved, the Variegated Meadowhawk, seems to funnel to the coast and head south. But beyond that, little is known about these autumn migrants. “This is not only an amazing spectacle to witness but a great mystery even to scientists,” said Cary Kerst, co-author with Steve Gordon, of *Dragonflies and Damselflies of Oregon*, the definitive field guide to the subject. “We don’t know where they are coming from or going or what prompts them to start moving.”



Scientists have tried various methods of tracking dragonfly migrations with little success. Now, a partnership has formed to solicit the public’s help to better protect and sustain this phenomenon. The Migratory Dragonfly Project offers an opportunity for people to collect and record dragonfly migration observations. Citizen scientists monitor the timing, duration, and direction of travel of migrating dragonflies, and note any behaviours observed such as feeding or mating.

Learning to identify the main migratory species of dragonflies is an essential first step in migration monitoring. With sufficient participation in migration monitoring, it’s not hard to imagine a future in which volunteers in Oregon are seen wearing “Dragonfly Watching” t-shirts and introducing curious onlookers to the wonders of dragonfly migration. Although the wonders of UK dragonfly migrations are more subtle at the moment, they are no less intriguing. Tracking new dragonfly movements from the continent to the UK would provide some incredible insights into the physical capabilities of these incredible insects, and into what drives their instinct to move and re-settle.

The News Guard September 5, 2013
Corvallis.

Dragonfly species thought extinct found in UAE wadi

A species of dragonfly once thought to be extinct has been seen in the United Arab Emirates for the first time. The *urothemis thomasi* dragonfly was found in Wadi Wurayah National Park, Fujairah, by the ecologist and wadi research consultant Dr Jacky Judas. Dr Judas discovered the specimen while taking photographs of the wadi's native dragonflies. One of his photos showed an unfamiliar species with cross-veins on its lower wing.

After checking with an expert at the International Union for Conservation of Nature (IUCN), Dr Judas revealed the dragonfly was a male *urothemis thomasi*. The species had previously been recorded only at eight sites in Oman and has not been seen anywhere since 1957, according to the IUCN.



The *urothemis thomasi* dragonfly. Courtesy of Emirates Wildlife Society

An *ischnura nursei*, a small colourful damselfly found in Pakistan, India and Iran, has also been spotted for the first time in the UAE, at another site in Fujairah. "These latest exciting discoveries give evidence that Wadi Wurayah is an exceptional site for wildlife. It is vital to conserve this rich area in order to protect the unique species which rely on it for survival," said Mohammed Al Afkham, of Fujairah Municipality. "As a move is made to establish a Wadi Wurayah National Park, this news yet again confirms that this area remains a stronghold for wildlife in the UAE", said Ida Tillisch, director general of the Emirates Wildlife Society in association with WWF.

Wadi Wurayah became the UAE's first Mountain Protected Area by a decree from Sheikh Hamad bin Mohammed. Thirty species have been identified in the wadi, including 21 of the UAE's 30 recorded dragonfly and damselfly species. This latest addition of a species which was thought to be extinct will help support the proposals to protect this wetland site.

Black silicon could germ-proof the world

Nanometer high spikes on a material called black silicon, which are similar to those on dragonflies' wings, can apparently cut bacteria to ribbons. This amazing phenomenon may pave the way for hospitals and other public places where pesky microbes lurk to be made germ-free.

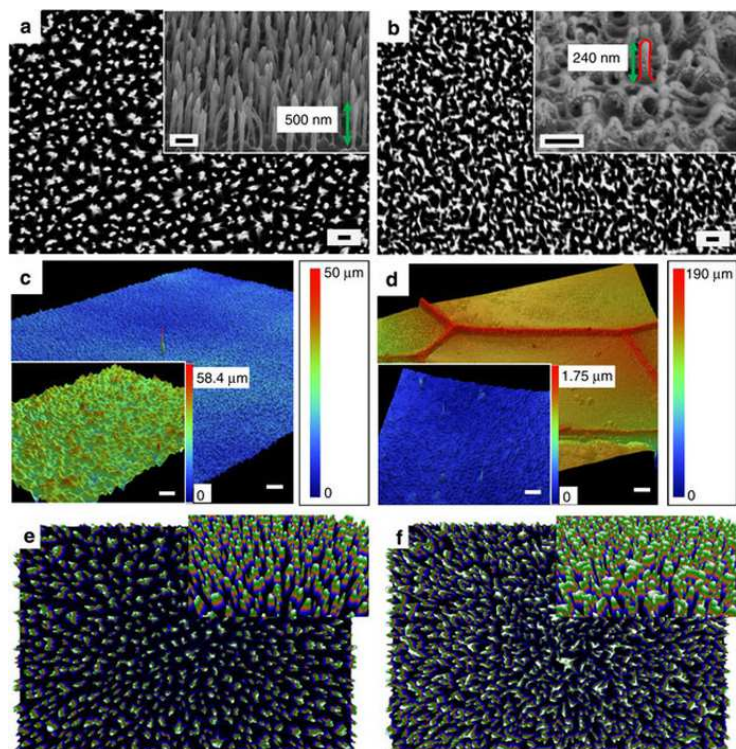
A study published in the journal Nature Communications, outlined how scientists in Australia first learned how black silicon's nano-tech surface is a potent germ killer. The research team, led by Elena Ivanova at Swinburne University of Technology in Melbourne, were earlier startled to learn that the wings of a cicada "*possessed potent bactericidal activity against Pseudomonas aeruginosa*," a common bacterium that can cause disease in animals, including humans. The scientists then discovered that it was the surface of the wings themselves, and not their biochemical functionality, which was killing the microbes.

Underneath an electron microscope, the cicada's wings appear to be tiny little spikes known as nanopillars, which cut bacteria to bits when they end up on the surface. Black silicon, has a similar needle-shaped surface, being covered in a forest of 500 nanometer (500 billionths of a meter) high spikes that rip open the cell walls of any bacterium which comes into contact with it.

The scientists then put black silicon and dragon fly wings (which have even smaller spikes, measuring just 240 nanometers high) through the ringer. Both surfaces lay waste to two categories of bacteria, called Gram-negative and Gram-positive, along with endospores – the protective shell that coats certain kinds of dormant germs. Testing the surfaces against three bugs, *P. aeruginosa*, *Staphylococcus aureus* and *Bacillus subtilis*, the kill rate was determined to be 450,000 bacterial cells per square centimeter per minute over the first three hours of exposure. This is 810 times the minimum dose needed to infect a person with *S. aureus*, and a massive 77,400 times that of *P. aeruginosa*.

Although the cost of manufacturing black silicon may prohibit its use as a wide-spread germ-killing coating, the scientists said cheaper synthetic antibacterial nano-materials which have similar levels of effectiveness can be *fabricated over large areas*. Another amazing dragonfly adaptation that we can learn from and benefit from as humans!

November 27, 2013 <http://rt.com/news/germ-killing-nano-surface-silicon-388/>



Habitat for rare dragonflies saved

An area of habitat for the rare Southern Damselfly has been saved thanks to the combined effort of several conservation organisations, the landowner and local farmers. The endangered Southern Damselfly is at risk of extinction in the Preseli Special Area of Conservation in Pembrokeshire — one of its traditional strongholds in Europe.

This partnership project between the British Dragonfly Society (BDS), Natural Resources Wales (NRW) and Pembrokeshire Coast National Park Authority (PCNPA) has safeguarded the specialist habitat at a site known as Pensarn Corner. The project was funded by Environment Wales and was supported by the landowners (the Barony of Cemais) as well as local farmers who graze this extensive area of common land. This is an area with several specialist wetland features including streams, bogs, flushes and pools. It is the confluence of several streams and an important access area for livestock, graziers and walkers to the common. Essential habitat restoration work has created clear access to the common for walkers and graziers whilst ensuring that the sensitive wetland features are maintained.



Projects like this that maintain wetland habitat for dragonflies and other species are vital for the survival of many of our keystone wetland species into the future. The Pembrokeshire project is even more valuable because local people are all working together. This species is rare throughout Europe and protected by law both in the UK and Europe.

The BDS Conservation Officer, Claire Install says 'this matchstick-sized blue and black damselfly has very specific habitat requirements and is currently under threat through changes in land management.' Pensarn Corner is also home to the near-threatened Scarce Blue-tailed Damselfly. This project means that the disturbed habitat required by Scarce Blue-tailed Damselfly is also maintained by directing livestock across an area of wetland favoured by this species. It lives and breeds in muddy areas with little vegetation and shallow water. There are several other species of dragonfly in this small area and it is considered to contain one of the most important dragonfly populations in Pembrokeshire.

Thursday 4th July 2013 Tivy-side advertiser

Dragonflies with backpacks may advance the science of prey capture.



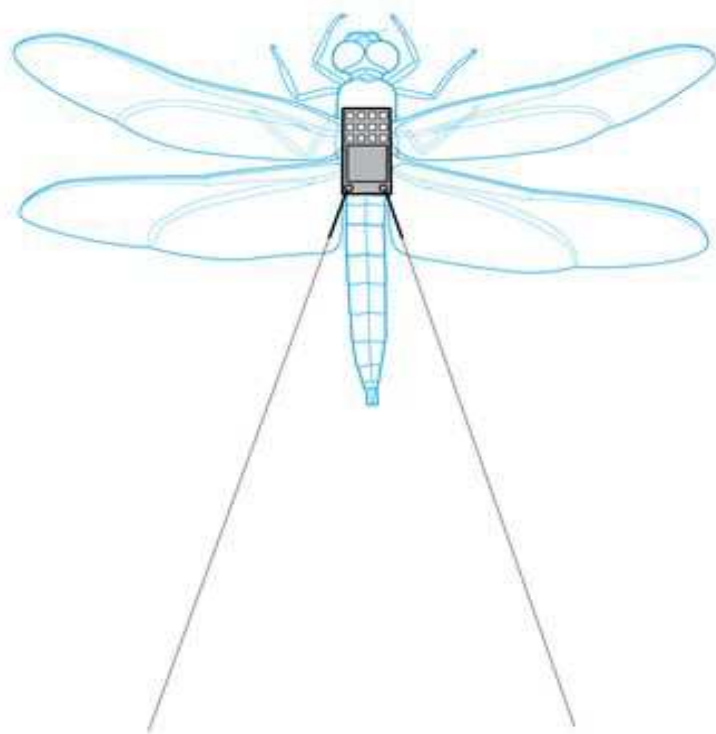
Dragonflies are grade “A” hunters. They can capture fruit flies in mid-air around 95 percent of the time, which puts a ‘head-of-the-class’ predator such as a lion to shame.

The Dragonflies efficiency — combined with hackable biology (less moving parts — i.e., neurons compared to any mammal big or small) makes the dragonfly an alluring organism to study the neural underpinnings of a basic but still complex behavior like prey capture.

Intrigued by the dragonfly, biologist [Anthony Leonardo](#) and colleagues from Intan Technologies and Duke University set about creating the instrumentation that will enable the researchers to monitor the activity of a group of neurons in the species *Libellula lydia* that appear to be essential for guiding the hunt. The group wants to demonstrate what happens in the dragonfly’s nervous system during the course of carrying out a complex behaviour such as zooming in for the kill, over the second or so that it unfolds. In the process of catching moving objects in the air, a dragonfly has to think about where it’s going, where it is now, where it’s going to be in the future how its own body works and that kind of goal is constantly changing.

Carrying out these experiments requires both tracking the dragonfly and devising the necessary instrumentation to monitor the 16 neurons hypothesized to steer the insect’s movements as it closes in on a fruit fly. The team was able to successfully outfit dragonflies with a set of small reflective balls on the head and wings to track them as they move through an insect version of the Roman Coliseum where they feast away on fruit flies.

The hard part is yet to come when the insects will be [equipped with backpacks](#) that can record signals from brain cells which then transmit them by a radio signal to a computer for analysis. A dragonfly weighs 400 milligrams, less than half the weight of a paper clip, so building a backpack that would not pin the insect to the ground or radically change its behaviour is a major challenge. The smallest practical battery for the telemetry in the backpack would have totalled about a third the weight of the dragonfly, and might have dampened the insect’s ardour for the hunt. So Leonardo and team designed a 40-milligran backpack that is powered by energy from radio waves. The backpack has tiny wires, miniature sensors, that connect to the ventral nerve cord, the dragonfly equivalent of a spinal cord.



Intercepting a moving object looks effortless. An outfielder gets his eye on the ball. He runs, he sticks out his glove, and smack! But at the level of the nerve cells, it's very complicated. Figuring out exactly how to put the probes in so they won't annoy the dragonflies is the tricky part. "It's like if I'd put a pebble in your shoe and asked you to dance," Leonardo says. His team is still working on how to place the probes so the dragonflies will dance.

Leonardo's team have already learned a lot about how dragonflies think just by watching them work. High-speed video cameras show dragonflies and fruit flies converging in slow motion. They have also worked out how to do motion capture on the dragonflies, as if they were being recorded for an animated movie. The researchers stick tiny reflective dots on a dragonfly in several places, and an array of infrared cameras records just how its body bends and turns as it flies.

It seems that the dragonfly catches its prey by keeping the fly in the same place in its visual field and flapping so that it gets closer, which was what people thought — but Leonardo is working out how the way its body works determines how it actually moves. Its like, if you were driving from London to Brighton, you can't drive in a straight line, There are other constraints that dictate your line of travel.

"It's amazing work," says Adrienne Fairhall, a computational neuroscientist at the University of Washington. We look forward to learning more about how dragonflies function, in order to understand more about how they hunt, breed, migrate, fight and use the landscape around them.

Helen Fields
for [National Geographic](#)
Published October 23, 2013
[Gary Stix](#) June 17, 2013

Rare dragonfly spotted up a tree in Western Ghats, India

In the silent valley area of India, a group of scientists has discovered a tree hole breeding dragonfly. Researchers claim that presence of the insect, *Lyriothemis tricolor*, is the first time that this species has been reported in Indian subcontinent.

The study, which appears in the latest issue of the *Journal of Threatened Taxa*, says that field studies conducted at the Silent Valley National Park, New Amarambalam Reserve Forest, Salim Ali Bird Sanctuary (SABS) and Thattekkad of the Western Ghats, has revealed that the species uses tree holes of evergreen and semi-evergreen forests of the Ghats as a larval habitat.

The studies were conducted during December 2009 - April 2013 period. In 2010, larvae of the species were collected from the silent valley and New Amarambalam. However their presence was confirmed after an adult female specimen of species was collected from Anachathapara area of the sanctuary, during a survey at SABS, on April 3, 2013.

The study says a freshly-emerged female specimen with exuvia was sighted on a tree in a semi-evergreen forest, interspersed with mahogany and teak plantations, in an area very close to the Boothathankettu Dam.

The study was conducted by Anoop Das, assistant professor at the Centre for Conservation Ecology, department of Zoology, M E S College, Mampad along with scientists from Zoological Survey of India, Subramanian, Emiliyamma, Jafer Palot and K A Nishadh of Salim Ali Centre for Ornithology and Natural History.

Anoop Das said that many species of dragon flies are known to use water-filled tree holes as a breeding habitat. However, no species are known to breed in tree holes in India. It is the first report of the species in the sub-continent.

"The finding reveals that *Lyriothemis tricolor* breeds in tree holes of evergreen and semi-evergreen forests of the southern Western Ghats.

The study also shows the importance of least known habitats for biodiversity conservation, and perhaps gives us an idea of where we should start to look for dragonfly larvae in the future?



National News

The atlas of Dragonflies in Britain and Ireland



A new atlas of the dragonflies of Britain and Ireland is published today. The atlas is the result of a five year research project by the British Dragonfly Society (BDS) which builds on data collected over the last two centuries.

Dragonflies are regarded as good indicators of wetland health and climate change. The new atlas shows how some species have expanded their ranges – northwards in particular – and apparently consolidated their previous ranges. In contrast, a few species have declined and/or retreated northwards, perhaps also resulting from warmer temperatures.

Sir David Attenborough, the British Dragonfly Society Patron who contributed the foreword to the new atlas, commented that the publication is “An invaluable distillation of the wisdom and experience of those who have spent many long hours watching these most wonderful of insects.”

The new atlas covers the distribution of all 57 species of dragonfly recorded since records began, including all of the resident and regular migrant species, as well as all known vagrants - individual insects appearing well outside their normal range - up to 2012.

The Atlas completes a mapping project that lasted from 2008 to 2012 resulting in the gathering of nearly half a million records from over six and a half thousand people. The new dataset has been combined with over half a million previous records collected by dragonfly recorders since the 19th century.

The Atlas is more than just maps and distribution. It also contains an analysis of the trends in status of dragonflies in Britain and Ireland since 1980, and sections on habitats, environmental factors, phenology, recording and data collection.

The data in the atlas show:

- Fourteen (31%) of the 42 established breeding species have expanded their ranges, including the Scarce Chaser and the Red-eyed Damselfly, and appear to have benefited from a warming climate, together with a general increase in the number and quality of wetlands.
- Eight species (19%) have declined including the Scarce Blue-tailed Damselfly and the White-faced Darter. The reasons for this change are not fully understood, but may include climate change and/or habitat loss or deterioration.
- Three species were lost from Britain in the 20th century, but one of these has recently recolonised (the Dainty Damselfly in Kent).



- Five new species have colonised or attempted to colonise Britain since a previous atlas was published in 1996 including the Small Red-eyed Damselfly. Two new species have also colonised Ireland since 1990.
- No less than seven species have appeared in Britain and five species in Ireland for the first time since 1990, including the Willow Emerald Damselfly.
- The most commonly recorded species, with 115,375 records, is the Blue-tailed Damselfly, closely followed by the Common Darter with 103,251 records.

The most widespread species was the Large Red Damselfly, which was found in 80% of the hectads - 10 km x 10 km Ordnance Survey grid squares - from which dragonflies were recorded during 1991-2012.

Steve Cham of the British Dragonfly Society said, "On behalf of the British Dragonfly Society, I would like to pay tribute to the huge effort made by thousands of recorders and volunteer data collators in gathering data for the atlas. Dragonflies have captured the imagination of people for centuries, but we never envisaged that so many people would contribute records. This staggering response has enabled us to assess changes to the distribution of dragonflies over time. We hope that this publication will inspire people to continue to contribute to this long-term study."

Dr Helen Roy from the Centre for Ecology & Hydrology leads zoological recording for the Biological Records Centre, the UK's national focus for terrestrial and freshwater species recording. She said, "This atlas represents inspiring contributions from many, many volunteers across Britain and Ireland. Dragonflies are charismatic and popular insects but they also provide an important insight into the ways in which our environment is changing. So not only is the atlas another wonderful example of citizen science but it is also providing valuable scientific evidence."

The atlas was edited by Steve Cham, Brian Nelson, Adrian Parr, Steve Prentice, Dave Smallshire and Pam Taylor, all from the BDS. The Biological Records Centre, which is part of the Centre for Ecology & Hydrology, collaborated with the BDS in the production of this atlas both through the analysis of trends and editorial support.

The atlas can be ordered via all good bookshops or purchased from the Field Studies Council.

Project partners include: Biological Records Centre at the Centre for Ecology & Hydrology; British Dragonfly Society and its Dragonfly Recording Network; DragonflyIreland; National Biodiversity Data Centre, Ireland; CEDaR, Belfast, Northern Ireland; and the Manx Biological Recording Partnership.

Atlas production was funded and supported by: the Environment Agency; Natural Resources Wales; Scottish Natural Heritage; Natural England; the Esmée Fairbairn Foundation; the Scottish Environment Protection Agency; and the Biological Records Centre (co-funded by the Natural Environment Research Council (through the Centre for Ecology & Hydrology) and the Joint Nature Conservation Committee).



Britain's Dragonflies:
A Field Guide to the Damselflies and Dragonflies
of Britain and Ireland (Third Edition)
Dave Smallshire & Andy Swash

Paper | May 2014 | \$25.95 / £17.95 | ISBN: 9780691161235
224 pp. | 6 x 8 | 321 color illus. 66 maps.

[Shopping Cart](#) | [Reviews](#)

Britain's Dragonflies is the only comprehensive photographic field guide to the damselflies and dragonflies of Britain and Ireland. Written by two of Britain's foremost experts, this fully revised and updated edition features hundreds of stunning images and identification charts covering all 56 resident, migrant and former breeding species, and seven potential vagrants. The book focuses on identification--both of adults and larvae--highlighting the key features. Detailed species profiles provide concise information on identification, distribution, flight periods, behaviour, habitat, status and conservation. Other sections cover biology; how to watch, photograph, record and monitor Dragonflies; conservation status and legislation; and introduced exotic species.

This redesigned, updated and expanded edition features:

- Beautiful colour plates showing males, females, immatures and all colour forms for every species
- Over 450 stunning photographs and 550 illustrations
- Up-to-date species profiles and distribution maps
- Detailed, easy-to-use identification charts for adults and larvae

British Dragonflies

With spring approaching we also wanted to make sure you are aware of the redesigned, updated, expanded, third edition of the field guide to [Britain's Dragonflies: A Field Guide to the Damselflies and Dragonflies of Britain and Ireland](#) by Dave Smallshire and Andy Swash.

Local News

Many thanks to everyone that contributed to this newsletter.

Also huge thanks go to all the dragonfly recorders who submitted their records for 2013, If you haven't done so yet, then it's not too late! Please send them in to Penny Green: pennygreen@sussexwt.org.uk and she will be delighted to receive them!

Or you can submit your record via Living Record online database or iRecord online database. There are so many ways to submit your data now, it couldn't be easier!

Or if you prefer to send in good old hand written records, then they are also welcome:
Penny Green, Sussex Biodiversity Record Centre, Woods Mill, Henfield, West Sussex, BN5 9SD.



Red-veined Darter by Neil Hulme

BDS Sussex Group

Field Trips

In the event of adverse weather please call the leader to find out if the event is still going ahead.

Chithurst Exploration

Date: Saturday 12th July. 10.30 am - 2.30pm.
Meeting place: The Monastery main site car park SU841233
Walk leader: Ben Rainbow and Penny Green (07960 388096)
Likely species: Golden-ringed Dragonfly, Brilliant Emerald (and might just get Downy Emerald too!), Emperor, Red-eyed Damselfly, Banded & Beautiful Demoiselle.
Other information: We will be exploring Hammer Wood which consists of 144 acres of wood land and heath that surround a 5 acre pond and stream. Whilst there we must respect the need for quietness and try not to cause any disturbance. For more details of location etc. please look on the monastery website:
<http://www.cittaviveka.org/index.php/about/visiting/9-about/visiting/18-how-to-get-here>

Etchingam Adventure

Date: Sunday 20th July. 10.30 am - 2.30 pm.
Meeting place: Etchingam train station (car park is £4 for the day), Station Road, TN19 7PA or grid reference: TQ714263
Walk leader: Ben Rainbow and Penny Green (07960 388096)
Likely species: White-legged Damselfly, Variable Damselfly, Beautiful & Banded Demoiselle, Migrant Hawker, Broad-bodied Chaser.
Other information: We will set off from the station car park and follow a footpath to get to the River Rother floodplains, where we can have a meander!

Ashdown Forest & Moorlands Adventure

Date: Saturday August 2nd - you need to book: pennygreen@sussexwt.org.uk or 01273 497521
Venue: Old Lodge / Moorlands
Time: Meet at 10:30am
Meeting point: In Old Lodge SWT Reserve Car Park (TQ469306)
Leader: John Luck
Other information: Looking for acid habitat specialists including Small Red Damselfly, Keeled Skimmer, Golden-ringed Dragonfly and possibly Black Darter. Then on to Moorlands for Brilliant Emeralds by kind permission of Mr and Mrs Love. Please let Penny know if you would like to come:
Pennygreen@sussexwt.org.uk or 01273 497521.

Dragonfly Events 2014

Local

Introduction to Adult Dragonflies and Damselflies

Venue: The Bothy, Knepp Castle Estate, West Grinstead, West Sussex, RH13 8LJ

Date: Wednesday 4th June

Time: 10:00 - 16:00

Tutor: Mike Russell

Content: An introduction to dragonflies and damselflies in their adult stage, looking at identification techniques, habitats and management, life cycle and the best places to find them in Sussex

Cost: Sussex Wildlife Trust Members £30, Non-members £42

To book your place click here: <http://www.sussexwildlifetrust.com/PBSCProduct.asp?tmID=13818019>

An Introduction to Dragonflies and Damselflies

Venue: Three Oaks Village Hall, Butchers Lane, Three Oaks, E Sussex, TN35 4NG

Date: Wednesday 17th June

Time: 10:00 - 16:00

Tutor: Mike Russell

Content: An introduction to dragonflies and damselflies, looking at identification techniques, habitats and management, life cycle and the best places to find them in Sussex.

Cost: Sussex Wildlife Trust Members £30, Non-members £42

To book your place click here: <http://www.sussexwildlifetrust.com/PBSCProduct.asp?tmID=13818633>

ARC Dragonfly Training Pulborough Brooks, RSPB Monday 9th June 2014

Are you a dragonfly enthusiast? And would you like to be part of a special team being trained to monitor dragonflies on the Arun & Western Rother rivers? If so, join our dragonfly expert Simon Curson and the Arun & Rother Connections team for a day of dragonfly identification at Pulborough Brooks. The training day is free for local people who are able to commit to survey a small area of these river valleys for 2 years or more. We will be looking at all the species found in the area, with a particular emphasis on the rare Club-tailed dragonfly. For more information contact

Deborah.coggles@rspb.org.uk

Dragonfly Events 2014

National

Dragonfly week from 5th - 13th July

Look on the British Dragonfly Society website events page for this year's events, including those for Dragonfly Week 2014:

<http://www.british-dragonflies.org.uk/content/upcoming-events>



Searching for exuviae

New to Recording Dragonflies?

Here's a few tips to help you get started. A basic dragonfly record has 5 parts to it:

1. Your name and contact details
2. The date you made your sighting
3. The name of the site you were at
4. An OS Grid Reference for the site (Guide on how to do this to follow very shortly)
5. What you saw

Other information that can be recorded, and is useful to us, includes the type of habitat, the weather, the altitude of the site and breeding behaviour. Please send your records to pennygreen@sussexwt.org.uk

First and Last

Julie Redford saw the first recorded dragonfly of the year so far. She logged the sighting on our website on the 8th of April at 16.32 and she wrote

“2 Large Red Damselflies seen at Warnham LNR dipping ponds this morning. Both looking very new.”

**Stunning image of a Small red damselfly at rest ©
B Foreman**



Kids Corner

How to make a dragonfly costume

Things You'll Need

- Corrugated cardboard
- Scissors
- Duct tape
- Measuring tape
- Fabric strips
- Velcro
- Needle and thread
- Paint
- 4 coat hangers
- Gauze or medical tape
- Can of fixative
- Glitter
- Velour or fleece
- Paper towels or rags
- Glue, or glue gun
- Ski mask or balaclava



1) Make the dragonfly's long, needle-shaped body with two pieces of cardboard which cover your front and back. Make the front and back long enough to cover you from shoulders to ankles. Cut them wider at the top and narrower towards your ankles. Round all the edges for a [smooth](#) look, taping pieces of cardboard together if necessary with a diagonal strip of duct tape.

2) Measure the shoulder length and waist distance to make sure the cardboard front and back fit together comfortably. The costume stays in place with fabric straps that Velcro over the shoulders and around the waist. Cut the four fabric straps, and sew pieces of Velcro to the ends. Hot glue or duct tape the four straps to the two shoulder and two waist spots on the cardboard front.

3) Using paint, colour the outer sides of each piece of cardboard. Set them aside to dry for an hour. When they're dry add the four matching Velcro pieces from Step 2 to the corresponding spots on the cardboard back.

4) Cut the curved hanger hook off the top of each of the four coat hangers and discard them. Bend the pointed ends of the remaining four coat hangers until you have four narrow oval-shaped wire wings.

5) Take the roll of gauze and wrap it around the wire wing frames. Secure it either by tucking in the last strip of gauze or by gluing it in place. Apply glitter or decorate as desired.

Continued...

6) Lay the cardboard back flat. Place the four wings near the shoulder blade area, with two on either side. Angle the upper set slightly higher, with the lower set sticking straight out. Secure the wings to the cardboard with duct tape. Cut a piece of velour or fleece large enough to hide the area where the wings join the back. Bunch up the fabric to resemble the wide area on the dragonfly's upper [body](#). Stuff it with paper towels or rags to create depth. Glue or sew the edges of the velour in place

7) Velcro the back of the dragonfly costume to the front. Wear a ski mask or balaclava over your head with [your face](#) exposed for the eyes.

Voila—you are now a dragonfly!



www.ehow.com/how_5916478_make-dragonfly-costume.html?ref=Track2&utm_source=ask

Adopting a Waterbody

It's easy!

I'm sure that many of you get out and about in the countryside on a regular basis, and that on your way you spot the odd streak of dragonfly colour zooming across your field of vision. Well, if you would like to adopt a local pond, reservoir or stream that you visit regularly and tell us what dragonfly life you see there then it couldn't be easier.

Just complete and return the form below to Penny Green, Sussex Dragonfly Society, c/o Sussex Wildlife Trust, Woods Mill, Henfield, BN5 9SD. All returns will be held in our local database so that we can provide you with support on identification. If you're not great at identifying dragonflies, never fear, you can email or send us your pictures and we'll get our experts to identify them for you!

Name

Address

Contact Tel No

E-Mail

Name of Adopted Site

OS Grid reference (where possible)



Sussex Dragonfly Society Newsletter

Top Ten Things To Do To Keep Dragons Flying In Sussex

1. We have developed our own version of Species Recorder called Odonata Recorder, which can be downloaded from <http://sxbrc.org.uk/odonatarecorder> . Report your sightings either on the SDS recorder, or to the Sussex Biodiversity Records Centre at Woods Mill
2. Take photos of unusual dragonflies you see
3. Come on our free training days and guided walks with local experts – more pairs of eyes mean we know more about what's happening with our dragonflies
4. Build a pond in your garden
5. Become a member of your local group – No charge, just send your contact details to pennygreen@sussexwt.org.uk or c/o Penny Green, Sussex Wildlife Trust, Woods Mill, Henfield, BN5 9SD, and we'll keep you up to date with our newsletters.
6. Adopt a waterbody near you and report back to us on its dragon and damselfauna
7. Report the first and last times you see individual species in each year
8. Use less water! Simple as it sounds if we use less water there is less pressure on our water resources and therefore on our wetlands that these amazing insects rely on.
9. Use eco products for washing clothes and washing up — they leave less damaging residues in our waste water and so help our winged friends by reducing pollution.
10. Look out for aliens! Not little green men, but plants: Parrot's feather, Australian swamp stonecrop, Floating Pennywort and Water fern among others. These non-native plants when released into our wetlands can reproduce rapidly and can smother ponds and ditches etc making it difficult for dragonflies and damselflies to breed and to reproduce.



Not all ponds for dragonflies need to be dug!

If you would like to contribute to the next edition of the newsletter or would like to participate in any of the events listed, please get in touch.

Contacts

Core Group

Chairman:	Phil Belden - Hobhouse, 47 Arundel Street, Brighton BN2 5TH
Editor & Wetland advisor:	Fran Southgate - fransouthgate@sussexwt.org.uk
Sussex BRC and secretary:	Penny Green - 01273 497521 - pennygreen@sussexwt.org.uk
Website:	Penny Green - 01273 497521 - pennygreen@sussexwt.org.uk
Press/Publicity:	Ben Rainbow — Ben.Rainbow@westsussex.gov.uk
Pond Conservation Advisors:	Jon Wood - jonwood555@hotmail.com
	Bev Wadge - ponds@sussexwt.org.uk

Other useful Contacts

Wildcall – Free advice on all wildlife issues. 01273 494777; WildCall@sussexwt.org.uk
British Dragonfly Society - bds@british-dragonflies.org.uk
Booth Museum - boothmuseum@brighton-hove.gov.uk. 01273 292777
Freshwater Habitats Trust (ex Ponds Conservation) — www.freshwaterhabitats.org.uk/
Sussex Wildlife Trust — www.sussexwt.org.uk
Sussex Wetlands Project — www.sussexwildlifetrust.org.uk/livinglandscape/living_wetlands
National Insect Week — www.nationalinsectweek.co.uk
British Dragonfly Society Shop — www.british-dragonflies.org.uk/content/bds-shop

Donations

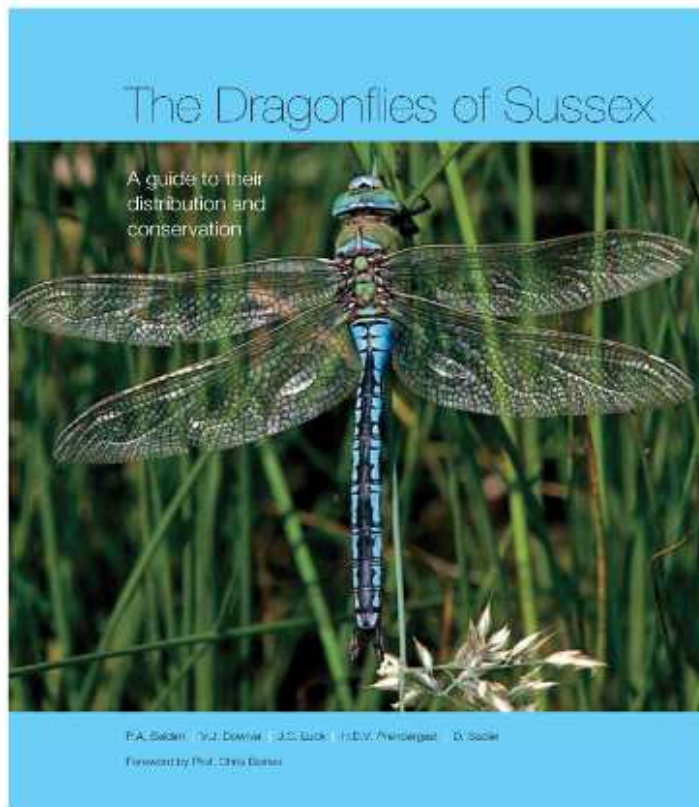
The Sussex Dragonfly Society is run exclusively with donations and proceeds from the sale of the Dragonflies of Sussex book.

If you would like to make a donation towards dragonfly work and restoring wetlands for dragonflies then please write a cheque made out to British Dragonfly Society (Sussex Group), and send it to Sussex Wetland Landscapes Project, c/o Sussex Wildlife Trust, Woods Mill, Henfield, BN5 9SD. All donations will be reserved exclusively for dragonfly and damselfly habitat enhancement work.

Useful Publications

- The leaflet 'Dragonflies and Damselflies in your garden' is available as a pdf file at :- www.british-dragonflies.org.uk/sites/british-dragonflies.org.uk/files/images/GardenDragonflies_0.pdf
- Field Guide to the Dragonflies & Damselflies of Great Britain & Ireland. S Brooks & R Lewington.
- Guide to the Dragonflies and Damselflies of Britain. Field Studies Council
- Dragonflies: New Naturalist. PS Corbet. Collins
- How to encourage dragonflies and damselflies on your land — www.sussexotters.org/wildlife/dragonflies.htm
- "British Dragonflies" 2nd edition. D Smallshire and A Swash.

The Essential Garden Companion & Guide for Countryside Explorations **THE DRAGONFLIES OF SUSSEX**



The first ever published book on Sussex Dragonflies.
by Phil Belden, Vic Downer, John Luck, Hew Prendergast & Dave Sadler.

The indispensable guide to these aerobatic, highly colourful and beautiful insects.
With detailed distribution maps and notes on status, habitat and conservation, , etc.

Available from Sussex Wildlife Trust, Woods Mill, Henfield, Sussex BN5 9SD. (01273)
492630, or from good book shops (ISBN 0-9525549-1-7)

NOW JUST £5 plus post & packaging
Payable to 'Sussex Wildlife Trust' c/o Fran Southgate
Proceeds go to dragonfly and wetland conservation

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Sussex Dragonfly Society Newsletter