

# British Dragonfly Society Sussex Group Newsletter Autumn 2013

No 31



## Small red damselflies breeding like rabbits? ...



. . Well, perhaps not quite like rabbits, but we do have evidence that they are breeding in places which have previously been unrecorded. These amazing photos were taken this year by our Dragonfly Committee Chair, Ben Rainbow on an area of heathy pools near Pulborough Brooks which were recently restored. Both the picture of the male and female clasp and ovipositing, and the picture of the exuviae are proof that long-term breeding is occurring at the site.

Previously, the main records of Small reds have come from their stronghold on Ashdown Forest, with a small smattering of other records from other heathy Sussex sites. So an interesting question is, how did they get to Pulborough? Did they migrate from nearby habitat, or have they always been here but under-recorded?

Either way, it is great news, and worth keeping an eye out for them in the future. It is also great evidence of how the restoration of small wetland features can have an almost immediate positive impact on wetland wildlife.



# Dragonfly Study Shows How Ecosystem Changes Affect Biodiversity



August 14, 2013

Image Credit: [Thinkstock.com](http://Thinkstock.com)

Rice University researchers have found that communities in nature are likely to be a lot more sensitive to change than previously thought.

The study findings, published in [Nature Communications](http://NatureCommunications), points to a need for scientists concerned with human impact on the biosphere to take a different look at the consequences of altering the dynamics of a population. One example of such alteration would be removing large members of a species through overfishing, according to ecologist [Volker Rudolph](http://VolkerRudolph).

Natural communities are greatly altered through human impact, and ecologists have long strived to determine how these changes influence communities,” Rudolph also noted the disappearance of a species is the most extreme cause of biodiversity loss, but not the only one. “That’s the last thing that happens after you mess up the entire ecosystem for a long period of time,” he said. By the time a species disappears entirely, changes forced upon the structure of a population — such as the ratio of young to old in a species — have already been felt up and down the [food chain](http://foodchain).

## Continued...

Species play various roles in the environment, and their effects on the environment change as they progress through their life cycles, to the degree that altering these life “stages” within a species could have a significant impact. To prove this theory, he enlisted the help of Rice graduate student Nick Rasmussen.

The researchers chose [dragonflies](#) and water-diving [beetles](#) as representative of species that have major impacts on their respective communities — in this case, fishless ponds. The team created dozens of miniature environments to analyze that impact, and then they manipulated the presence of different developmental stages within a predator species in each pond. This helped the researchers determine that such changes did alter the dynamics of complex ecosystems in a measurable way.

“Other than being the largest and most voracious predators in these communities, they’re totally different,” Rudolf said of the apex predators. “We figured if we saw any generalities across these two species, then there’s something to our theory.”

The team found that the structure of the entire community and how the whole ecosystem functioned could be altered by changing which size of life stage were present in a population. Rudolf also found it important that changing the structure of populations sometimes had bigger effects on the ecosystem than changing the predator species.

The results, he said, “challenge classical assumptions and studies that say we can make predictions by assuming that all individuals of a species are the same. You don’t expect a toddler to do the same thing as a grownup, and the same is the case for animals.”

The study might also explain the reason why some human activities, such as size-selective harvesting, can alter the structure of entire food webs in some ocean systems. Rudolf said that this happens even when no species had gone extinct and the total biomass of the targeted fish remained the same.

“While these changes would be hard to predict by the classical approach, our results suggests such changes are expected when human activities alter the population structure of keystone species in an ecosystem,” Rudolf said. “Thus, natural ecosystems are likely to be much more fragile then we previously thought.”

**Source:** April Flowers for  
redOrbit.com - Your Universe Online

Image of Diving beetle from DK  
Books





# A rare emperor at the fort

On Wednesday 30th October the weather was fine and sunny in the morning so I visited my default local patch, the Old Fort at Shoreham Harbour, for what must be the thousandth time! Dragonflies were not in my thoughts as I don't recall ever seeing any species there previously. Before checking the piers and sea for birds I thought that as the weather was so good I'd have a look at the lizards on the fort walls. Looking down into the 'moat' I immediately noticed a Hawker-type dragonfly, about Migrant Hawker-sized, flying along the eastern side of the wall. I checked it in the binoculars and saw it



Vagrant Emperor © D Sadler

was brown-bodied with a bright blue segment behind the thorax. Without a doubt, a male Vagrant Emperor, a distinctive species that I'm familiar with, having seen it on a number of occasions abroad. I watched it from my elevated position for about 5 minutes as it hawked back and forth along the wall, at only 5-6 metres distance. Unfortunately, it didn't perch and flew off and away. I searched for an hour or so but was unable to re-locate it. I assumed that was the last of it as the weather deteriorated for the rest of that day and for subsequent days.



Vagrant Emperor © D Sadler

Saturday 2nd November was the first bright day since my original sighting, albeit quite cool and breezy, but at about 09:30, as I walked around the Moat, again on the east side, a dragonfly flew in front of me and immediately perched down in the grass, sheltering from the wind in the sunshine. It was the Vagrant Emperor and this

time it remained perched allowing close approach so I took a few photographs. I alerted various people I thought would be interested but at that time only one other observer saw it. It was still in the same position when I left after about an hour, but was gone when I returned a couple of hours later. This wasn't surprising as there were many people and dogs around and the wind had increased considerably with attendant showers. I visited the site on subsequent days but did not see the Dragonfly again.



# Club-tailed Dragonflies are staying out late!

A mature male Club-tailed Dragonfly (*Gomphus vulgatissimus*) was spotted out later than any Sussex Club-tail has ever been seen before. Recorded by Paul Stevens whilst out fishing on the 8th of August this year, this is the latest record we have in the database for the species, and over a month later than we would otherwise expect to see the species. Prior to this, the latest date we previously had on record for Sussex for the species is 3rd July, and that was in 1991!

Whether this is a function of the late start to the dragonfly season this year or it is simply a local anomaly remains to be seen. We will be keeping our eyes out for Club-tails over the next few years and we will report back any other unusual phenomenon that we find.



Mature male Club-tailed Dragonfly  
© P Stevens

## The Keeled Skimmer makes a rare appearance at Iping

A male Keeled Skimmer was found and photographed by Dorian Mason, at Iping Common in August. This is the first time this species has been recorded at this site since 2005. This species favours wet heath areas usually where there is Sphagnum moss, and can be spotted around acid pools, streams and ditches. The flight season runs from late June to early August. This species is rather scarce in Sussex, with a handful of records in the Iping/Trotton area in West Sussex; it's stronghold on the Ashdown Forest in East Sussex and a few other one-off records in other areas of Sussex.



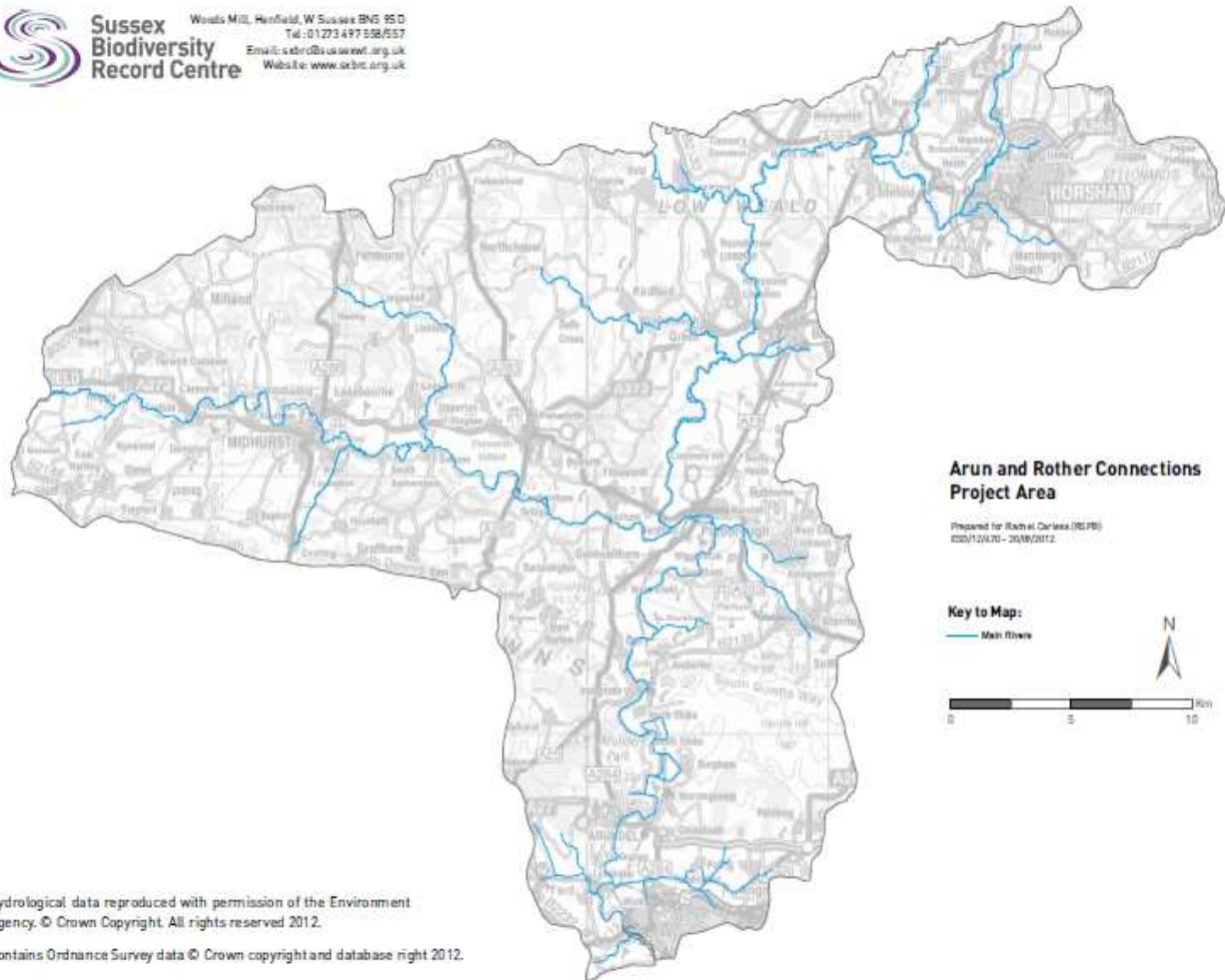
© Dorian Mason

# Putting dragonflies back on the ARC

We frequently hear about big issues like flooding, drought, climate change and the decline of biodiversity, but it seems impossible that we as individuals can do anything to help tackle such huge issues at such massive scales. The Arun and Rother Connections (ARC) project is an attempt to remove the sense of powerlessness felt by local communities and to help support them to positively change in their environment. We are therefore please to announce that the Heritage Lottery Fund has given three years of funding to this project covering an entire river catchment.

The money will help local people tackle a number of big issues. Among other things, at a landscape scale we will be helping to tackle invasive aquatic species such as Giant hogweed, we will be funding people to create 'Rain garden' solutions to urban flooding, and we will be providing key villages with support to reduce their local water use at a community scale.

The Arun & Rother River catchments are in West Sussex, and spread across over 70,000 hectares from Littlehampton, to Horsham to Petersfield. Continued .....





## Continued...

The project will be funding a whole suite of education and innovation projects, and a wide range of biodiversity and habitat restoration across the catchment. Funding will be available for things as diverse as pond restoration, toad monitoring, disabled access and wetland bushcraft training. We want local people to be involved as much as possible, and to tell us how we can help them make a difference to their river catchment at a local scale.



**This is where you can get involved.** The Upper Arun Site of Special Scientific Interest (SSSI) was originally designated for its dragonfly interest, but we no longer have a true picture of how they are faring in the area.

If you can help with surveys, particularly of the rare Club-tailed dragonfly, or if you have an idea for a wetland enhancement (including ponds, species rich floodplain meadow restoration, wet woodland restoration, reedbed and fen creation, river and chalk stream rehabilitation or even small things like barn owl boxes, wader scrapes and management plans for Local Wildlife Sites), then please contact Rachel Carless, Project Manager at [Rachel.Carless@rspb.org.uk](mailto:Rachel.Carless@rspb.org.uk) or Wetlands Officer, [fransouthgate@sussexwt.org.uk](mailto:fransouthgate@sussexwt.org.uk)



Upper Arun SSSI © R Howorth

# Rare dragonfly returns to Cheshire

Cheshire Wildlife Trust have brought a regionally extinct dragonfly back to Delamere Forest in the first project of its kind ever undertaken in Cheshire. The white-faced darter was last seen in Delamere in 2003, and was lost due to changes in the water quality of its favoured pools and over-shading from the forest. A combined habitat improvement scheme led by the Forestry Commission and meticulous translocation of young dragonflies from 'donor' sites elsewhere has now seen the species in the air once again. It's now hoped that over the next five years a self-sustaining population of white-faced darters will recolonize their former stronghold, and regain their place as the iconic emblem of Delamere

The return of the dragonflies comes after several years of dedicated work to reinstate and improve lost habitats in partnership with the Forestry Commission, Cheshire West & Chester Council and a meticulous translocation process and carefully planned reintroduction. The project follows the successful reintroduction of the species in Cumbria, where Cheshire Wildlife Trust staff have been observing the techniques needed to achieve the ground-breaking move.

"We're extremely excited after months of preparation to see this iconic dragonfly species back where it belongs", said Dr. Vicky Nall who has been heavily involved in the extensive research behind the project.

The Trust is also inviting people to help out with the project as volunteers, tracking the progress of the emerging adults and other dragonfly species in the area.



If you would like to take part contact Dr. Vicky Nall on [vnall@cheshirewt.org.uk](mailto:vnall@cheshirewt.org.uk)

Cheshire today Thursday, July 04, 2013



# Habitat and other preferences of two dragonfly species in Hungary

We generally know very little about the seasonal and habitat nuances of our various dragonfly species. So we thought you might like to know about a recent study in 2011, on the abundance, phenology, sex ratio, emergence pattern, mortality and larval emergence behaviour of two riverine dragonfly species (*G. flavipes* (River club-tail) and *G. vulgatissimus* (Common club-tail — Gomphidae) on the Lower-Tisza reach at Szeged in Hungary. Only Common Club-tails are present in Sussex, however the results of the study are still interesting, and can provide us with some insights into the behaviour of this dragonfly.

Three 20 meter long sampling sites were chosen and searched systematically for exuviae, dead specimens and dragonfly wings, which were left behind by bird predators. At the studied reach of the river two species *G. flavipes* and *G. vulgatissimus*, formed stable populations.

*G. flavipes* was much more abundant than *G. vulgatissimus* in Hungary, but exuviae searches indicated a slight excess of females in the *G. vulgatissimus* population. *G. vulgatissimus* started to emerge first as a 'spring species', while *G. flavipes* started to emerge about a month later showing the characteristics of a 'summer species'. The distance crawled by the larvae from the water-front to the emergence site differed significantly between the two species, and it was *G. vulgatissimus* which crawled further, which might explain why they are often so hard to find.



Picture Left.  
Common Club-tail  
D Sadler

# Dragonflies See Things Using On-Off Switches In Their Brains

Asian Scientist August 19, 2013

*AsianScientist* (Aug. 19, 2013) – Researchers in Australia have discovered a novel and complex visual circuit in a dragonfly's brain that could one day help to improve vision systems for robots. Dr Steven Wiederman and Associate Professor David O'Carroll from the University of Adelaide's Center for Neuroscience Research have been studying the underlying processes of insect vision and applying that knowledge in robotics and artificial vision systems.

Their latest discovery, published in *The Journal of Neuroscience*, is that the brains of dragonflies combine opposite pathways – both an ON and OFF switch – when processing information about simple dark objects. To perceive the edges of objects and changes in light or darkness, the brains of many animals, including insects, frogs, and even humans, use two independent pathways, known as ON and OFF channels, explains lead author Dr Steven Wiederman. “Most animals will use a combination of ON switches with other ON switches in the brain, or OFF and OFF, depending on the circumstances. But what we show occurring in the dragonfly's brain is the combination of both OFF and ON switches.”

This happens in response to simple dark objects, which are likely to represent potential prey to this aerial predator, says Dr Wiederman, who adds that this circuit may also be present in other animals. The researchers were able to record their results directly from ‘target-selective’ neurons in dragonflies' brains, by presenting the dragonflies with moving lights that changed in intensity, as well as both light and dark targets.

“We discovered that the responses to the dark targets were much greater than we expected, and that the dragonfly's ability to respond to a dark moving target is from the correlation of opposite contrast pathways: OFF with ON,” he says.

Understanding how visual systems work may be useful in the the development of neural prosthetics and improvements in robot vision, says Dr Wiederman. It may also result in new engineering applications in target detection and tracking.

“A project is now underway at the University of Adelaide to translate much of the research we've conducted into a robot, to see if it can emulate the dragonfly's vision and movement.

The article can be found at: [Wiederman SD et al. \(2013\) Correlation between OFF and ON Channels Underlies Dark Target Selectivity in an Insect Visual System](#)



# Rare Norfolk Hawker

## Moves to Cambridgeshire

The British Dragonfly Society has confirmed that a new breeding population of rare Norfolk Hawker dragonflies has been found at Paxton Pits Nature Reserve, Little Paxton. This is the first breeding site to be discovered outside of Norfolk and Suffolk since Norfolk Hawkers were lost from the Cambridgeshire fens 120 years ago.

Dr Pam Taylor, President of the British Dragonfly Society, said: "The Norfolk Hawker is an endangered dragonfly protected by law, so the discovery of a totally new population is very exciting indeed. The main threats to the species in its Norfolk Broads and coastal Suffolk habitats are sea level rise and saline intrusion into freshwater dykes and ditches. The discovery of a new inland site, well protected from these threats, could help to preserve the future of Norfolk Hawkers in the UK."



The first recent sighting of Norfolk Hawker in Cambridgeshire came two years ago when a male was seen holding territory over water soldier plants in Hayling Lake at Paxton Pits Nature Reserve. This season the first reported sighting came from Potton Wood, just over the border in Bedfordshire. This prompted a search for the possible source of this dragonfly and a number of exuviae (shed larval cases) were found at Paxton Pits. Further searches by boat a few days later revealed no fewer than 26 Norfolk Hawkers have already emerged from Hayling Lake. If they return to breed successfully again later this month, the future of Norfolk Hawker dragonflies in Cambridgeshire could be secure.

Norfolk Hawker is a large gingery-brown dragonfly with conspicuous apple-green eyes. It has largely clear wings, two yellow stripes on each side of the thorax and a yellow triangle near the top of the abdomen. After living as aquatic larvae for two years, adults usually emerge from late May onwards. In most years the species can still be seen flying until early August.

Norfolk Hawker was listed as a Biodiversity Action Plan (BAP) species in 2007. The localised distribution of this species in low-lying areas of the Norfolk Broads and coastal marshes make it vulnerable to extinction from climate change and sea-level rise. Norfolk Hawker dragonfly is fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and is described as Endangered in the Odonata Red Data List (2008).

**Donna Rockett June 2013**  
(images: HDC)



# Dragonfly all set to be part of dengue-control measure in Tamil Nadu

**Aug 2, 2013 . The Times of India. Pushpa Narayan**

In their fight against the mosquito, first they tried a fish; now they are bringing in a bigger insect. The dragonfly, a carnivorous insect, will be a vital part of the dengue-control measure in the state of Tamil-Nadu this year. The dragonfly eats as much as 20 mosquitoes in an hour, and is therefore a highly tuned pest control agent which should be encouraged to flourish. With no known 'adverse effects', dragonflies constitute the perfect natural pest control (as far as we know they don't bother humans, they don't have negative impacts on other species, and they are not considered a pest), flying faster and higher, and having a more targeted impact than anything that humans could design.

After scientists in the US, Australia and Myanmar studied how some species of dragonflies have been bringing down the population of mosquitoes, scientists from the Madurai-based Centre for Research in Medical Entomology (CRME) conducted a laboratory experiment and found the Indian species, *Bradinopyga geminata*, to be equally effective. The results were published in an international journal, and dragonflies are now being appreciated in new and unprecedented ways for their ability to help humans reduce some of these diseases which affect us so badly. Yet another reason to like them!





# Bamboo dragonfly making village in the heart of Hanoi



I recently saw a model dragonfly performing a stunning feat of balance similar to those that the real live ones are able to do. At a friends house, this tiny dragonfly balanced perfectly in mid air on the edge of their bookcase.

The dragonfly was made in such balanced proportions that it could be placed with its' only support on the tip of its nose, where it will elegantly bob in mid air.



It's a simple thing, but dragonflies such as these are made with immense care and attention by local people as far away as Vietnam. Sometimes its good to know where these things come from, and that dragonflies create inspiration across the world, not just in Sussex!

**Ngoisao.net. August 2013**





# EYE — D Corner No 13

## Hairy Dragonflies

The Hairy dragonfly (*Brachytron pratense*) is the UK's smallest Hawker, and one of the earliest dragonflies to emerge, flying from early May onwards until mid July. When the dragonfly is perched, the hairy thorax from whence it gets its name is very obvious. Other identification points include oval spots on each abdominal segment and a long, thin pterostigma. The male is dark in appearance and the spots on the abdomen are blue. It has green ante-humeral stripes. The female has yellow markings and much shorter ante-humeral stripes.



**Hairy Dragonfly male,  
left © D Sadler**



**Hairy Dragonfly female,  
right © S Ewan**



## Continued ...

### Distribution

Hairy dragonflies are fairly common and widespread across Sussex, and are present and/or breeding in most of our river catchments, but are also slowly expanding their range both in Sussex and nationally. Uncommon but increasing its range. Now widely scattered through England, Wales and Ireland but rare in Scotland.

### Habitat

They prefer unpolluted still waterbodies such as lakes, ponds, canals and ditches, with abundant vegetation.

### Threats

This species appears to be badly affected by intensive farming, and poor water quality, although extensive grazing by cattle seems to help maintain a slightly more open vegetation structure which the dragonflies prefer



### Confusion with other species

The Hairy could potentially be confused with other Hawker dragonflies, but its early flight season and relatively small size are good clues to its identity.

**Southern Hawker (top right) © B Rainbow**

**Migrant Hawkers (top left) © J Redford**

**Common Hawker (bottom left) © D Sadler**



# Local News

## It's that time of year to get your records in!

Thank you to everyone who has got their dragonfly records in to the record centre already for 2013, whether it be via Living Record (<http://www.livingrecord.net/>), iRecord (<http://www.brc.ac.uk/irecord/>) or by sending your spreadsheets in, all your records are welcome.

Once you have sent your records in they get entered in to the main database here at the record centre, Recorder 6, they then get checked by the Sussex dragonfly rarities committee (that's Dave Chelmick and John Luck) and then we pass them on to the British Dragonfly Society who then add them to the NBN Gateway. This means that you can have a good idea about what's going on with Sussex dragonflies, by simply visiting the Gateway and having a look at the records on the map. In 2012 we entered 2,377 let's see if we can top that this year, so please send in your records!

Please send in photos/descriptions of the more difficult to identify species to aid the verification process. It is important to note that all teneral insects should be treated with caution.

**Dave Chelmick has kindly written these Guidance Notes on recording dragonflies in Sussex:**

### **Demoiselles (Calopterygidae)**

All records should be based upon male insects and preferably fully adult. Females are extremely variable and cannot be relied upon

### **Blue and Red Damselflies (Coenagrionidae)**

**Blue-tails (*Ischnura*)** – Records can be accepted for both male and female insects. Little confusion is likely in Sussex

**Blue Damselflies (*Coenagrion* and *Enallagma*)** – Records should only be accepted for mature adult male insects. Female records should never be accepted unless specific details are provided eg vulvar spine on *Enallagma*, pronotum shape, *Coenagrion*

**Red Damselflies (*Pyrhosoma* and *Ceriagrion*)** – Records can be accepted for both male and female insects. Black females occur in both genera and can cause confusion.

**Red Eyed Damselflies (*Erythromma*)** – Records can be accepted for both sexes. Females are black and can be easily separated: complete thoracic stripes (*E. viridulum*) partial stripes (*E. najas*). Caution: the black female (rare in Sussex) of *Pyrhosoma nymphula* looks very similar to female *Erythromma najas*.

**White Legged Damselflies (Platycnemididae)** – Records can be accepted from both sexes.

Only one species occurs in UK and is easily separated from other blue damsels. Juvenile (white) insects can also be identified; the black markings along the top of the abdomen are diagnostic in both sexes.

**Emerald Damselies (Lestidae)** - Only one species (*Lestes sponsa*) occurs in the county and male and female records can be accepted. However three other *Lestes* species could occur.

Beware – all the following characters apply to mature adult insects only. Teneral and juveniles should be viewed with great caution.

Pterostigmas large and pale – *Lestes viridis*. This species now breeds in eastern England

Pterostigma bi-coloured half black half white - *Lestes barbarus*. This species was found in Kent



# Local News

last year and has bred in the past in coastal sites in Kent. Caution: *Lestes sponsa* has white marks at the end of its black pterostigmas.

*Lestes dryas* may still occur in the County. Like *L. sponsa* it has a black pterostigma. Separation is based upon anal appendages (males) ovipositor (females). All possible records of this species should be scrutinised in detail.

## **Hawker dragonflies (Aeshnidae)**

No particular problems, records can be accepted for both sexes

## **Club-tail dragonflies (Gomphidae)**

Quite unmistakable (both sexes). The only British dragonfly with eyes separated above the head.

## **Goldenrings (Cordulegastridae)**

Huge black and yellow dragonflies; unmistakable both sexes

## **Emerald dragonflies (Corduliidae)**

Two species easily identified when at rest (finding them at rest is the problem). Flight shots should be attempted, even blurry images can provide sufficient information for identification. Records accepted for both sexes.

## **Darter dragonflies (Libellulidae)**

Three groups; records can be accepted for both sexes. Only the true darters present problems

**Chasers** (*Libellula*) – three species all easily separated in both males and females. All species have black patches at the base of the wings.

**Skimmers** (*Orthetrum*) – two species. Wings clear no black wing patches. The smaller species (*O. coerulescens*) is very local in Sussex and the females look like darters.

**Darters** (*Sympetrum*) – some problems here. One species (*S. danae*) is small and black and, even as a juvenile, almost unmistakable. The remaining species are all tawny to red depending on age and sex and can be very confusing. This paper is not meant as an identification guide but the following notes may be useful.

Black legs (no yellow stripes) – *Sympetrum sanguineum*. Males are blood red.

All remaining species have legs with yellow stripes to a lesser or greater extent.

Continuous black markings along sides of abdomen. Males have extensive yellow basal wing colouring not always seen on females – *S. flaveolum* – very rare vagrant not seen in Sussex for many years

Underside of the eyes light blue: pterostigma pale with black borders top and bottom – *S. fonscolombii* – occasional visitor, has bred in coastal areas

If your specimen does not fit the above it will almost certainly be *S. striolatum* which is the commonest species in Britain.





# National News

## New Dragonfly Atlas published!

The Atlas of Dragonflies in Britain and Ireland pre-publication offer is now available for those of you who are interested. Due for publication in May 2014, this full colour book (approx 400 pages) from the British Dragonfly Society represents five years work by our volunteers and partner organisations to map the distribution of damselflies and dragonflies in Britain and Ireland. You can order online from FSC Publications at: <http://is.gd/odonata> . The new atlas is now available for the pre-publication offer price of £20 plus p&p.

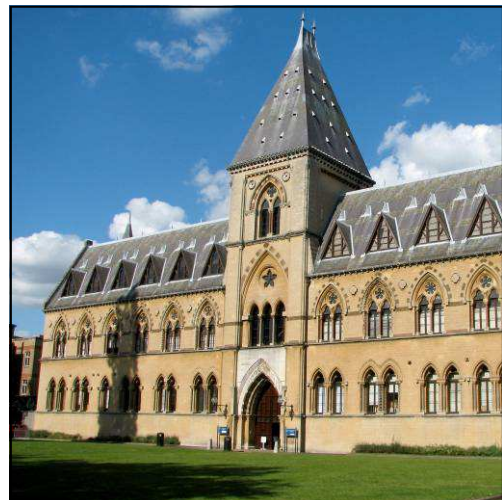
This much needed atlas summarises the distribution of over a million dragonfly records, and includes:

- Species accounts, including maps, for all 56 resident and immigrant species in Britain and Ireland
- Four pages devoted to each resident species
- Sections on habitats, conservation, distribution changes and phenology

A huge thank you to all those of you who contributed to the records in the Atlas.

## BDS Members' Day 2013

This year the BDS members day will be held at Oxford Natural History Museum on Saturday 16th November. Speakers will include Prof. Georg Ruppel & Dr Dagmar Hilfert-Ruppel explaining how sexual conflict in dragonflies affects evolution, Mark Tyrrell telling of the Beautiful Demoiselles and Scarce Chasers of the River Nene, and Dr Carl Sayer enthusing us about the special wildlife that can be found in farmland ponds.





# Dragonfly Events 2013/14

## Mince-pies & dragonfly-chat

**7pm on Wednesday 11th December 2013**

**Sussex Wildlife Trust HQ, Woods Mill,**

**Henfield, W. Sussex, BN5 9SD.**

You are cordially invited to join us for mince pies and festive cheer on 11th December. Please bring your best photos along to share with everyone (there will be a computer and projector to put them on) or if you need help identifying any species you have photographed we will be happy to help out if we can!

There will be a round up of the dragonfly year, and short presentations about dragonfly records, wetlands and ponds by different members of the committee.

If you would like to come then please let Penny Green know so we can make sure that there is enough seasonal fare for all. Email on [pennygreen@sussexwt.org.uk](mailto:pennygreen@sussexwt.org.uk) or phone on 01273 497521.



## Dates for your Diaries

### Identifying Dragonfly Exuviae

**Thursday 6th Feb 2014 7:00pm**

**BOOKINGS ONLY**

Join dragonfly committee members Ben Rainbow and Penny Green for an evening of dragonfly exuviae identification and sharing. Bring along your unidentified exuviae for expert help, share and swap exuviae collections and photograph them close up. You will be taught the main features to look for to identify all the common and some of the less common species. **Novices are welcome.** Ben will be leading the session using his own exuviae collection, but if you have any exuviae you have collected over the years then please bring them along on the day.

Contact Penny Green on 01273 497521 or [pennygreen@sussexwt.org.uk](mailto:pennygreen@sussexwt.org.uk) to book your place.



**Downy Emerald exuvia © B Rainbow**

# SDS Field Trips

## Quest for Emeralds at Buchan Country Park

Fifteen 'big game' hunters joined us for the quest for Emeralds at Buchan Country Park on 24<sup>th</sup> July and I'm pleased to say that it was a sparkling success...

We got off to a good start as we waited for the sun to appear, when we found 16 Southern Hawker exuviae around two of the small ponds near the visitor centre, a few Large Red damselflies were spotted here too. The next stop was Douster Pond where we spotted our first Emerald - a Brilliant Emerald at that. Here we also bagged Common Blue, Blue-tailed, Large Red and Red-eyed damselfly and just as we were about to move off, we noticed a Marbled White butterfly fluttering towards us, which several of us were watching through our binoculars, and just as it got close....chomp! An Emperor dragonfly ate it for his elevenses. Game over for the Marbled White, but for us it added no. 8 on to our list. Moving on around Douster pond we added Azure Damselfly, Brown Hawker, Black-tailed Skimmer and much to our delight, an ovipositing Downy Emerald - which brings us to 12 species so far....

At Boundary Pond we stopped for lunch - what a spot! Amongst the huge array of dragons and damsels copulating and engaged in aerial battles, new for the day were Four-spotted Chaser, Banded Demoiselle and White-legged Damselfly. This brings us to 15 species. But hang on a minute, we haven't seen any Darters yet, surely we can find one on our way back?...

We were easily distracted by two freshly emerged Purple Thorn moths, Lemon-scented Fern and a White Admiral, but just as we were getting close to the end a Common Darter was spotted, bringing us to a very satisfying 16 species.

We were also pleased to see an immature female 'drab form' of the Common Blue damselfly.

Thank you to all those that came along and made this a very enjoyable day out in the field. Buchan Country Park is an excellent place to see a wide range of Sussex's Odonata species, let us know if you find more than 16 - it's a challenge!

## Dragons & Damsels at Combe Haven/Filsham Reedbed

The Combe Haven trip wasn't a spectacular scoop for dragonflies due to a few factors including the good old British weather. A huge thanks to those who attended and made a donation, hopefully they learnt a lot about ecology and had a nice walk, even if we only saw very few of the winged beasts!





# SDS Field Trips

## A rare treat for a privileged few – Arun Valley field trip 6<sup>th</sup> July 2013

On the first Saturday in July, a select band set forth from Amberley railway station for the wilds of the brooks of Amberley. It was to be the perfect day; hot and sunny, with some light cloud and no wind. This was a simple linear walk, following the Arun up its course, to where it met the western Rother near Pulborough, via the Wildbrooks, before a train ride back to conclude the day.

Optimism was rife and we had high hopes at the culmination of the trip to get a sight of the elusive Club-tailed Dragonfly (*Gomphus vulgatissimus*) in its traditional favoured habitat. What a surprise therefore, right at the start of the walk, to catch a fleeting glimpse of a Club-tail as it took off from the bank-side reeds, flew over the South Downs Way bridge and headed up-river. This was well south of its usual haunts – doubts crept in, but then we saw

another male fly past along the far bank. Our eyes were now keenly focused and, amazingly, a few yards further on a female Club-tail was spotted, nonchalantly perched on the ground between river and ditch, right by the footpath. We all had plenty of time to observe, record and photograph. Over the next stretch of the riverside vegetation, we came across three more males, again, all receptive to the human presence and our prying eyes.



Club-tailed Dragonfly (male) © J Redford



Club-tailed Dragonfly (female) © J Redford

We could have packed up there and then, after that initial half hour or so and it would have gone down as a five-star day. Dave, on hand as our Club-tailed expert, said it had been the best day in all his many years of hunting this secretive beast. “Tame” is not a word one would attach to our dragonfly fauna, with their compound eyes ever watchful and their powerful wing-muscles to carry them away from too-close human encounters. But this day we encountered tame Club-tails and the photos are proof of that.

There were, of course, other treats and, as ever, it was a joy to see the Banded Demoiselles out in force, the Arun a real stronghold for this species. The uncommon Variable Damselfly was also evident, especially in the ditch systems parallel to the river and at Amberley Wildbrooks, where we also saw a range of other damselflies: Large Red, Azure, Blue-tailed and Red-eyed. Of the true dragonflies spotted at the Wildbrooks that day, an unusual sighting was the Brilliant Emerald, seen along with Broad-bodied Chaser; plus Emperor and Four-spotted Chaser to the south and Scarce Chaser to the north.

Scarce Chaser (male) © J Redford





# SDS Field Trips

Continued...

By the time we reached Stopham and the Rother/Arun junction, we needed a refreshing drink in the White Hart. We ended our day with sightings of Banded Demoiselle, Red-eyed, Azure and Blue-tailed damselflies, along with Brilliant Emerald, Scarce Chaser and Emperor dragonflies.

Also on route, we had spotted a few White-legged damselflies and a couple of Common damselflies. In the morning, we had encountered Hairy dragonfly too, giving us a grand total of 15 species for the day. A rich day all round: super linear walk and punctual trains, some interesting species seen, with the perfect dragonfly weather; but the highlight had to be the Club-tailed sightings of a number of tame specimens, for which we were all deeply grateful.



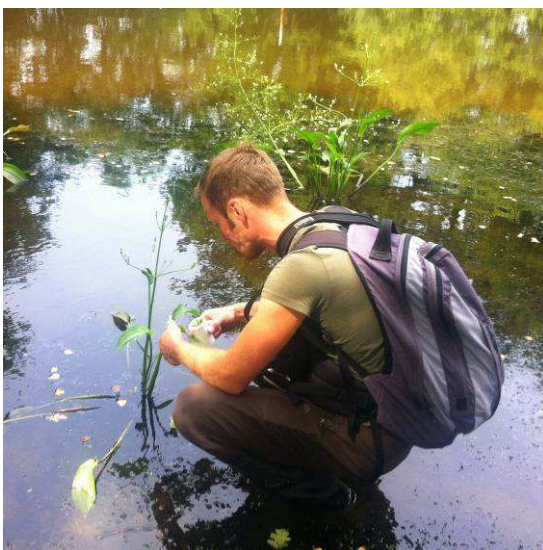
**Hairy Dragonfly (male) © J Redford**

## Committee Recording day — 16th July



An interesting day was spent perusing various waterways around Tilgate Park, St Leonards Park Ponds and Horsham. Dragonfly committee members were particularly interested in recording new species at a number of sites, by collecting exuviae rather than by recording sightings.

The weather was fair and amongst other things, we discovered three new colonies of young toads for the County, as well as recording sites which were severely affected by non native invasive plant species such as Skunk cabbage, Monkey balsam and New Zealand pygmyweed.





# 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](mailto:pennygreen@sussexwt.org.uk)

## First and Last

Our most esteemed committee member Ben Rainbow saw a 'wet-looking' teneral Large Red Damselfly which flew up from a pond at Lords Piece onto a nearby tree on the 23rd April 2013. He managed to take this picture before it flew off. See the sightings page on the Sussex Dragonfly Society website for more details



# Kids Corner

## Dragonflies made from trees!



Making dragonflies doesn't get much simpler than this — and even better, all you need is some sycamore seeds and a few twigs! As you can see in the picture below, this is a craft that you can do just with glue, paint, a bit of imagination and stuff found on the ground on the way home! Happy dragonfly making!



Appeared in Family Fun magazine a month or two ago, credited to a Shanti Nordholt. [Here is the link to the originals](http://www.filthwizardry.com/2012/10/autumn-woodland-treasure-sculpture.html) . [www.filthwizardry.com/2012/10/autumn-woodland-treasure-sculpture.html](http://www.filthwizardry.com/2012/10/autumn-woodland-treasure-sculpture.html)



# Here Be Dragons: Our Spring Quiz on the Winged Wonders!



## Questions.



1. Listed on the *Sussex Rare Species Inventory*, this species has a preference for nutrient –poor, acidic, tree-lined or woodland ponds, lakes and canals.



2. A locally common species in Sussex. Found skimming over the water's surface and resting for long periods on regular perches, such as sticks and areas of bare ground.



3. This rare species (listed on the *Sussex Rare Species Inventory*) is restricted to southern England and West Wales. Typically found at heathland pools and bogs, particularly around the Ashdown

4. Common throughout Britain and locally common in Sussex, occurring in a range of habitats.

5. Predominantly found across the High and Low Weald in Sussex, where it can be locally abundant, and well distributed along sections of the upper Arun and mid-Sussex Adur. Flies with a bouncy, fluttery flight and has a preference for well vegetated rivers and streams. Listed on the *Sussex Rare Species Inventory*.



Many thanks to Ben Rainbow and everyone who has uploaded photographs on to the British Dragonfly Society – Sussex website.

# 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)**

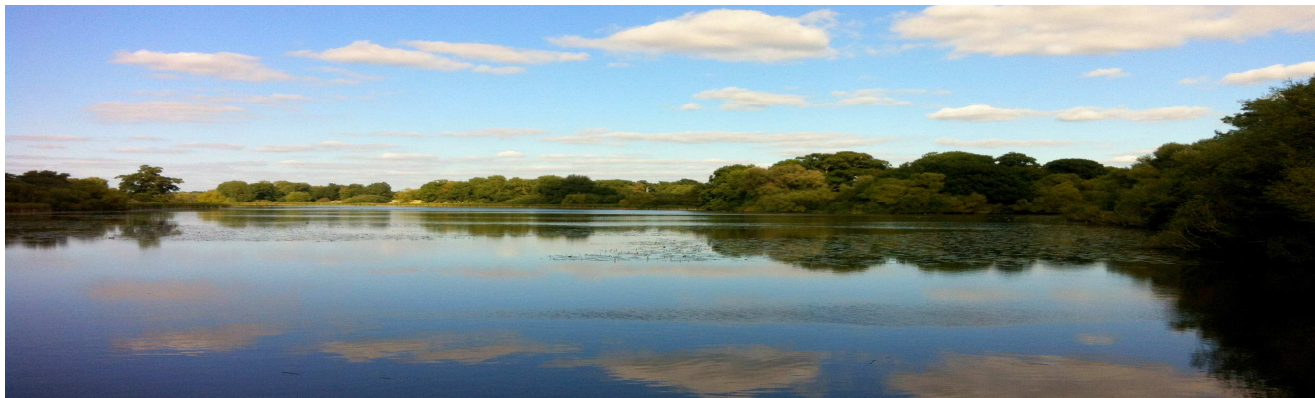
**Stunning image of a Small red Damselfly © B Rainbow**





# 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 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. 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.



## Odonata Quiz Answers

1. Downy Emerald   2. Black-tailed skimmer   3. Small red damselfly   4. Four spotted chaser  
5. White-legged damselfly   6. Azure damselfly

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

# Contacts

## Core Group

Chairman:	Ben Rainbow — <a href="mailto:Ben.Rainbow@westsussex.gov.uk">Ben.Rainbow@westsussex.gov.uk</a>
Editor & Wetland advisor:	Fran Southgate - <a href="mailto:fransouthgate@sussexwt.org.uk">fransouthgate@sussexwt.org.uk</a>
Sussex BRC:	Penny Green - 01273 497521 - <a href="mailto:pennygreen@sussexwt.org.uk">pennygreen@sussexwt.org.uk</a>
Website:	Victoria Hume — Please contact via Fran Southgate
Press/Publicity:	Ben Rainbow
Technical advisor:	Phil Belden - Hobhouse, 47 Arundel Street, Brighton BN2 5TH
Pond Conservation Advisors:	Jon Wood - <a href="mailto:jonwood555@hotmail.com">jonwood555@hotmail.com</a> Bev Wadge - <a href="mailto:ponds@sussexwt.org.uk">ponds@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 - [bdssecretary@dragonflysoc.org.uk](mailto:bdssecretary@dragonflysoc.org.uk)  
Booth Museum - [boothmuseum@brighton-hove.gov.uk](mailto:boothmuseum@brighton-hove.gov.uk). 01273 292777  
Pond Conservation Trust — [www.pondconservation.org.uk](http://www.pondconservation.org.uk)  
Sussex Wildlife Trust — [www.sussexwt.org.uk](http://www.sussexwt.org.uk)  
Sussex Wetlands Project — [www.sussexwildlifetrust.org.uk/livinglandscape/living\\_wetlands](http://www.sussexwildlifetrust.org.uk/livinglandscape/living_wetlands)  
National Insect Week — [www.nationalinsectweek.co.uk](http://www.nationalinsectweek.co.uk)  
British Dragonfly Society Shop — [www.dragonflysoc.org.uk/shop.html](http://www.dragonflysoc.org.uk/shop.html)

# Donations

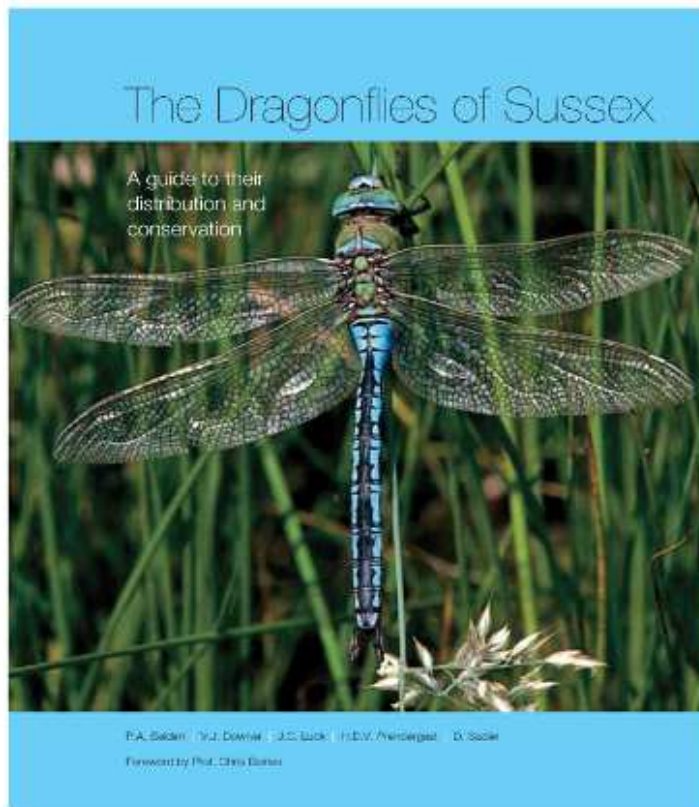
The Sussex Dragonfly Society is run exclusively with donations and proceeds from the sale of the Dragonflies of Sussex book.

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 Natural England leaflet 'Dragonflies and Damselflies in your garden' is available as a pdf file at :- [www.naturalengland.twoten.com/naturalenglandshop/docs/NE21dragonflies.pdf](http://www.naturalengland.twoten.com/naturalenglandshop/docs/NE21dragonflies.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