

# British Dragonfly Society Sussex Group Newsletter Autumn 2018

No 41



## Southern emerald—is it the next big thing in Sussex?

Sussex had superb weather for much of 2018's dragonfly season with high pressure systems over Europe resulting in ideal conditions for some species with a more southerly distribution to make it to our shores. There were numerous sightings of Lesser Emperor, Southern Migrant Hawker and even, late in the season, a Vagrant Emperor.

Notable, also, was the male Southern Emerald Damselfly found by Steve Teale at Winchester's Pond, high on Lullington Heath in early August, representing only the fourth occurrence of this species in Sussex. The alternative (European) name is, appropriately, Migrant Spreadwing.

Over recent years, small and sometimes temporary colonies have been found in England, and whether Southern Emerald Damselfly follows Willow Emerald Damselfly, another recent colonist now resident and breeding at a number of locations in our county, remains to be seen.

Although uncertain times in terms of climate, these are exciting times for dragonfly enthusiasts' as new colonisers change their habits and habitats with the weather. This year's warm and dry summer was perfect for dragonfly spotting, although potentially a lot less beneficial for their natural wetland habitats. It remains to be seen what next year brings.



**Southern emerald,**  
© Bob Eade

# i record ....

## Vagrant Emperors

The i record website is now our favoured way of getting all those important wildlife records on the map, and it's really working. Even some of our tech shy Sussex Dragonfly Committee have now embraced the recording system with open arms (well, almost!), and the records of dragonflies and damselflies are flying in. What's great about i record is that you can upload photos of what you've seen, which makes it much easier for us to confirm some of the rarities and unusual finds. Add to that the fact that all the i record sightings are verified by local experts, and we are starting to compile a much better view of where our Odonata prefer to hang out in Sussex (as well as our Odonata recorders!)

The photo below is a fantastic picture of a Vagrant emperor captured by Matt Clifton Bowley in Lancing this year. It's such a great photo, clearly showing the pterostigmas and some unique colouring. These are the record finds which make it a pleasure to be part of the committee.



# Exploring unchartered territory

## Are there really no dragonflies in one third of Sussex ?

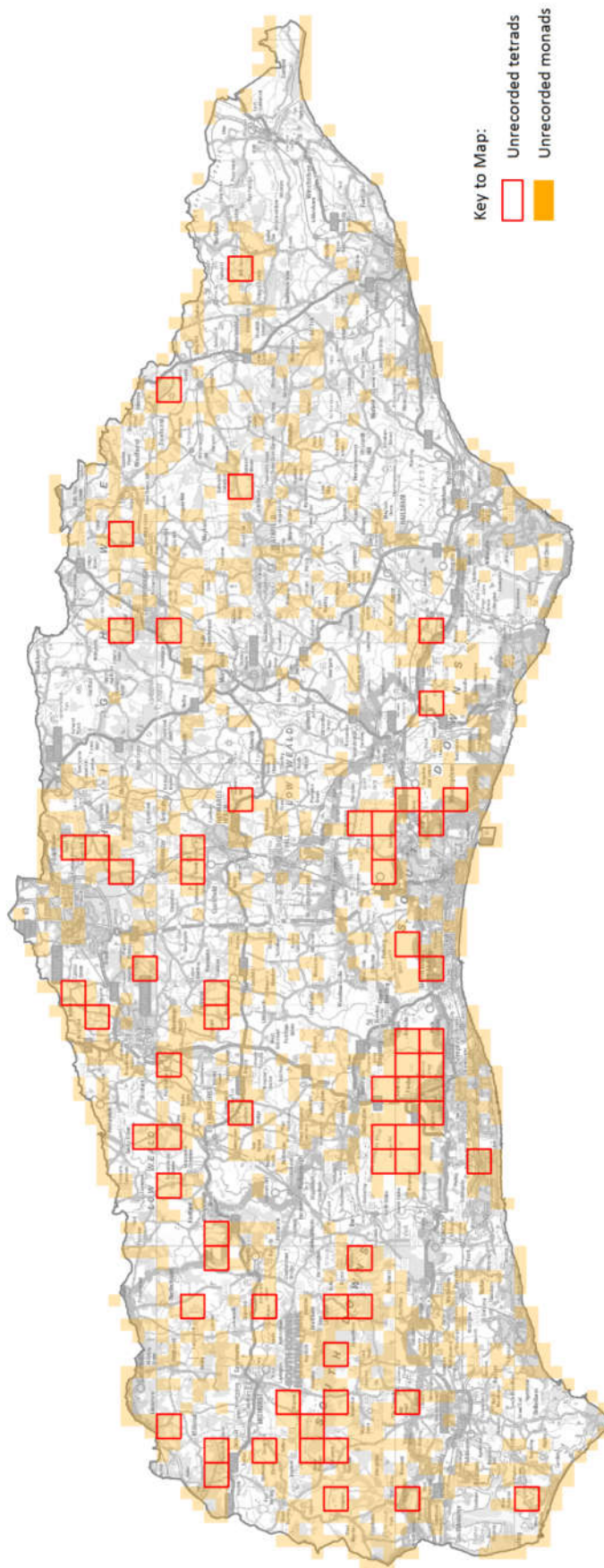
It's probably the wrong time of year to be talking about this but, nevertheless it is quite important and needs to be said. In the table below are the 67 tetrads (2km x 2km Ordnance Survey National Grid squares) in Sussex from which the SxBRC doesn't hold any dragonfly records. This list doesn't include "incomplete" squares – those that, for example, straddle the county boundary or the coastline, if it did there would be considerably more. If we look at single 1km squares (monads), there are 1,381 of these without a single record – the area of Sussex is 3,841km<sup>2</sup> give or take a hectare or two, which means that we can either infer that approximately one third of Sussex is unsuitable for dragonflies and that's why there are no records, or alternatively, we need to visit these squares to find out what's there (I am inclined to suspect the latter).

Once winter is over and the first Large Red Damselflies are on the wing, I suggest choosing one of these squares, maybe one that is close to home and therefore easily accessible and make a point of visiting and exploring it at least two or three times over the course of next summer. Take your camera and a notebook and make a note of every dragonfly and damselfly that you spot. When you get home, enter all of your sightings into the iRecord website ([www.brc.ac.uk/irecord/](http://www.brc.ac.uk/irecord/)) including details of the location (including an O.S. grid reference) and the number of individuals you have seen – either that or use the iRecord mobile app on your smartphone as you go. Your records will be seen and verified by the County Recorder for Odonata and will then make their way to the British Dragonfly Society and to the Sussex Biodiversity Record Centre's database where they can then be properly mobilised to not only fill in the squares on these maps but to help inform anything from academic research to habitat management decisions or local planning.

If you want any more information on dragonflies and damselfly recording or help using iRecord please contact me at [bobforeman@sussexwt.org.uk](mailto:bobforeman@sussexwt.org.uk).

SZ79Z	TQ00R	TQ30S	TQ10D	TQ10I	TQ10N	TQ10T	TQ20I
TQ30U	TQ01Q	TQ01V	TQ11F	TQ31L	SU81H	SU81S	SU91C
SU91M	SU81U	SU82F	TQ12B	TQ82B	SU82C	SU82H	SU92N
TQ32D	TQ32I	SU82P	TQ52E	TQ72E	TQ03V	TQ23F	TQ53B
TQ53W	TQ13X	TQ33H	TQ30N	TQ40N	TQ50D	SU70Z	SU80U
TQ00U	TQ00Z	TQ10J	TQ10P	TQ10U	TQ20P	TQ31A	TQ31F
TQ31K	SU91L	SU91W	SU71X	SU81I	SU81N	SU92K	TQ32R
TQ62G	SU92X	TQ02C	TQ12X	TQ22C	TQ02P	TQ02Z	TQ12P
TQ33B	TQ23D	TQ33I					

## Areas of Sussex without a single dragonfly record



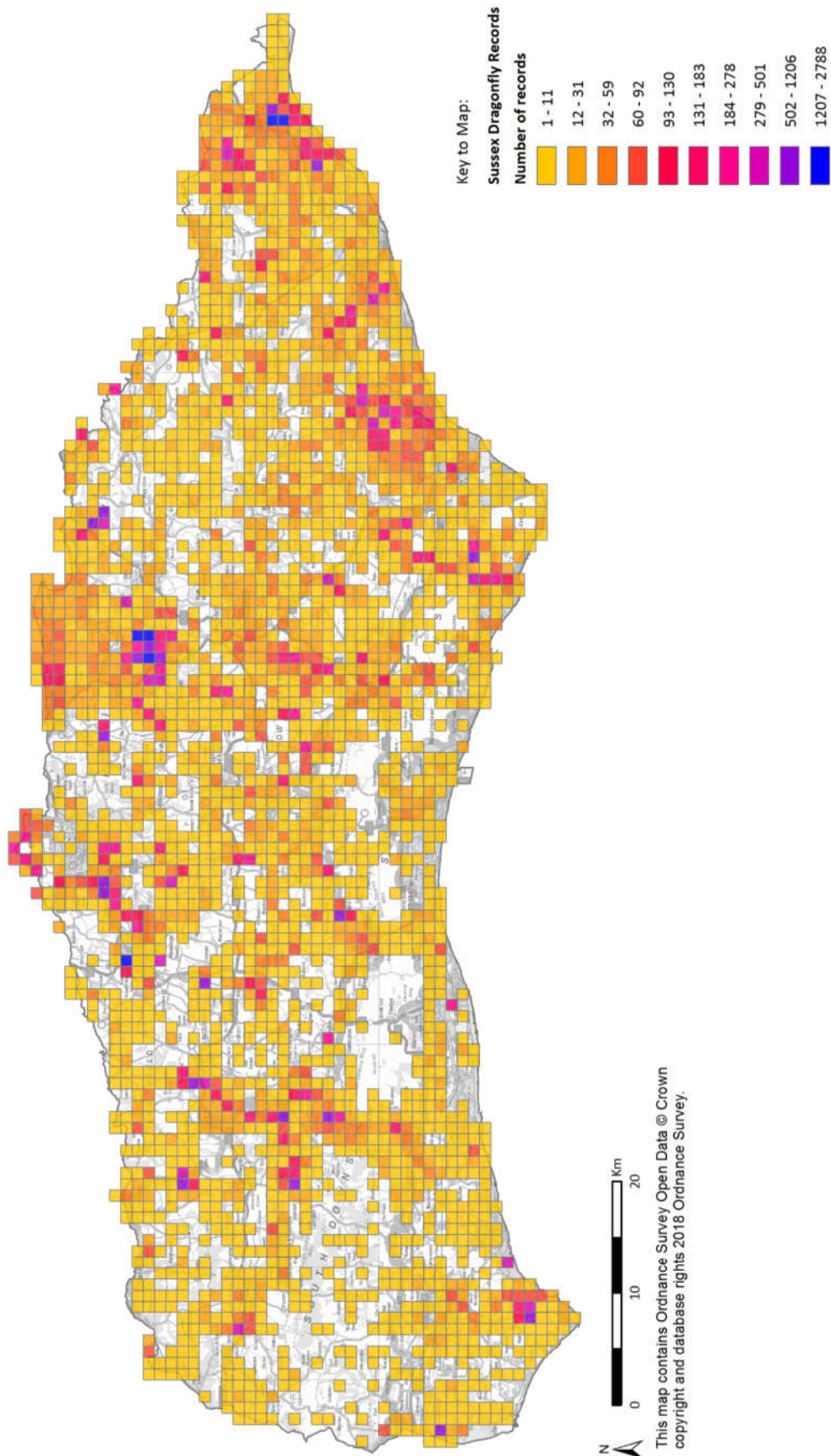
Key to Map:  
 Unrecorded tetrads  
 Unrecorded monads



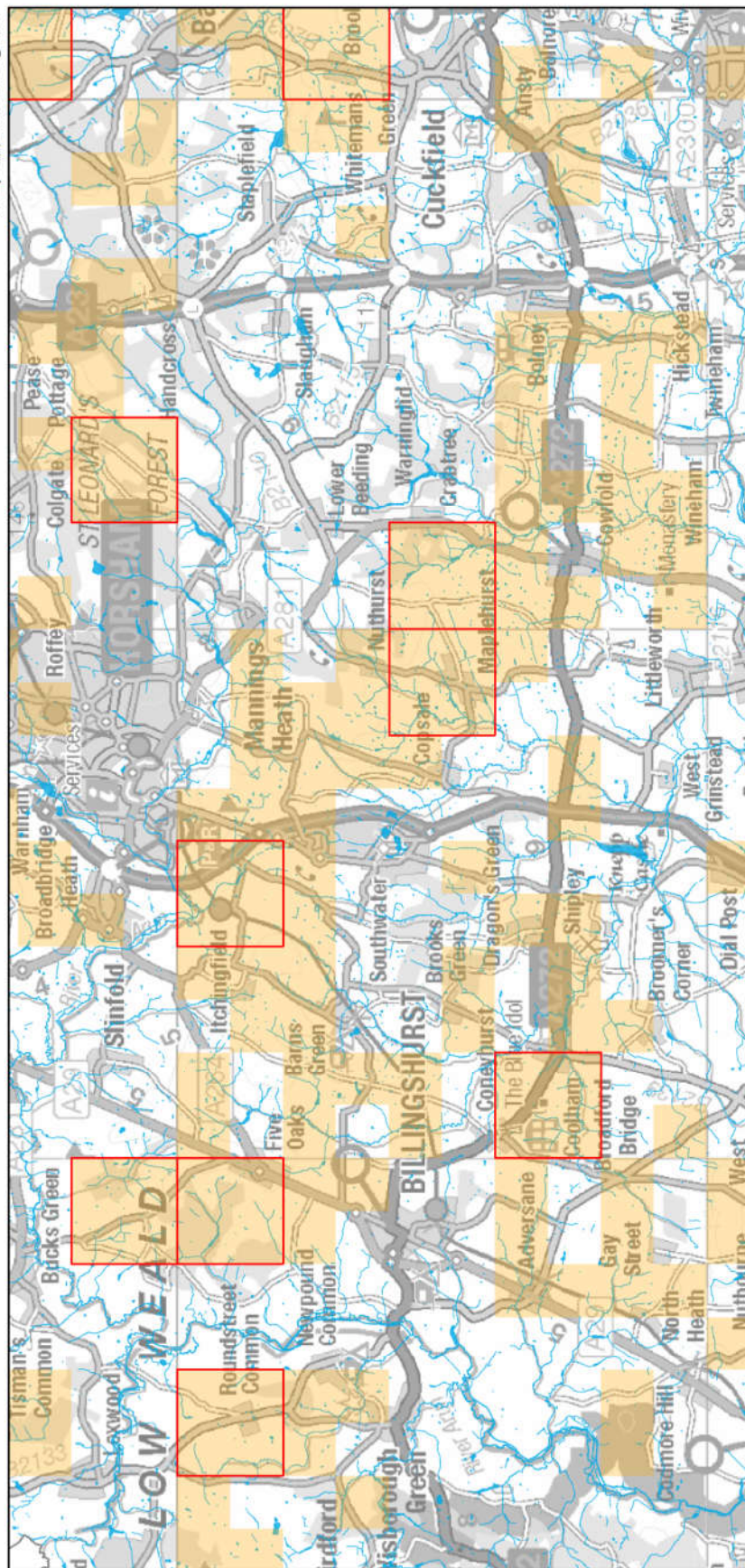
This map contains Ordnance Survey Open Data © Crown copyright and database rights 2018 Ordnance Survey.



## Number of Sussex dragonfly records per 1km square (monad)



Under-recorded swathe of central Sussex showing potential freshwater dragonfly habitat



Key to Map:

- Open Water
- Unrecorded tetrads
- Unrecorded monads

This map contains Ordnance Survey Open Data © Crown copyright and database rights 2018 Ordnance Survey.



# The Darters – *Sympetrum* sp.

Of the 25 species of dragonfly that have been recorded in Sussex in the 21<sup>st</sup> Century, probably the commonest (and certainly the most recorded) is the Common Darter (*Sympetrum striolatum*). In total the SxBRC has 7500 records for this species, 4502 of which have been gathered since the year 2000. The Common Darter though is just one of seven *Striolatum* species that have been recorded in the UK, all but one of which have been recorded in Sussex.

All except the Black Darter (*S. danae*) are superficially similar in appearance and a little bit of care is needed in order to correctly identify them. Black Darter however, is our smallest dragonfly and mature males are almost completely black, the females have a distinctive half and half abdomen – yellow on top and black below. It is a species that is mostly restricted to ponds in our heathland sites and not likely to be encountered in the wider countryside. The remaining species however are less distinctive and possibly for that reason, somewhat less recorded.

The most frequently encountered are Common Darters (*S. striolatum*) which have black legs with a yellow strip along their length, a brown thorax and eyes that are brown on top and yellowy-green below. The males, when mature, have a bright red abdomen and the females yellow-brown.

The thorax and abdomen of male Ruddy Darter (*S. sanguineum*) is, as its Latin name suggests, blood-red in colour. It can easily be distinguished from a male Common Darter by the club-shaped abdomen, entirely black legs and an orange-yellow coloration at the base of its wings. Although the Common Darter is generally more abundant both of these two species are often found together around vegetated water bodies or further afield, often in woodland rides., often flying earlier. The remaining *Sympetrum* species recorded in Sussex are migrants and much less frequently recorded. Red-veined Darter (*S. fonscolombii*) has 38 records this century. Mature males have bright red bodies with red-veined wings, particularly along the leading edges. Females, like other *Sympetrum* are yellow-brown. Both sexes have two-colour eyes, red on top and blue-grey below.

There are only three recent records of Yellow-winged Darter (*S. flaveolum*) in the SxBRC database. Slightly smaller than the other similar *Sympetrum* species, Yellow-winged of both sexes have black markings along the side of their abdomens and wings with yellow coloration close to the body. The final Sussex *Sympetrum* is *S. vulgatum* or Vagrant Darter. This species has only been recorded twice in Sussex both times during the 1990s. Very similar to Common Darter, the males can be distinguished by the presence of a row of tiny yellow-ringed black dots along the abdomen and no yellow markings on the side of the thorax. The females have a small spur that points downward from the ninth abdominal segment.

All the *Sympetrum* can be seen flying between June and October or November in warmer autumns with August being the peak of the flight period. When warm southerly air flows from mainland Europe, as has this year, there is a strong possibility of migrants arriving along the coast so it is well worth having a closer look at dragonflies seen in coastal locations. If you do see a *Sympetrum* species (or any other dragonfly, for that matter) please record it, ideally with a photograph that shows the distinctive features mentioned above, on the iRecord website. Or if you prefer, send your records directly to Bob Foreman at the SxBRC and they will be passed to both the Sussex and British Dragonfly Societies.

Bob Foreman

# Dragons & Damsels – what's in a name?

## An A to Z of those names attached to our dragonflies

How were dragonflies christened; what do their names mean? Our English names derive from Cynthia Longfield (Dragonflies of the British Isles, 1937); her simple popular name logic, “so that dragonflies will arouse more interest than they do at present”. Functional, but pretty boring and unromantic names for most. More interesting, the Latin, like *Ischnura elegans* (Van der Linden, 1820) or *Gomphus vulgatissimus* (Linnaeus, 1758), (respectively Blue-tailed Damselfly and Common Club-tail.)

Inquisitive? I am. Here's Golden-ringed Dragonfly, *Cordulegaster boltonii* (Donovan, 1807): *Cordulegaster* from Greek, *kordylinus*, meaning club-shaped and *gaster*, enlarged rear end of abdomen. Shame Longfield didn't choose the name used in other countries, Golden-ringed Spiketail, which aptly describes the female, with her long-pointed ovipositor. The last two parts are both names, Bolton and Donovan – who were they?

I turn to a new tome, **Eponym Dictionary of Odonata by Bo Beolens, Whittles**

**Publishing 2018** (for bird-twitchers, he's “Fat Birder”). Like any dictionary, easy to use if you know the word. B for Bolton (p50) – naturalist brothers from Yorkshire; D for Donovan (p112) – natural history illustrator who named and drew several species, this one still bears his name. The note ends sadly, that in authoring and illustrating, due to unscrupulous book dealers and publishers, he died in poverty.

This is a reference book for the keen; not read cover to cover reading, but to consult when curious. It is, simply, a dictionary of people or place names, real (Aztec Emperor Montezuma) and mythological (Greek Aphrodite). No index, but cross-referencing helps where relevant. However, it's a one-way search, you cannot look up a species and find the person, you have to know the full name, then you can look him, her or it up. It's a big book, spanning the World, from Aaron (Texan naturalist) to Zoe, not an eponym, possibly a reference to the Greek “for life”.

Despite its 460 pages there are gaps. *Oxyagrion zielmae* named after de Souza's wife – who? Don't know, he's not in. Freddie Mercury (of Queen fame), under F, not cross-referenced under M, one of four Flatwings named after the original band members. Any book can be soon out of date, so newly discovered fossil *Mesosticta davidattenboroughi* (<https://british-dragonflies.org.uk/content/damselfly-named-after-bds-patron>) isn't in, but there is not-quite-so-new *Acisoma attenboroughi* (<https://british-dragonflies.org.uk/content/sir-davids-dragonfly>) so you can read up on David Attenborough (under A not D).

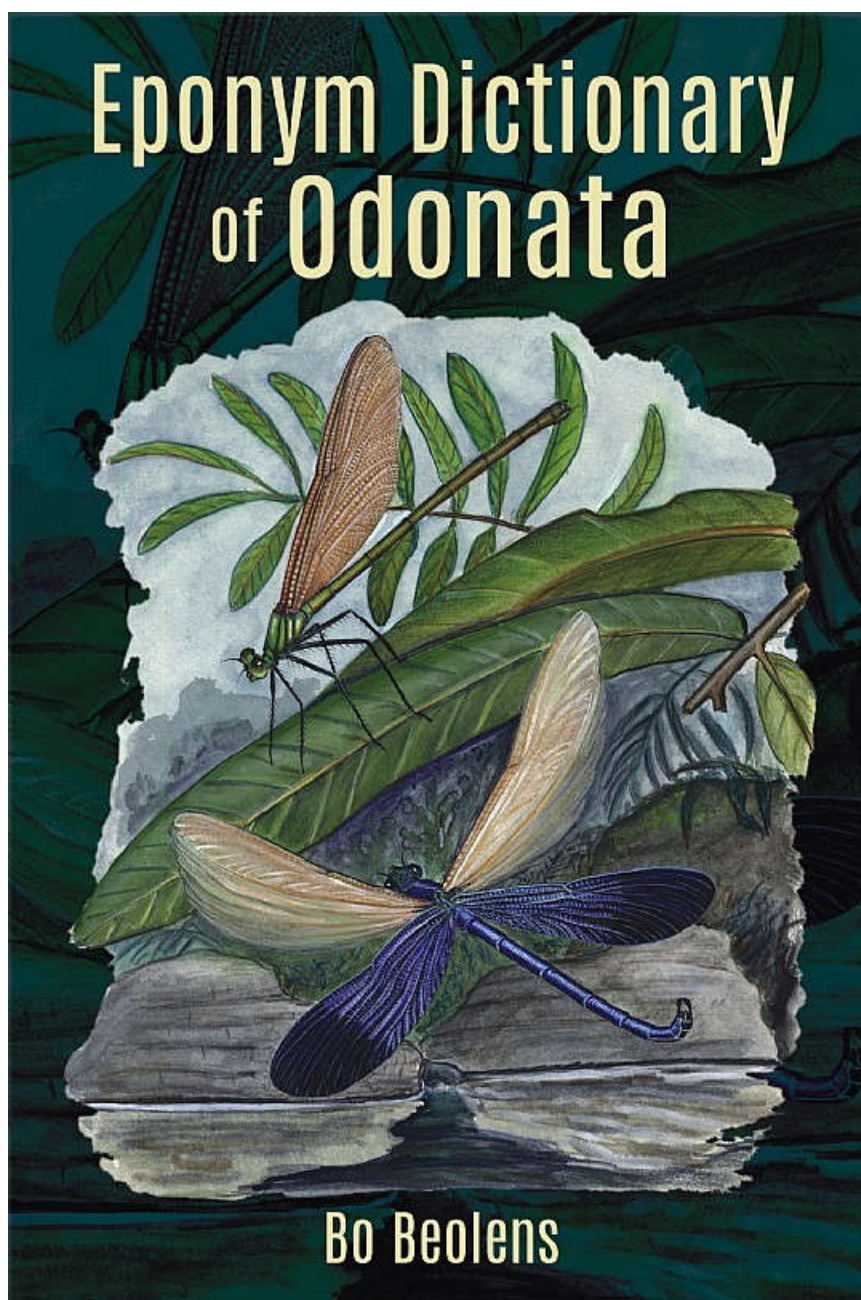


## Continued ...

It's more than a dictionary though, you can find great family names, or tribes when species have been tied to their mutual homes. You can pick out patrons, friends or lovers. The namers have been quirky, not bound by rule or convention; a new discovery named from the Bible (Anax goliath Selys) or Buddhism (Coeliccia poungyi), comic character (genus Riminella – Rima the Jungle Girl) or film (Archboldargia scissorhandsi), or none at all!

So now I know how Gomphus vulgatissimus (Linnaeus, 1758) was derived. Beolens' book gives me the gen on Linnaeus, though doesn't mention this species specifically. Now I need a book to explain what Gomphus means and why it's so vulgar or common.

Phil Belden, BDS-Sussex, October 2018





# Willow Emerald Watch !

## There's one coming your way. soon

The Willow Emerald Damselfly is widespread throughout Europe. Described by Dijkstra as “inexplicably absent until recently from Great Britain (where suitable habitat abounds)”. The *Field Guide to the Dragonflies of Britain and Europe* was published in 2006 and a year later, it all started happening with a female being found near Felixstowe in Suffolk. Since then it has spread steadily across the South-east in a similar manner to the Small Red-eyed Damselfly.

My first encounter with this species was on 28th August 2014 on a visit to a Surrey nature reserve at Nutfield Marsh with Dave Chelmick, meeting up with reserve manager, Simon Elson. Here, we found a small colony of males and ovipositing pairs. Some distance away, we found oviposition scars in further willow bushes.



Plate 1 (above)  
Willow bush site at Nutfield Marsh



Plate 2 (left)  
Close-up of willow bush above the pond



Plate 3 (above right)  
Close-up of ovipositing pair in tandem, laying eggs into willow branch



Plate 4 (left)  
Egg-laying marks in willow branch

## Continued ...

My next encounter was not until almost 3 years later, on 22nd June 2017, during a survey of Appledore along the Royal Military Canal with NT Area Ranger, Andrew Dyer. We were nearing the end of our walk, when I spotted an emerald damselfly perched in a bramble bush. All emerald damselflies are worth a second look, so I alerted Andrew, who took a photo. At the time, we were unaware that this would turn out to be a Willow Emerald, but after returning home and looking at his photos, the pronounced spur at the side of the thorax looked promising. Adrian Parr, National Migrant Recorder, agreed and confirmed that the photo was a teneral female. This was significant as it meant that the species had bred the previous year. The magnified photo shows key id features – prominent spur and dark line along the metapleural suture:



**Plate 5 - Teneral female Willow Emerald beside Royal Military Canal near Appledore**

It is possible that the species may aestivate (have a summer kip), reappearing in late Summer. And so it was that on July 31<sup>st</sup> the NT rangers had a couple of sightings near Kenardington car park, one being an adult female, again perched in a bramble bush, close to the original site.

After a bout of poor weather, I joined them on August 9<sup>th</sup> and we conducted a thorough survey on both sides of the car park, along the canal and adjoining ditch. We found 12 Willow Emeralds, evenly distributed either side of the car park, with 8 males, 2 females and 2 others with 1 pair ovipositing in bramble and 1 set of oviposition marks on an alder branch. All sightings were made in the ditch,, although we were unable to see the branches overhanging the canal on the near side.

On Sunday August 13<sup>th</sup>, my wife and I parked at Appledore and walked the whole section through to the Kenardington car park, finding 16 males + 1 set of oviposition marks. This pointed to a minimum population of 22 adults. It was noted that many of the males had a penchant for perching on dead bramble branches.



**Plate 6 - Close-up of key id features**



## Continued ...

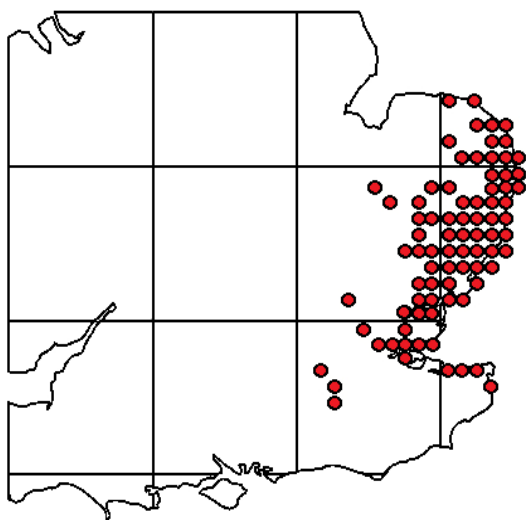
We had held a training day for NT staff and volunteers at Scotney Castle on July 17<sup>th</sup>. Chartwell volunteer, Jane Howard not only attended but was obviously putting new knowledge to good use on August 25<sup>th</sup>, when discovering a new population on the lower lake.

It seemed to me that the species had to be somewhere in East Sussex, so I did further surveys over the next couple of months, along nearby waterways – Royal Military Canal, Eastern Rother and East Guldeford Levels – but without success.

At this point, we should consult Adrian Parr's distribution maps, which he has kindly allowed me to use, in particular, the maps for 2014 and 2015.

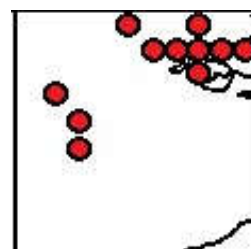


**Plate 7 - Male Willow Emerald holding territory on dead bramble stem**



The species at this point has spread steadily throughout East Anglia and appears to be heading through Surrey and Kent via 2 main threads – firstly via inland channels in Surrey such as the River Mole and secondly along the Kent coast and then inland.

The 2014 map shows the TQ square with 3 remote hectads, being those at Esher in North Surrey (TQ16) on the upper left, following down to Nutfield Marsh (TQ25) in South-east Surrey and then Gatwick (TQ24), on the Surrey/Sussex border.



**Plate 8 (above) - Willow Emerald Distribution Map 2014**

**Plate 9 (right) - Willow Emerald Distribution Map 2014 for TQ hectad**

Referring to the 2015 map (page below), this additionally shows the Woods Mill sighting (TQ21), which was the first confirmed sighting in Sussex and the first confirmed breeding site (at least 20 ovipositing/tandem pairs in Sept 2018). The nearest population to Woods Mill is based at Gatwick Airport, which is fully 30km away.

## Continued ...

The species undoubtedly now occurs in many places in Sussex, including Warnham and Pevensey. So why have there not been any sightings in TQ23 and TQ22? The Willow Emerald has to be somewhere in these large areas. Perhaps our dragonfly spotters are returning to their traditional haunts rather than seeking out new ones. It can be quite an elusive species, usually being found on the 'water' side of overhanging trees.

So, why not dig out your OS map 134 and select 2 or 3 new sites. If there is not a footpath nearby, why not contact the landowner for permission to carry out a survey. The species has to be somewhere in both hectads: Ifield Mill Pond, Tilgate Lake, Bolney, Pond Lye and Slaugham cannot surely all be empty. Do not be misled by the name "Willow" as the species happily lays its eggs in young branches of many soft barked bushes and has recently been observed in North Kent laying eggs into a bed of nettles.

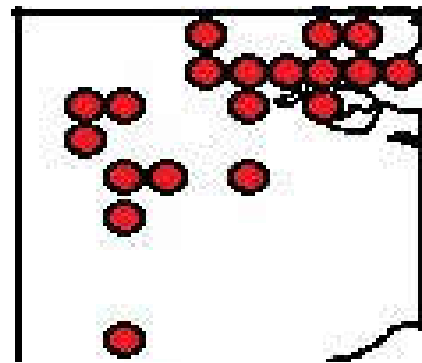
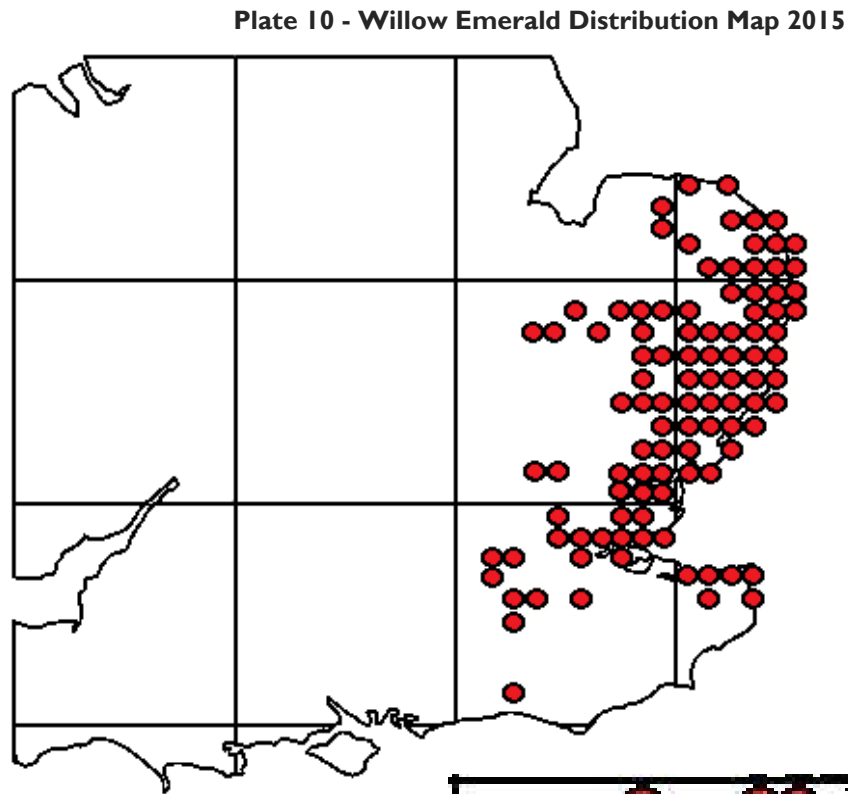


Plate 11 - Willow Emerald Distribution Map 2015 for TQ hectad

Peter Dear scored a double hit, this year when he found a new colony at Smallhythe Place in Kent with a mating pair on the small pond (TQ83) and a solitary male a few yards away, the other side of the barn (TQ82). I will shortly be taking a leaf out of his book with a visit to Nymans, which covers both TQ23 and TQ22.

I brought up the dispersal topic with Adrian Parr, who commented:

"I am also sure that they can disperse "randomly". Their favoured habitat includes various ponds etc. that aren't linked to watercourses, so it makes evolutionary sense for them to be relatively mobile. Indeed the species clearly does turn up regularly in areas well away from water, and we've had several records from suburban gardens this year."

Remarkably, a willow has self-sown itself alongside our original garden pond. So I await events with interest. He further compared Willow Emerald's expansion with that of Small Red-eyed Damselfly, noting: "Perhaps *E. viridulum* is a lot more fine-tuned towards migration - e.g. it seems to be able to move in groups, whereas Willow Emeralds may just move independently."

## Continued ...

I'm pleased to say that East Sussex has finally got cracking this year during September when Samantha Crocker broke our duck on 2nd at Broadwater Warren, followed the very next day by the NT rangers at Winchelsea (TQ91), then Patrick Bonham on 6<sup>th</sup> on River Tillingham (TQ92), Nigel Kemp on 7<sup>th</sup> and 9<sup>th</sup> at Pevensey Levels (TQ60), the author and Dave Mitchell on 10<sup>th</sup> and 27<sup>th</sup> on the River Brede (TQ81) and 25<sup>th</sup> Alastair Gray at Weirwood Reservoir (TQ33).

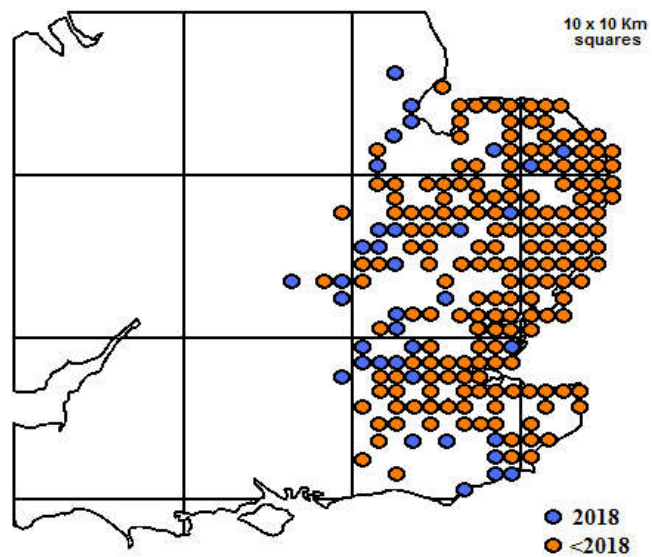


Plate 12 - Willow Emerald Distribution Map 2018 to date

The West Sussex populations increased in 2017 with a sighting by Mike King at River Kird, near Kirdford (TQ02). I understand that it is also present at Warnham NR, but do not have the details. This puts a far rosier complexion on things as far as Sussex is concerned and the up-to-date map now looks like this:

The good news is that the Willow Emerald's oviposition marks can be observed throughout the year and even more easily in Autumn and Winter, when the leaves have fallen. Here's an example recently photographed near the Brede:

So, time to get out, track some new populations and fill in more circles on the distribution map.

The National Migrant Recorder will, I'm sure, be duly grateful.



Plate 13 - Oviposition marks in willow near River Brede

John Luck 6<sup>th</sup> October 2018



# The National Trust's London & South East Dragonfly Bioblitz Day

This summer we in the National Trust trialled a Dragonfly Bioblitz day at some of our properties in Kent, Sussex, Surrey, Buckinghamshire and Berkshire. The event took place on Friday 6<sup>th</sup> July, although some staff undertook surveys a day or two beforehand because of uncertainties of the English weather or other demands on the properties' time and resources.



The aim of the event was to contribute to the Trust's region's wildlife monitoring (part of the "Land, Outdoors & Nature initiative restore 25,000 hectares of land to high nature status by 2025") by encouraging volunteers and staff to undertake Odonata surveys. We wanted people to join in, regardless of their level of skill and to make it fun by building on the healthy competition and "league tables" that John Luck, our stalwart volunteer, had already created between individual properties.

On the day in question each participating property e-mailed data to a central control "HQ" with photographs of any unidentified species, where John Luck was able to help with I.D. Survey data was entered onto the Recorder database.

Fortunately the weather did us proud, as did our stalwart volunteers and staff, and the day was a great success. 16 individual sites participated in the event, 120+ photographs were submitted and a total of 25 individual species were identified. So the day achieved its aims of encouraging a range of properties across the region to engage staff & volunteers in dragonfly surveying and identification and we managed to demonstrate how it can be undertaken effectively with a minimal amount of background knowledge, taking advantage of digital technology for I.D.

The sun shone and the Sussex highlights included Winchelsea's rarity of the Southern Migrant Hawker and Scotney Castle staff winning the prize for the most species spotted on the day (19). Can we do this again in 2019, and make it even bigger and better? It was hard work and the follow-up continued for several weeks as more reports and photos came in. It would be great if we could include all our properties, with local dragonfly volunteers and make a real occasion of it and seeing who will be "Top of the Prop(erty)s". This will take a good deal of forward planning and commitment and a big push to ensure that all data is entered on i-record, but one to discuss and plan in the winter months as we look forward to the summer sun once again.

# Video reveals the secret to the dragonfly's backward flight

Dragonflies are acrobats of the sky. They can fly upside down, turn 360° on a dime, and fly more than 55 kilometers per hour. They can even fly backward with as much skill as they fly forward. Now, researchers have figured out how they execute this tricky talent.

Scientists captured more than 40 dragonflies in the wild and placed dots on their wings to record their movements. They then let the insects go in the lab and recorded them with high-speed cameras.

When the scientists analyzed the videos, they discovered that dragonflies angle their bodies upward, like a helicopter, when they fly backward. They use their wings to pull back with the same amount of force they use to propel themselves forward. Flying backward is surprisingly aerodynamic for the insects, which don't use any more energy than when they fly forward, the team reported last week in the *Journal of The Royal Society Interface*.

The findings suggest that dragonflies are capable of flying backward for an extended amount of time. They are also capable of taking off from different resting positions, which comes in handy when there is an obstacle—or predator—in front of them. The work may also help engineers design more dexterous aerial robots—even ones that, yes, can fly backward.



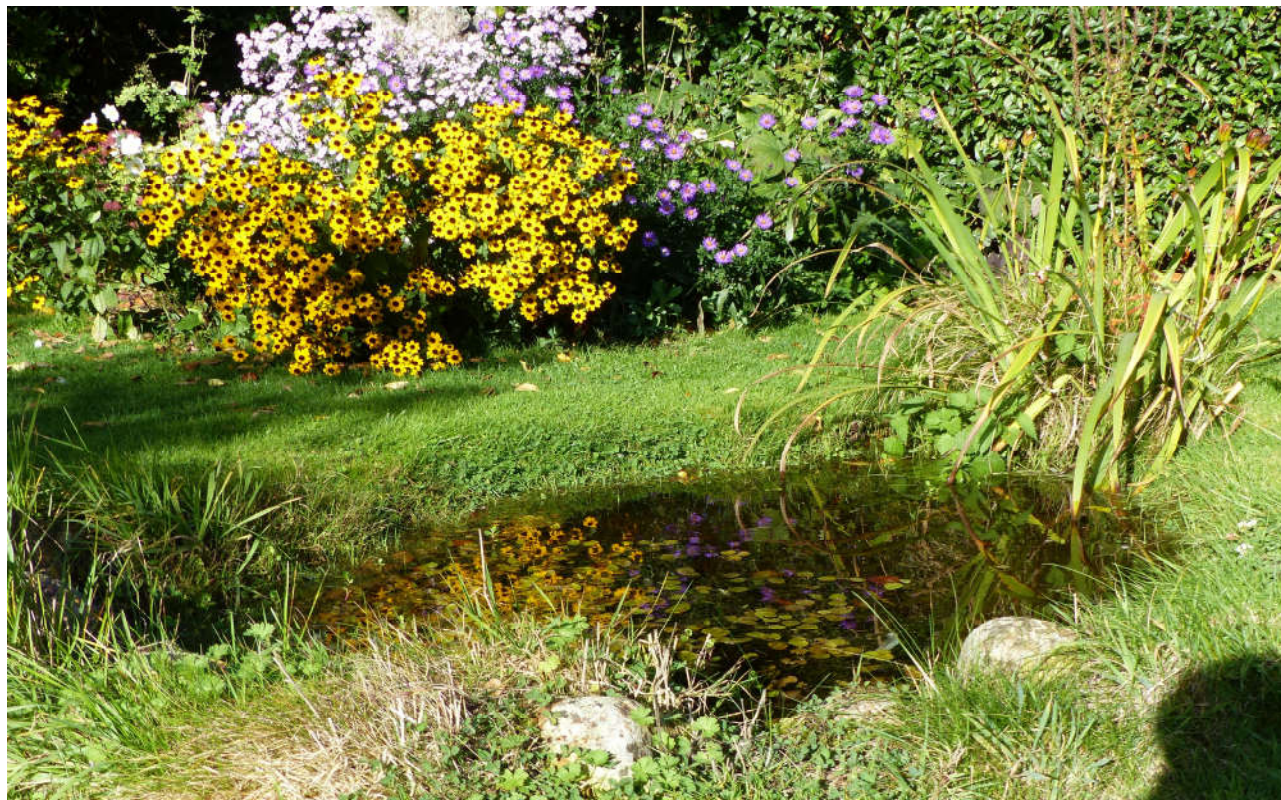
You can watch the video here :- [mwww.youtube.com/watch?time\\_continue=88&v=IOrH0Gbt8YM](https://mwww.youtube.com/watch?time_continue=88&v=IOrH0Gbt8YM)

By Victoria Davis Jul. 2, 2018  
[www.sciencemap.org](http://www.sciencemap.org)



# Our garden ponds - 2018

Just the two small ponds, which attract the usual suspects and occasional surprises, with asters and rudbeckia making a pleasing backdrop at this time of year.



As ever, Large Red kicked off the season, with the first ones emerging on April 22<sup>nd</sup> and adults flying in on May 5<sup>th</sup>. Followed by Azures, Broad-bodied Chasers, egg-laying Emperor, then Common Darter and the Hawkers (Southern and Migrant....never have seen a Brown). So these are our 7 regulars. Then we await the surprises:

On May 18<sup>th</sup>, a Beautiful Demoiselle appeared and flew up into our apple tree:



## Continued...

A Blue-tailed Damselfly arrived on May 25 and the following day even ventured indoors.

And finally, a Ruddy Darter flew around the main border, alighting on a knautia:

The first one for 10 years and finally I had managed to obtain a photo.

Looking back at earlier records, you do wonder at which point one found out that Ruddy Darters have black legs. Having a good photo is the ultimate assurance.



I took the opportunity to also take a picture of a Common Darter perched nearby:

Many id guides refer to this species as being straight sided, but cast this aside.

At times they can be quite waisted, although never to the degree of the Ruddy.

We are talking males here, of course. Identifying females is far more demanding.



## Continued...

One interesting occurrence, I've noticed over the past few years, is the appearance of cast skins of hawkers, which float up to the surface. There are typically 10 – 15 stages as the dragonfly larva grows. These can be retrieved and identified, bearing in mind that younger larval skins will be smaller than the final exuviae.

Away from dragonflies, we've had trouble with ducks. I'm talking mallards to be precise. It may well be to do with the wooden ducks at the end of our first pond, but ever since we dug a second pond, we have upped our street cred in the mallard world.



And this pair were really persistent, particularly the female. Whether she had it in mind that our ponds were just the place to bring up her family, I don't know. However, on more than a dozen occasions, they landed on the rear hedge and shortly after flew down on to the lawn and proceeded to swim in our ponds. We even found them asleep on the end hedgerow first thing, one morning.

This was clearly not on. As they would surely mop up all the invertebrates in a short space of time. And believe me, they did not want to fly off, until almost trodden on. Even then, they flew back on to the hedge at the end of the garden. Chasing them off towards the field side of the garden proved to be much more effective.



## Continued...

Our most exciting event, was on July 18<sup>th</sup>, when I found a grass snake in our new pond with a frog in its mouth. We hadn't ever had a snake in the garden before. My wife joined me and we took a closer look. At this point, the snake released the frog, which hopped away. However, I found a dead frog on the lawn the next day, so suspect our amphibious friend hadn't survived.



“Well, bless my soul”, just as I am finalising this article, a female Southern Hawker has flown into and out of our breakfast room and proceeded to lay eggs in the old log I provided for that very purpose. Brilliant. Positively my favourite dragonfly. When you encounter one flying around, just sit down on the ground and let it fly around you.....quite magical. We're talking males here, of course, as females have to be treated with some caution. I speak from experience, having allowed one to land on to my hand to lay eggs, so that one of the NT rangers could take photos for a com-

petition. I felt a slight prickling sensation, followed by a trickle of blood and degree of bruising the following day. Definitely, not recommended, so be aware.

So, now the season's over. But, wait a minute. There's still time for a Willow Emerald to appear. Remarkably a willow seedling has self-sown itself at the near end of our first pond. So, you never know.

John Luck 21st October 2018





# Exciting Sightings at Rye Harbour Nature Reserve

One of the most exciting wildlife finds at Rye Harbour in July this year was a southern migrant hawker on Harbour Farm on the 25th — the first reserve record for this rare migrant dragonfly. This largely Mediterranean species was an extremely rare visitor to the British Isles during the 20<sup>th</sup> century, with only a handful of records. Since 2006, however, it has become more frequent, with the species even seen egg-laying in the last few years, suggesting it may be in the process of colonising the UK in the same way that migrant hawker, now a familiar species in the south-east, did during the 20<sup>th</sup> century.

Notable moths during July included the macros pigmy footman, crescent striped, starwort and pale grass eggar and the micros bordered ermel, starry pearl, saltmarsh grass veneer, twin-spot honey and rosy-striped knothorn. The warm weather has brought out the butterflies, with marbled white and good numbers of brown argus recorded during the month, as well as migrants such as painted lady and red admiral, while odonata included ruddy and common darter, emperor, black-tailed skimmer and variable damselfly. Other notable invertebrates during July included the levels yellow-horned horsefly in the information centre on 1st, only the third reserve record, the soldier beetle *Crudosilis ruficollis* at Castle Water on the 9<sup>th</sup>, the first reserve record since 1999, and several bee-wolf at Castle Water on the 25<sup>th</sup>.

**Christ Bentley**



**Southern migrant hawker**

# Digging up Drains for Dragonflies

In my day to day role as Living Landscapes advisor, I come across many people who would like to make their land better for wildlife. Often one of the best things they can do is to add some kind of water feature to an otherwise dry landscape. What most people don't realise however, is that the majority of our landscape is massively sub-surface drained, and is much drier than it should be.

Often a legacy of more intensive farming days, these land drains tend to be up to 3-4 feet below the surface, and are often 6 inches or more wide—the ones in this picture were nearly 12 inches across. High up on the Ashdown forest, in a sandy landscape where water is scarce, these drains are systematically removing water from the landscape before we even see it.



For dragonflies and many other species which rely on wetlands, these must have had an immense impact over time. In the picture below, the landowner wanted to create more wildlife and dragonfly habitat, and so she allowed us to break up the land drains..... And hey presto—instant wetland. We had one small rainstorm, and the water features we'd created where once there were only land drains, filled up with water immediately. With any luck, these are now providing habitat for Golden ringed dragonflies, Black darters and other amazing dragons.

F Southgate



Image © A McNaught



# Clubtail Count 2017

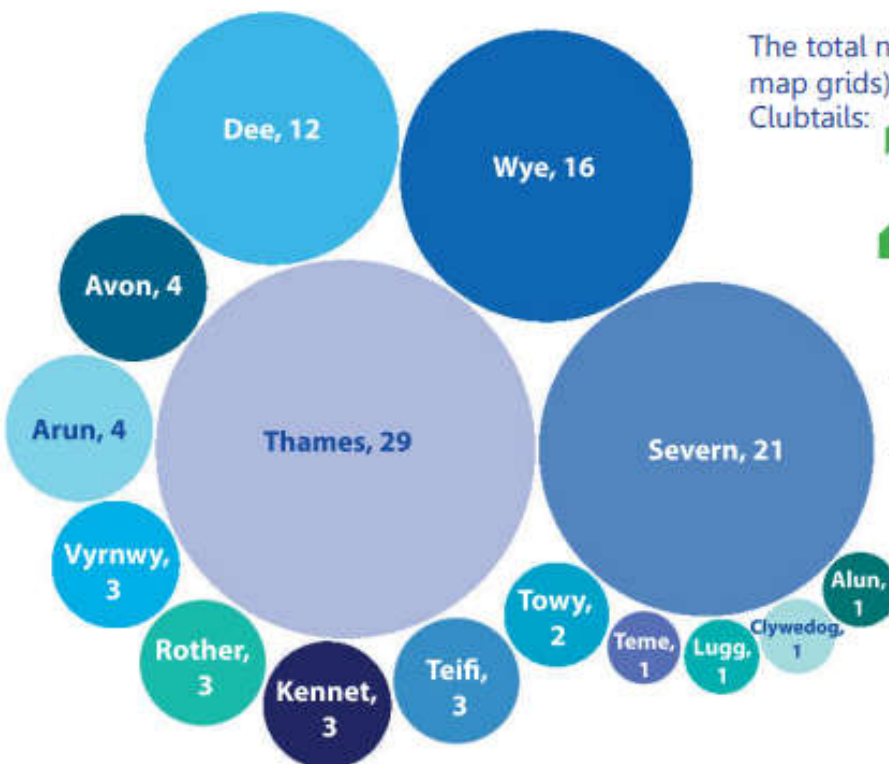


Thanks to the hard work of all the volunteers, we've had a fantastic number of records to gather and analyse from last year's Clubtail Count survey. And here are the results....

# 110

The total number of volunteers who submitted results to the first ever national, citizen science survey for the Common Clubtail Dragonfly.

## Number of Volunteers per River



The total number of monads (1km<sup>2</sup> map grids) surveyed for Clubtails:

# 206

The average number of visits to a monad:

# 3



# Kids Corner

## Christmassy Dragonflies !?

If your parents have got a few of the old school clothes pegs lying around, and a few lolly pop sticks, then you can make these little sparkly dragonfly numbers to hang on your Christmas tree. Just use a bit of glue to stick the lolly stick wings on the peg in an X shape, Then paint them Christmassy colours and sprinkle a bit of glitter on them before the paint dries. You can add googly eyes if you've got them, or just draw them on, then find some Christmassy string and hey presto — Christmas dragonflies.



# BDS – Sussex Field Trips

## Pevensey Perambulation

Sunday 1st July 2018



We picked one of the hottest days of 2018 to go dragonfly spotting at Pevensey levels this year, and I think that if it hadn't been for the kind ministrations of one of the landowners and his family, taking us round in his open top landrover, we may all have passed out well before we could finish the surveys. As it was we had an absolutely magnificent day, with some fantastic wildlife finds as well as a good list of dragonflies. In the morning we visited [Montague Farm](#), one of two stunning organic farms where the landowners have done huge amounts of work for wetland wildlife that we visited that day. In the afternoon, we visited [Court lodge Organics](#).

There is some healthy competition between these two landowners for who could get the greatest number of species listed! And in the morning we found a healthy ten species at Montague, along with Fen raft spider, Tubular water dropwort, hundreds of toadlets and much much more. The game was on .... And after a brief stop to fan ourselves, we headed to Court lodge to see how many species we could find.

### TOTAL Dragonfly Species seen on the day at Montague Farm

Emerald Damselfly	Lestes sponsa	Emperor	Anax imperator
Azure Damselfly	Coenagrion puella	Broad-bodied Chaser	Libellula depressa
Variable Damselfly	Coenagrion pulchellum	Black-tailed Skimmer	Orthetrum cancellatum
Blue-tailed Damselfly	Ischnura elegans	Common Darter	Sympetrum striolatum
Brown Hawker	Aeshna grandis	Ruddy Darter	Sympetrum sanguineum

## Continued...

Our afternoon was no less of a scorcher, but sunhats akimbo, and a bit of dabbling around a newly desilted pond on the edge of the Levels helped us to cool off whilst admiring a bustle of busy dragonfly activity. This kept us amused for some time, as well as providing us with a number of good wildlife spots including unusual whirligig beetles and plants.

As we toured the rest of the site, taking in reedbed restoration and scrapes formed from land drain breaking, we were lucky enough to have a close encounter with a Marsh harrier, and a flock of Lapwing amongst other things. It really is amazing to see what turns up in a landscape when you provide some of our rarer wetland habitats. Unfortunately for Montague Farm, Court Lodge Organic came up trumps and we saw 15 species of dragonfly and damselfly, making it a very satisfying event.

Ice creams were had all round afterwards!



### TOTAL Odonata Species on the day

DAMSELFLIES		TRUE DRAGONFLIES	
Emerald Damselfly	<i>Lestes sponsa</i>	Brown Hawker	<i>Aeshna grandis</i>
White-legged Damselfly	<i>Platynemis pennipes</i>	Emperor	<i>Anax imperator</i>
Azure Damselfly	<i>Coenagrion puella</i>	Hairy Dragonfly	<i>Brachytron pratense</i>
Variable Damselfly	<i>Coenagrion pulchellum</i>	Broad-bodied Chaser	<i>Libellula depressa</i>
Common Blue damselfly	<i>Enallagma cyathigerum</i>	Four-spotted Chaser	<i>Libellula quadrimaculata</i>
Red-eyed Damselfly	<i>Erythromma najas</i>	Black-tailed Skimmer	<i>Orthetrum cancellatum</i>
Blue-tailed Damselfly	<i>Ischnura elegans</i>	Common Darter	<i>Sympetrum striolatum</i>
		Ruddy Darter	<i>Sympetrum sanguineum</i>



# Broadwater Warren Wander

**If you want the thrill of discovery,  
come on a Dragonfly Field Trip !**

On Sunday 5<sup>th</sup> August 2018 a band of 15 set off, into the heart of the RSPB's Broadwater Warren Nature Reserve. It was a beautiful, hot and sunny day, with clear skies and little breeze. The treat of an organised field trip is that you can boldly go where no man has gone before, well, where the public can't go into the heath, to visit its wet flushes and small ponds, woodland and ghyll.



What a day it turned out to be! Of course we saw the common, lots of them, countered by slight disappointment at not seeing the Black Darter heathland specialist or Keeled Skimmer and too brief a glimpse of a possible White-legged Damselfly. No regrets though, for we recorded 18 species, including collecting an exuvia by Decoy Pond, later confirming a Brilliant Emerald.

After the open heath and the plethora of hawkers, darters, chasers and damselflies, we snuck into the woodland and explored along a classic Wealden ghyll stream.

The highlight of the day was surely going to be the Golden-ringed Dragonfly, patrolling up and down his beat, with a couple of others at small shady ponds encountered on the way.



## Continued...

The ultimate destination was the large Decoy Pond, buzzing with dragonfly fauna. Over lunch an idle search discovered exuviae and added another species to our growing list, along with Common Blue and Red-eyed Damselflies out on the open water.



The aerial display of Emperors and Brown Hawkers was captivating, but I managed to tear my gaze away to peer down into the marginal vegetation. There on a soft rush stem floating on the water was a pristine Small Red Damselfly, the first one to be confirmed at Broadwater Warren and definitely worth a trip back in future to check the little heath pools and flushes.

P Belden



# Willow Emerald at Broadwater Warren

Sitting in Brighton after breakfast, on a hot and sunny day, the beckoning beach and refreshing swim was tempting, especially having to travel virtually to Tunbridge Wells in Kent. On arrival at Broadwater Warren for our SDS guided walk, we were met by a smiling and enthusiastic Samantha Crocker, RSPB's Dragonfly Surveyor (yes, really – official title) and immediately saw a Migrant Hawker overhead, then a Common Darter, I started to warm me to the “task” very quickly. By the time we reached that first small pond, and five species all doing their stuff, I was lost in the heath and the stunning beauty and various antics of our dragonflies. Odonata-less Brighton beach could wait, this was going to be a glorious day ... and it was. We didn't get to see one of these spectacular and delicate looking damselflies on the day, but it will definitely be worth a trip back to find one later. Many thanks to the RSPB team for their support.

Phil Belden



Willow Emerald at Broadwater Warren © S Crocker





# **EYE — D Corner**



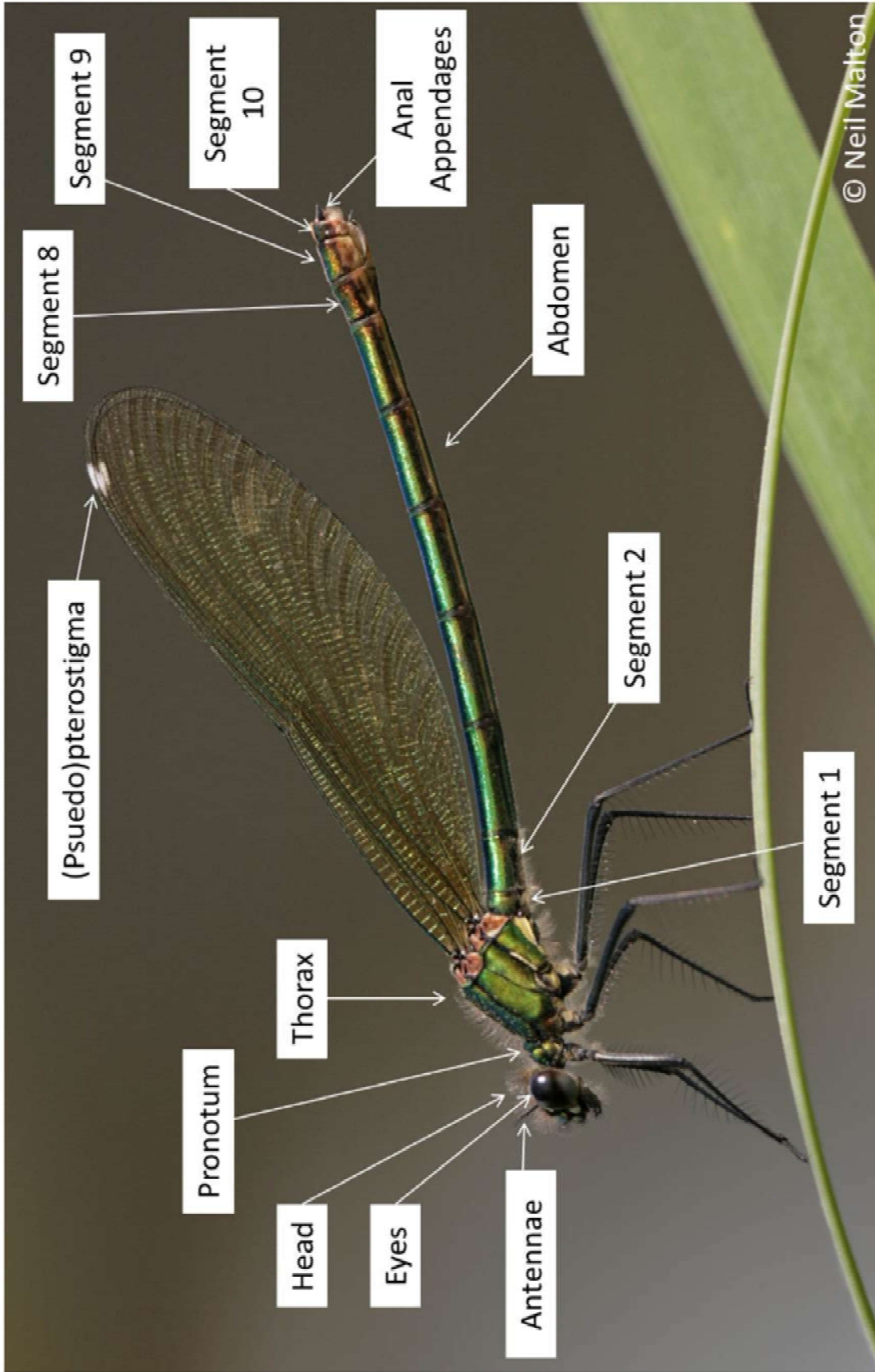
## **Royal Damsel !?**

**Nice of the Duchess of Sussex  
to honour Odonata**

**Confused by dragonfly and damselfly terminology? These handy diagrams from the British Dragonfly Society web pages should help you learn your pterostigma's from your pronotums!**

Damselflies are insects in the sub-order Zygoptera (meaning "paired-wings"). All four wings are near enough equal in size and shape. They are usually small, weakly flying insects that stay close to the water margins or water surface. When at rest, most species hold their wings along the length of their abdomen. The Emerald Damselflies are an exception and usually hold their wings partly open when at rest. They are therefore known as Spreadwings in North America. The eyes are always separated, never touching. The larvae have external plates (lamellae) at the end of the abdomen, which act as accessory gills.

The labelled diagram below may help to define the various anatomical terms used in the descriptions in the species pages.



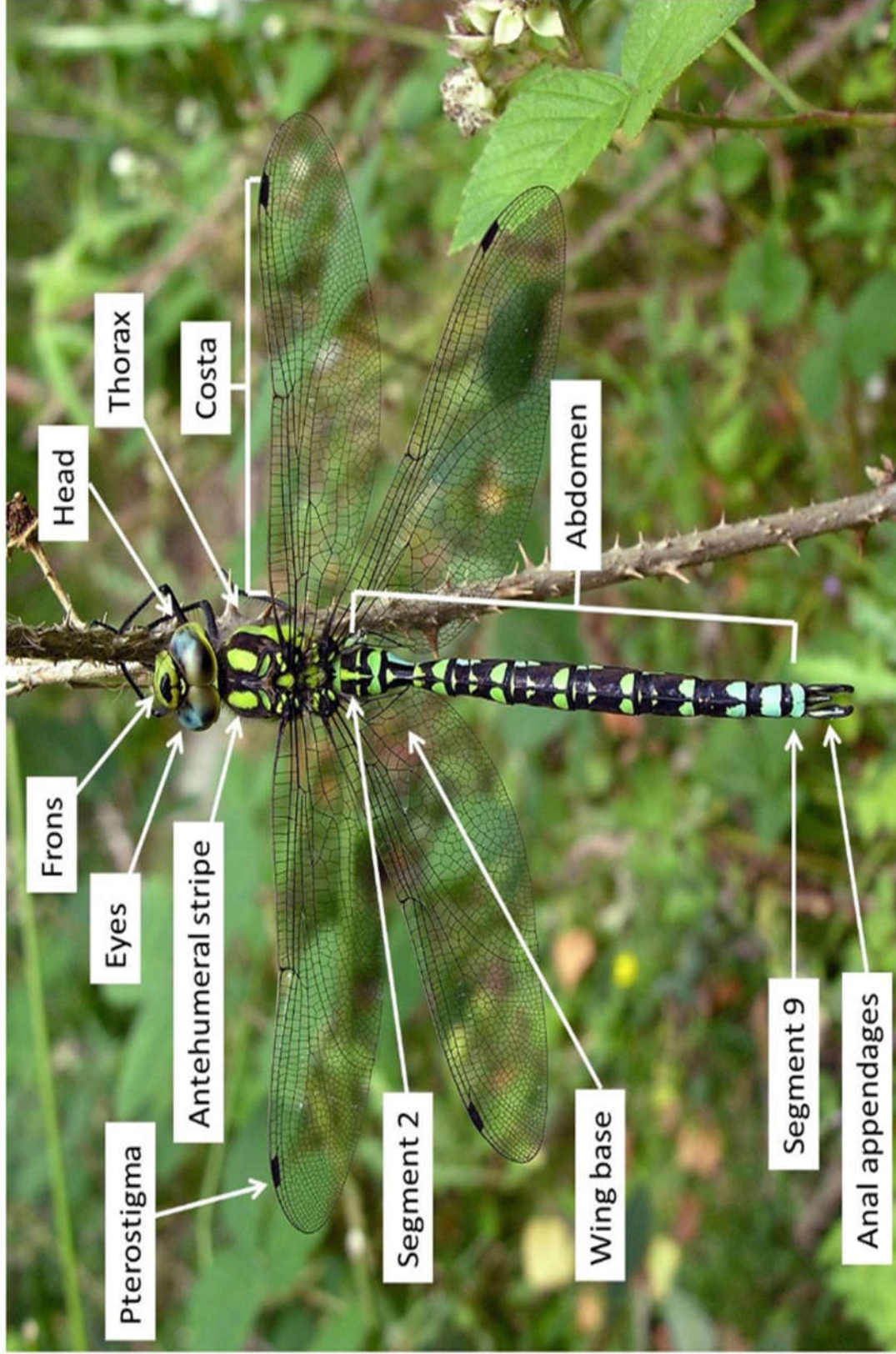
© Neil Malton



## Dragonflies

Dragonflies are insects in the sub-order Anisoptera (meaning "unequal-winged"). Hind wings are usually shorter and broader than forewings. They are usually large, strongly flying insects that can often be found flying well away from water. When at rest, they hold their wings out from the body, often at right angles to it. The eyes are very large and usually touch, at least at a point. The larvae have no external lamellae (gill plates).

The labelled diagram below may help to define the various anatomical terms used in the descriptions in the species pages.





# National News—BDS

If you have a dragonfly photo, but are not sure which one it is, then try the BDS' new dragonfly identification page [here](#).

Identify Your Dragonflies...with our new help page!



## BDS Autumn Meeting and AGM

This year's BDS meeting will be on Saturday 17th November at Newcastle University, Newcastle, NE1 7RU. Members and non-Members are welcome.

Please **book your place online at Eventbrite**  
[www.eventbrite.com/e/bds-annual-meeting-agm-tickets-48987966326](http://www.eventbrite.com/e/bds-annual-meeting-agm-tickets-48987966326)



# 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 [bobforeman@sussexwt.org.uk](mailto:bobforeman@sussexwt.org.uk) or enter them into i record on the web.





# 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. 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 Bob Foreman, 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**



**Sussex Dragonfly Society Newsletter**

# Top Ten Things To Do To Keep Dragons Flying In Sussex



1. Report your sightings either at [www.brc.ac.uk/irecord](http://www.brc.ac.uk/irecord), or to the Sussex Biodiversity Records Centre at Woods Mill
2. Take photos of unusual dragonflies that you see and post them on the SDS website or SWT twitter feed
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. Create a pond in your garden
5. Become a member of your local group – No charge, just send your contact details to [fransouthgate@sussexwt.org.uk](mailto:fransouthgate@sussexwt.org.uk) or c/o Fran Southgate, 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 damselfly fauna
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. Don't pour chemicals down the drain



A fully revised and updated **Britain's Dragonflies: A Field Guide to the Damselflies and Dragonflies of Great Britain and Ireland** by Dave Smallshire and Andy Swash was published this August.

*Britain's Dragonflies* is a comprehensive photographic field guide to the damselflies and dragonflies of Great Britain and Ireland. Written by two of Britain's foremost Dragonfly experts, this fully revised and updated fourth edition features hundreds of stunning images and identification charts covering all 57 resident, migrant and former breeding species, and six potential vagrants.

This redesigned, updated and expanded edition features:

- An introductory spread that covers the twelve types of dragonfly and damselfly with a to-scale example of each, including additional introductory sections for the most difficult groups; blue damselflies, hawkers and darters.
- Over five hundred stunning photographs – many of which are new – and even more b/w and colour illustrations
- Up-to-date distribution maps that reflect recent range changes and records
- Detailed, easy-to-use identification charts for adults and larvae



Princeton  
University  
Press

# Contacts

## Core Group

Chair:	Ben Rainbow — <a href="mailto:ben.rainbow@wealden.gov.uk">ben.rainbow@wealden.gov.uk</a>
Editor & Wetland advisor:	Fran Southgate - <a href="mailto:fransouthgate@sussexwt.org.uk">fransouthgate@sussexwt.org.uk</a>
Sussex BRC:	Bob Foreman - 01273 497521 - <a href="mailto:bobforeman@sussexwt.org.uk">bobforeman@sussexwt.org.uk</a>
Website: & Publicity	<b>Vacant position.</b> Please contact Fran Southgate
Secretary:	Bob Foreman / Penny Green — <a href="mailto:penny@knepp.co.uk">penny@knepp.co.uk</a>
Technical specialists:	Phil Belden — <a href="mailto:philbelden@sussexwt.org.uk">philbelden@sussexwt.org.uk</a>

## Other Useful Contacts

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

# Donations

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

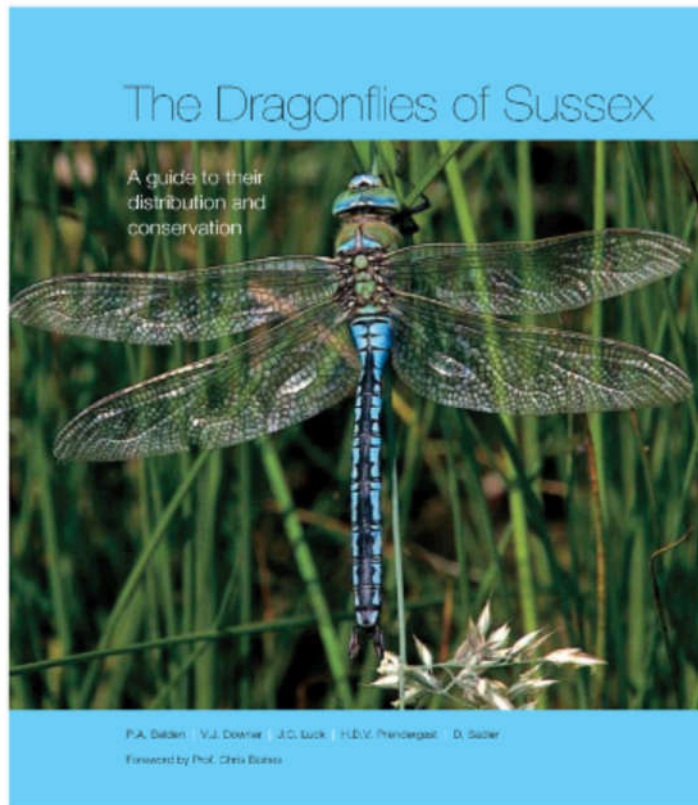
If you would like to make a donation towards dragonfly work and restoring wetlands for dragonflies then please write a cheque made out to British Dragonfly Society (Sussex Group), and send it FAO Fran Southgate, Dragonfly project, c/o Sussex Wildlife Trust, Woods Mill, Henfield, BN5 9SD. All donations will be reserved exclusively for dragonfly and damselfly work, surveys, and wetland 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](http://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](http://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

*Generously sponsored by: Environment Agency, English Nature, Southern Water, East Sussex County Council, West Sussex County Council, Brighton & Hove City Council, Chichester District Council, Horsham District Council, Wakehurst Place, Profile Security, Temple Environmental Consultants, The Wetland Trust, Gravetye Manor, Harveys Brewery.*

## Sussex Dragonfly Society Newsletter