

British Dragonfly Society Sussex Group Newsletter Autumn 2012

No 29



Insects Are Scared to Death of Fish

The mere presence of a predator can cause enough stress to kill a dragonfly, even when the predator cannot actually get at its prey to eat it, say biologists at the University of Toronto. Shannon McCauley, a post-doctoral fellow, and EEB professors Marie-Josée Fortin and Rowe raised juvenile dragonfly larvae (*Leucorrhinia intacta*) in aquariums or tanks along with their predators. The two groups were separated so that while the dragonflies could see and smell their predators, the predators could not actually eat them.

"What we found was unexpected -- more of the dragonflies died when predators shared their habitat," says Rowe. Larvae exposed to predatory fish or aquatic insects had survival rates 2.5 to 4.3 times less than those not exposed.



Pike © Darin Smith info@wildstock.co.uk / Sussex Wildlife

Sussex Dragonfly Society Newsletter

Continued

"How prey respond to the fear of being eaten is an important topic in ecology, and we've learned a great deal about how these responses affect predator and prey interactions," says Professor Locke Rowe, chair of the Department of Ecology and Evolutionary Biology (EEB) and co-principal investigator of a study conducted at U of T's Koffler Scientific Reserve.

"As we learn more about how animals respond to stressful conditions -- whether it's the presence of predators or stresses from other natural or human-caused disruptions -- we increasingly find that stress brings a greater risk of death, presumably from things such as infections that normally wouldn't kill them," says Rowe.

In a second experiment, 11 per cent of larvae exposed to fish, died as they attempted to metamorphose into their adult stage, compared to only two per cent of those growing in a fish-free environment. "We allowed the juvenile dragonflies to go through metamorphosis to become adult dragonflies, and found those that had grown up around predators were more likely to fail to complete metamorphosis successfully, more often dying in the process," says Rowe.

The scientists suggest that their findings could apply to all organisms facing any amount of stress, and that the experiment could be used as a model for future studies on the lethal effects of stress. The research is described in a paper titled "The deadly effects of 'nonlethal' predators," published in *Ecology* and highlighted in *Nature* this week.

Shannon J. McCauley, Locke Rowe, Marie-Josée Fortin. The deadly effects of "nonlethal" predators. *Ecology*, 2011; 92 (11): 2043. *ScienceDaily* (Oct. 27, 2011)



The dragonfly
Is it a deadly predator above water, and scared of fish below?
Common Darter image © B Rainbow

i-spot a dragonfly

www.ispot.org.uk

We're often trying to work out how we can make it easier for wildlife recorders who are just starting out in a new wildlife group, or who need help to identify and record some of the things they see when they're out on a country walk. We've been helped a lot by some fantastic technological and mapping developments, and with the arrival of the wonderful World Wide Web. We can now take pictures on hand held phones and send them instantly to someone else if we want to, it's just knowing who to send it to! Sometimes the amount of information out there can be overwhelming. Fortunately there are a few other people who have realised this and so they have tried to simplify things for those of us who are not a technological genius.

iSpot is a website aimed at helping anyone identify anything in nature. Once you've registered on the website, you can add any picture or description of a species to the website. You can suggest an identification for the species yourself or if you don't know what it is, you can see if anyone else can identify it for you. If you are an expert in a certain group of species, you can help others by adding an identification to an existing observation. Your reputation on the site will grow as people agree with your identifications, and you gain strength to your online reputation as more experts agree with you.

If you think this might help you with your wildlife ID, have a quick look at the site. Anyone can see what's on the site without registering - just go back to the [home page](#), and click on the photos for the latest observations, or on the species-group icons just below. Then note down what you've seen, where you've seen it, and when you saw it. If you can take a digital photograph of it that is very helpful, and allows others to share what you've seen. Once you've registered on the site, then you can upload your observations. Click [Add an observation](#), fill in the form, and you're away! For help and advice on what to spot, where to see it, and how to identify it, go to the top of the page and click on the [Groups menu](#) - select which of the eight iSpot wildlife groups you are interested in.

The Wildlife Trusts and local records Centres are finding this site really useful for helping get us 'non experts' some advice on some of the harder to identify species, with trusted online support from a whole range of online experts. The i-spot site is also working with the National Biodiversity Network gateway (<http://data.nbn.org.uk/>) so see if they can set up a link between the two sites, so that all the species records can be added to National databases, and shared with Local Record Centres.

It's an exciting new resource and we recommend having a bit of a play with it to see if you like it!

Darts of Black at Pulborough Brooks

By Pete Hughes

On the heathland at the end of July there were a number of black darter dragonflies - they have an amusing way of avoiding sunburn (or whatever it is they are doing) called the obelisk position. It is a handstand, as far as I can tell - shame it isn't an olympic sport.

Black darter was first seen at Pulborough Brooks by local ecologist and dragonfly enthusiast Ben Rainbow a couple of years ago (just the one!) and my colleague Nick found a freshly emerged individual earlier this week. On further investigation it appears they seem to have properly colonised the site, with several males and females present on the wet heath.

Out on the Brooks themselves, there have been a few passage waders - at least one wood sandpiper, 1 greenshank, 3 little ringed plovers, several green sandpipers and two dunlin. The dunlin were unconcernedly feeding 5 metres from me as I walked past to check the cattle - it made me wonder whether they had come from the remote far north where humans are rarely, if ever encountered. Yesterday, at least 3 garganey were present on the south brooks and a marsh harrier was seen again. It's a thriving site, and well worth a visit.



Recording DNA in Water?

Fauna of an Entire Lake in a Shot Glass

Danish research team are leading the way for future biodiversity monitoring using DNA traces in the environment to keep track of threatened wildlife. In doing so, they have discovered that a lake water sample the size of a shot glass can contain evidence of an entire lake fauna.



Global biodiversity is plummeting while biologists are fighting to keep score and reliable monitoring of threatened animals remains a major challenge. The biologist toolset has changed little on this area for a hundred years - still relying on expensive expert surveys basically finding and counting the animals. However, this situation is now set to change according to a recent study by researchers at the Natural History Museum of Denmark. The results of the study show that a new method can be used to monitor rare and threatened animal species from DNA traces in their freshwater environments.

DNA traces in very small water samples

The development of the innovative DNA species monitoring was accomplished by PhD student Philip Francis Thomsen and Master's students Jos Kielgast and Lars L. Iversen at Centre for GeoGenetics headed by professor Eske Willerslev. "We have shown that the DNA detection method works on a wide range of different rare species living in freshwater - they all leave DNA traces in their environment which can be detected in even very small water samples from their habitat. In the water samples we find DNA from animals as different as an otter and a dragonfly," says Philip Francis Thomsen.

Study of 100 different lakes and streams

By studying the fauna of one hundred different lakes and streams in Europe with both conventional methods -- counting individuals - and the new DNA-based method, the research team documents that DNA detection is effective even in populations where the animals are extremely rare. The study also shows that there is a clear correlation between the amount of DNA in the environment and the density of individuals meaning that the DNA detection method can even be used to estimate population sizes.

"The UN has agreed to halt the decline of biodiversity, but a prerequisite to do so is that we are capable of properly documenting the status of threatened species. Our new approach is a huge step forward making it cheaper and faster to monitor the endangered species, and thus prioritise efforts to the benefit of biodiversity at a broad scale," says Jos Kielgast. With DNA sequencing technology advancing at rapidly dropping costs, environmental DNA research is set to change from being merely a scientific curiosity to become an important tool in applied biology. It is for example conceivable that fishing quota may in the future be based on DNA traces rather than fish catches.

Philip Francis Thomsen, Jos Kielgast, Lars L. Iversen, Carsten Wiuf, Morten Rasmussen, M. Thomas P Gilbert, Ludovic Orlando, Eske Willerslev. **Monitoring endangered freshwater biodiversity using environmental DNA.** *Molecular Ecology*, 2011; *ScienceDaily* (Dec. 11, 2011)

Mite-y Dragons:

Odonata and Water Mites

If you look at odonates closely enough, you're bound to notice some that are accessorized with tiny orbs—often orangish in color, clinging to various parts of the body like jewellery. But it isn't "bling" or the latest fad in body art. When I first started catching odonates and looking at them in-hand, I thought they might be eggs which got stuck to the body, but it's not that either. What are these sanguine spheroids, these rusty rondures, these blushing bulbous globules?



Red Veined Darter with Mite infestation (Bulgaria)

These are ectoparasites—meaning that the host-parasite interaction occurs on the outer surface of the host rather than internally. More specifically, these are larval water mites or Hydrachnida, which are in the same class of arthropods as spiders, scorpions, ticks, and their colleagues. Water mites that use odonates as hosts are predominantly species of [Arrenurus](#) in the family Arrenuridae—of which at least 55 species have been described as ectoparasites of Odonata so far.

Water mites actually initiated their relationship underwater during the odonate's nymph stage. The free-swimming larval mites find final instar odonate nymphs and cling to them, but they are not parasitic at this point—they just try to find a place on the body where they can hang on and avoid being knocked off when the nymph grooms itself (under the wing pads, for example). It would be interesting to know how the mites determine which odonates are nearing emergence and which are not.

When the odonate [emerges](#) from the water to become an adult, the mites crawl from the exuvia (the shed nymphal skin) onto the emerged adult (which is probably still expanding its abdomen and wings), and attaches somewhere on the body while the exoskeleton is still soft and easy to pierce. The mites most often attach to the ventral areas of the thorax or abdomen. Rarely you see them higher on a dorsal surface or on the head, and they sometimes even attach to the major wing veins although I've never seen this myself. Apparently attachment site preference varies by mite species.

Finding a meal isn't the only objective for the mites. They want to travel too. The technical term for this is *phoresy*—the use of one animal by another for transportation. Lots of mites are phoretic, at least during some stage of their life cycle, and they use a variety of arthropods and other animals for transport. Why do mites want to travel? There are a number of potential benefits of dispersal among which are finding food (or hosts), finding habitat, expanding the species' range, and increasing genetic variation by reproducing with individuals from other populations.

Author Jim Johnson

<http://nwdragonflyer.blogspot.co.uk/2012/01/mite-y-dragons-odonata-and-water-mites.html>

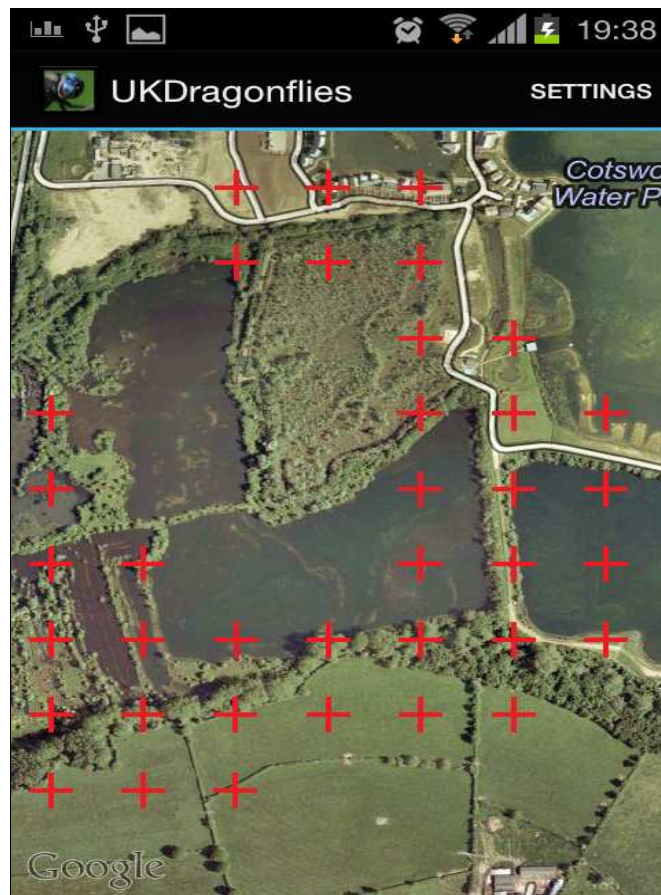
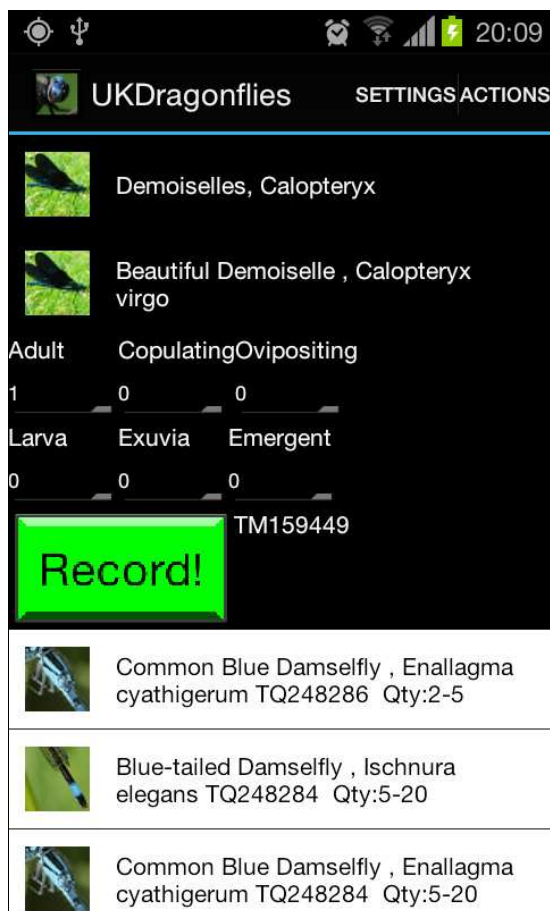
APPsolutely brilliant

A technologically minded chap called Tim Hanson has designed a dragonfly App for phones that we thought might be of interest to some of our more modern members !? The new App is supported by the British Dragonfly Society, and it can be used on most android devices (such as smart phones and tablets) and it allows users to record their dragonfly observations located by their devices own GPS.

The app is now available from the Android Play Store, or just search for UK Dragonflies on the Google Play Store.

https://play.google.com/store/apps/details?id=com.s.lni5t3r.ukdragonflies&feature=search_result#?t=W251bGwsMSwyLDEsImNvbS5zMW5pNXQzci5la2RyYWdvbmZsaVVzIl0.

We've added a few screen shots below so that you can get an idea of what it looks like.



The App facilitates the recording of dragonflies within England, Wales and Scotland and allows records to be submitted to the county recorder in an approved format. It includes pages on :-

1. Recording
2. Editing records
3. Sending Records and
4. Managing Files.

1. Recording

On first starting the app (or after a break of an hour or more) the "Settings" screen will be displayed. Here you can set various fields that will be used in all records. There is also the option to change the size of grid squares that are used. 10m squares are probably may be used to record exuvia or emergent individuals. Once you have set all the details to your liking, press "Done" to save the settings. We recommend that a new file is started from the "Actions" menu when a new location is visited.

There are 2 distinct modes for recording, single count and quantity input. In both modes the species to be recorded is selected from the dropdowns at the top of the screen. The first dropdown selects a smaller group for the second dropdown making finding the right species quicker.

If "Single Count" is checked in the "Settings" menu The screen will display 6 buttons, one for each life stage that the BDS request for their records. These are Adult, Copulating, Ovipositing, Larva, Exuvia and Emergent. If any of these buttons is pressed and no record for this species has been made in this grid square a new record is created with one individual of the type selected. From then on each button pressed will add a single individual of the type selected. Recorded copulating or ovipositing individuals also count as an extra adult.

If "Single Count" is unchecked on the "Settings" menu the app will record in quantity input mode. In this case the screen only displays one "Record" button but there are six dropdowns that allow the input of a quantity corresponding to the quantity codes used by the BDS. When the "Record" button is clicked a record is created. If there is already a record of this species in this grid square the "Editing" screen is opened. The exception to this behaviour is when the quantity dropdowns are in their default position (ie. 1 adult and all other quantities set to zero). In this case the record behaves as it would in single count mode unless the adult quantity has been set to a quantity code.

Records created are shown in a list at the bottom of the screen. As it is quite common to see a species more than once at a site, a species can be selected as the active species for recording by clicking any record of that species in the list. This saves time.

A map showing all the grid squares with records in can be reached from the "Actions" menu -> "Show Map". Long clicking on any grid square on this map will bring up a list of all the records in that square.

2. Editing Records

By long clicking (holding down for a second) on a record in the list the Editing Screen is opened for that record. Here all the attributes of the record can be altered. The record can also be moved by selecting the map button and long clicking a location on the map until the map zooms to that position and displays a red grid. All changes can be saved or canceled from the menu or the buttons at the bottom of the screen. Note that if the quantity for any life stage is changed it will remove the ability to single count that life stage and if the adult quantity is changed ovipositing and copulating individuals will not be single countable either.

Continued

3. Sending Records

Selecting "Send Records" from the "Actions" menu on the main screen gives you a choice of ways to share the record. If an email app is selected, the records will be attached in excel format and if all records are from the same vice county the county recorder's email will be put into the "to" field.

4. Managing Files.

Files are named from the location selected and the date and time at which they were created. Selecting "Browse Files" from the "Actions" menu will bring up a list of all files created by the app. Clicking on one will load it into the app. Long clicking on one will give the option to delete it.

Known compatible hardware:

Samsung Galaxy S2
Samsung Galaxy Ace

It all sounds incredibly technical, but actually, once you get the hang of it its an extremely useful tool, and one that we hope will be used by many of you to record your local dragonflies in the future.



Golden-ringed dragonfly © B Rainbow

APProaching Invasive Species, the Electronic Way

The Environment Agency and University of Bristol have just launched a new version of their PlantTracker app for phones, which helps you to record the distribution of invasive plant species in the UK. These non-native invasive plant species such as Giant hogweed and Himalayan balsam are causing widespread havoc with our local wetlands, and the first step in starting to eradicate them from the places that they are doing most damage, is to record where they are.

The Plant Tracker project involves key partners including the Centre for Ecology and Hydrology (BRC) and the Non Native Species Secretariat (Defra) who will make sure that the data collected is available to those that really need it.

They have just launched the new version of the app which is now UK wide and features 14 invasive plant species. September should be a key month for recording these species as they'll be at their most obvious - so we're really hoping to alert as many people as possible to it in order to make a start obtaining a clearer picture of their distributions. The main focus is on aquatic and riparian species and the app has already begun to reveal interesting records and has alerted key organisations to the previously unknown presence of invasive, non-native species in their areas of responsibility.

The app is available for both the iPhone and Android platform and can be accessed from the Plant-Tracker website: <http://planttracker.naturelocator.org/>

There is a results page here: <http://planttracker.naturelocator.org/content/results> which provides a quick overview, but all of the data will filter through to the NBN Gateway and local record centres once validated. The only ingredient required is that lots of people to use it and record invasive plants!

Giant hogweed image © C Chatters



Just Add Water

How to make a wetland in one easy lesson

For those of you who know me, you will know by now that I have a love of anything watery, and that because of that, I have an equal dislike for anything which drains or pollutes it. Just the sound of a gurgling stream is enough to raise a smile on my face and to relax me somehow.

Water is the foundation of all life on earth, and I believe that if we continue to drain and pump it out of our landscapes as quickly as we do now, then it will become increasingly difficult for anything living to survive (including ourselves). The continuing declines in much of our wetland wildlife seems to bear testament to that, but perhaps I'm a bit biased :)



Image © D Ball / Sussex Wildlife Trust



I'm sure there are many people out there who get a bit bored of me banging on about how amazing water is all the time, and about how much it can do for wildlife. So I thought I'd give a case in point, of just what a difference it can make if you just add water to the land (or rather just allow it to stay where it wants to be instead of draining it off to use or to make things less inconvenient for ourselves).

I was lucky enough to recently be invited back to a private nature reserve in East Sussex, which has been created by a local landowner who wanted to do something amazing for wildlife. I remember the site 10 years ago, when he first asked me for advice about how to turn his land from a bare and dry intensively farmed landscape, into something which attracted wildlife. Although a little more 'green' in those days, I told him that the best thing he could do was to block up his ditches to stop them draining straight out into the river.



Bare and sterile grassland, of which there was much at the Farm 10 years ago

I'm not sure I ever believed he'd do it, but sure enough, I got a phonecall some time later saying, 'Do you want to come and have a look?'.

Continued

Admittedly this landowner is not a farmer, and he has the luxury of not having to use the land to grow crops. And I'm not saying that it was all easy, as I am sure that along the way, there has been some blood, sweat and tears to make the land as good as it is. But this is the kind of example of an 'easy win' for wetlands that I would love to see replicated throughout Sussex—a county now virtually barren of high quality wetlands, and drained to within an inch of its life.

Even in my role as the Sussex Wetlands Officer, it is not often that I get the opportunity to experience a wetland which to me exhibits all the characteristics of so much that we have lost in the past.

To walk through reedbeds which tower over my head and whose sun-dappled heads ripple in waves across the landscape as far as the eye can see is a truly humbling experience. The air positively humming with insect life, and the ground strewn with a whole wealth of flowering plants, eking out their survival in small seasonal pools, and spring flushes.

The areas where ditches have been blocked, where once bland grasslands grew are now teeming with life—visited regularly by greenshank and 'watched over' by marsh harriers and swallows.

To add to the whole experience, the site is grazed by a traditional ancient breed of pony—the Koniks, who manage the site and keep its vegetation structure diverse and thriving with minimum intervention from the landowner. It was a pleasure to see such 'wild' grazers doing so well in a natural environment, unassisted by man, and it just added to the marvellous atmosphere.



So although this is a private site, all be it one with footpaths, I hope that soon it will at least be a sight, that many other people in Sussex will be able to behold—an example of a magnificent wetland, which provides natural services of flood water and carbon storage, and water purification, as well as being a haven for our winged friends the dragons and damsels.

Lesser Emperors

(*Anax parthenope*)

By Dave Sadler

I visited West Rise Marsh in East Sussex on 23.8.12 to look for a Lesser Emperor, having received a phone call from Ian Whitcomb some days earlier. He was certain he'd seen one hunting over the fields there. This was my first opportunity to visit, having been away for a few days. I wasn't confident of seeing the Lesser Emperor after this delay and, sure enough, spent some fruitless hours searching.

I was leaving the site, passing the South East corner of the Lake, when I noticed a tandem pair of Emperors over the water. I know *imperator* doesn't behave like this and a closer look with binoculars confirmed my suspicion that this was actually a pair of Lesser Emperors.

They remained in tandem, ovipositing into semi-submerged pondweed for over an hour, moving only short distances. Another male Lesser Emperor was present and occasionally flew in to inspect the ovipositing pair.

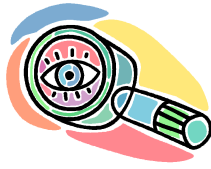


I revisited the site on 26.8.12 hoping for a more exhaustive look at the area. However, conditions although sunny, were far too windy for successful dragonfly-viewing, and I saw only one male Lesser Emperor then.



West Rise seems to tick all the right boxes for suitable sites for Lesser Emperor (and possibly other migrant species) being a reed-fringed lake close to the coast. I imagine it's a very good place to keep an eye on over the coming years.

Images © D Sadler



EYE — D Corner No 11

Demoiselles are truly beautiful, graceful, dragonflies. They are associated with streams rivers and canals, and from May to September, can be seen fluttering around these habitats. The Banded demoiselle, *Calopteryx splendens*, prefers slower flowing mud bottomed water courses, whereas the Beautiful demoiselle, *Calopteryx virgo* favours faster flowing sandy or pebbly bottom water courses. In Sussex they are both generally widespread species, sometimes both species can sometimes be found together.

Both species are sexually dimorphic, i.e. males and females differ in appearance. The males have unmistakable wing markings however the females of both species look similar and require more detailed field work to tell them apart.

Males (Difficulty: Easy)

Both species of Demoiselle can be confidently identified from their dark wing markings. Be aware that immature males have fainter wing markings.

Male Banded Demoiselles have pigmentation bands through the middle of their wings:



Male Beautiful Demoiselles have even more extensive dark pigmentation, covering most of the wing:



© Richard Bartz

Continued

Females (Difficulty: Hard)

Identification of Female Demoiselles is a tricky business. Many clues can be ascertained from the habitat type (see above) and presence of male individuals.

They both lack the dark pigmentation that makes Male Demoiselles so identifiable.

Female Banded Demoiselles have narrower wings with a greenish tint to them:



Female Beautiful Demoiselles tend to have a broader wing with a brownish tint:



Million Ponds

Good news for freshwater wildlife

Natural England welcomes the launch of Phase 2 of the Million Ponds project, which was celebrated in the House of Lords recently (18 September).

Wildlife charity Pond Conservation has announced, with Natural England and other partners, Phase 2 in its national Million Ponds Project, which aims to create 30,000 clean water ponds over the next 7 years, up to 2020.

Natural England has been working with Pond Conservation since the start of the project, contributing expertise and match-funding to help turn things around for pond life. New clean water ponds will be made at locations throughout England and Wales, with the first projects in the New Forest, Oxfordshire, Leicestershire, and **Sussex**. The work will provide new habitat for endangered freshwater plants and animals, building out from existing refuges, and extending clean water across whole landscapes. When completed we will see a landscape with the equivalent of a new clean water pond every couple of miles across the countryside.

Phase 1 of Million Ponds received major financial support from Biffa Award, who directly funded the construction of more than 1,000 ponds for many of the most endangered freshwater species in Britain. The new ponds have been created everywhere from the Lizard to Northumberland and the west of Wales to the Norfolk Broads. Ponds are already being colonised by endangered species such as tassel stonewort, great crested newt, shining ram's-horn, Norfolk hawker dragonfly and grass-poly. The project also trained around 1,500 people from conservation organisations across England and Wales.

Dr Pete Brotherton, Head of Profession for Biodiversity at Natural England, who is speaking at the Phase 2 launch said: "Ponds are fantastic little biodiversity hot spots. They are key habitats for about 10% of England's priority species and they also provide important links across England's fragmented landscapes, helping species to cope with climate change. We've been strong supporters of the Million Ponds Project - pond creation provides a practical and cost-effective way of restoring nature, and we look forward to working with Pond Conservation to make Phase 2 a success."

Natural England seconded two staff to the project over a two year period. This allowed for knowledge sharing between the two organisations and a wide range of other partners, and helped link our Higher Level Stewardship work with Pond Conservation staff – over 600 HLS agreements have been involved with the creation of new ponds. Our staff time and the provision of office space for the Northern Million Pond project officer provided much needed match funding and helped release funds from Tubney, Esmee Fairburn and Biffaward.

Dawn Isaac, who was seconded to the Million Ponds project said: "It was great to work with the charity's passionate and committed staff and be part of the development of this important project. The project has made great progress and I hope that it realises its 50 year vision for a million ponds."

Meet the Committee . .

And Jon Wood, our pond advisor

It's hard to say when my interest in wildlife started. I was fortunate enough to spend the bulk of my childhood in a village setting with at least one parent who was interested in flora and fauna. My siblings and I would spend hours in the Bevern stream catching bullheads, stone loach and on occasion eels, an altogether scarier prospect. An early summer feature, and the first Odonata I learnt, was always the Beautiful Demoiselles, still to be found on the same stretches of stream. It was my failure to secure enough A grades (too much sport) which meant rather than Geology at St Andrews I read an Environmental degree at Imperial that really began my ecological learning curve.

For years I had no particular interest in Dragonflies beyond an appreciation of their evolutionary longevity and aerial prowess. That was until pond survey work highlighted the gaps in my knowledge of Odonata at species level. Though not a big group (in the UK) to learn it is more daunting than many given the colour variations and changes in pruinescence that occur in many species with age.

With this in mind I attended a Sussex Dragonfly Group Event on the River Arun capably lead by Phil Belden and John Luck. We failed to see a Club tail, I still haven't, but it was the first of several walks that year which lead to my appreciation of Odonata and the realisation that identification is not as daunting as it seemed.

I am a bit of a generalist, surveying a wide variety of habitats and taxonomic groups from meadows and woodland gills to Dormice and Glow worms. This approach has benefits over a group focused field of interest but the downside is that I am not as proficient with Odonata as I could be. Hopefully my work as a volunteer on the Sussex ponds project over the last few years has helped Dragonflies and Damselflies in Sussex in ways which I have otherwise not measured however.

I work/volunteer for the Ouse & Adur Rivers Trust, SxARG, the National Dormouse Monitoring Programme, the River Ouse Project, Sussex BC and other local groups. I help run the Sussex Pond Project, which ambitiously aims to find, record, promote and advise on ponds in the county (currently working in Arun catchment). In my spare time I chair my local Parish Wildlife Group



I will close with the species that began it all for me, my strangest sighting this year was a male Beautiful Demoiselle flying east up Church Road in central Burgess Hill narrowly avoiding on coming traffic a scene evolution has yet to equip it for I think!!

Picture of Jon on a recent field trip—that's him on the far right honest !

National News



Enter the Dragon—Bird Style!

Dragonflies are a popular order of insects amongst birdwatchers. They occur at many birding sites, are relatively conspicuous and can usually be identified fairly easily after a little practice. With so many bird-watchers already noting dragonflies, it is important that we capture this information for conservation. 2012 is also the final year of the National Dragonfly Atlas, so it's doubly important to gather as many dragonfly records as possible.



The Birdtrack bird recorder is now a new route into the Dragonfly Recording Network. It will allow bird-watchers to enter dragonfly records at the same time as their bird observations. The wonders of technology will then forward these dragonfly records direct to the BDS. This partnership scheme between BDS and BTO is not a substitute for the BDS recording systems already in place, but rather a way to capture records we would otherwise miss. It is therefore important to stress that dragonfly records need only be entered into one system, not both.

Current dragonfly recorders should continue sending records to their Vice-County Recorder in the same way as before, but for birdwatchers that have not sent in dragonfly records before, Birdtrack just might be the answer. To find out more about BTO Birdtrack visit <http://www.bto.org/>



New, Combined Larval Guide

This publication combines for the first time the original Volume 1 on Dragonflies (2007) and Volume 2 on Damselflies (2009). In this volume, two new species, Dainty Damselfly *Coenagrion scitulum* and Southern Migrant Hawker *Aeshna affinis*, have been added. A new appendix for Willow Emerald *Lestes viridis* shows extra features on the exuvia and the scars left by ovipositing females. There have also been revisions to other text, but the overall format of this book matches the earlier field guides.

Local News



How the Lesser emperor came to the throne

Ian Whitcomb found Lesser Emperor at West Rise Marsh, West Langney Level in Eastbourne (TQ623024). We've had them before in Sussex, the last ones appear to be in 2006 at Rye, but also at Shinewater in Eastbourne (near to West Rise Marsh) in 2000. They are an annual visitor to the UK, recorded for the first time in the UK in 1996.



The Not-so-common Hawker

Dave Sadler also visited Black Pond, Iping Common on 11th August, mostly to check on the current status of Small Red-eyed Damselfly, a species that members of the Sussex committee had discovered there in small numbers in the mid-2000's during the British colonisation. Of course, Black Pond is an excellent acid heathland pond that holds many interesting species including Black Darter and Common Emerald Damselfly. As usual, just as Dave was about to give up, a large hawkler flew in and around the pond, hovering frequently. He assumed it would be a Southern Hawker but it looked interesting enough to attempt closer views. It hovered in front of me a couple of times and I became (almost) convinced that it was a Common Hawker, a species I have encountered on numerous occasions in the past but never in Sussex.

The blue areas on the abdomen were generally a paler blue than Southern, with no green colouration, and with broken dots on the last segments. It seemed too large for Migrant Hawker, the only other contender. As it hovered, Dave managed to take a couple of snaps, and, amazingly, both

were very nearly in focus! Confirmation of Dave's first Sussex Common Hawker. It then disappeared almost immediately.

Old records suggest that 30 years or so, Common Hawkers were present at Iping Common. It may be too much to hope that they are returning from their nearest sites, in Surrey or Hampshire, but don't dismiss any large hawkler you might encounter in July or August. Oh, and try to get a photo!



Images © D Sadler

Local News



Queen of Darts...



Image © N Hulme

Whilst visiting Rewell Wood, planning habitat management work for the coming winter, Neil Hulme spotted this Darter that posed nicely for a photo. Thinking that he'd photographed a young female Common Darter Neil posted this picture on the Sussex Butterflies website. John Luck, on holiday in France at the time, spotted the picture and was happy to say that it was in fact a female Red-veined Darter!

In both sexes of the Red-veined Darter the pterostigmas (the coloured cell on the leading edge of the wings) are pale with a bold black edge, and they have eyes that are blue below. The female has extensive yellow veins along the leading edge of the wings, in the basal half. This picture shows all three of these features really well. In males look for brick-red veins and abdomen. Red-veined Darters also have a black line extending down the side of the frons (the frontal part of the head, on the upper part of the face). One to look out for!

Kids Corner

Jigsaw magic

We have a special treat for you this time ! We found an interactive website where you can go online and do a special dragonfly jigsaw puzzle, using your mouse to guide the pieces into their places. If you'd like to have a go, go to www.jigzone.com/puzzles/14055D508559. If you don't have a computer, then never fear, you can make your own jigsaw by hand!

You will need:-

Scissors,

Glue,

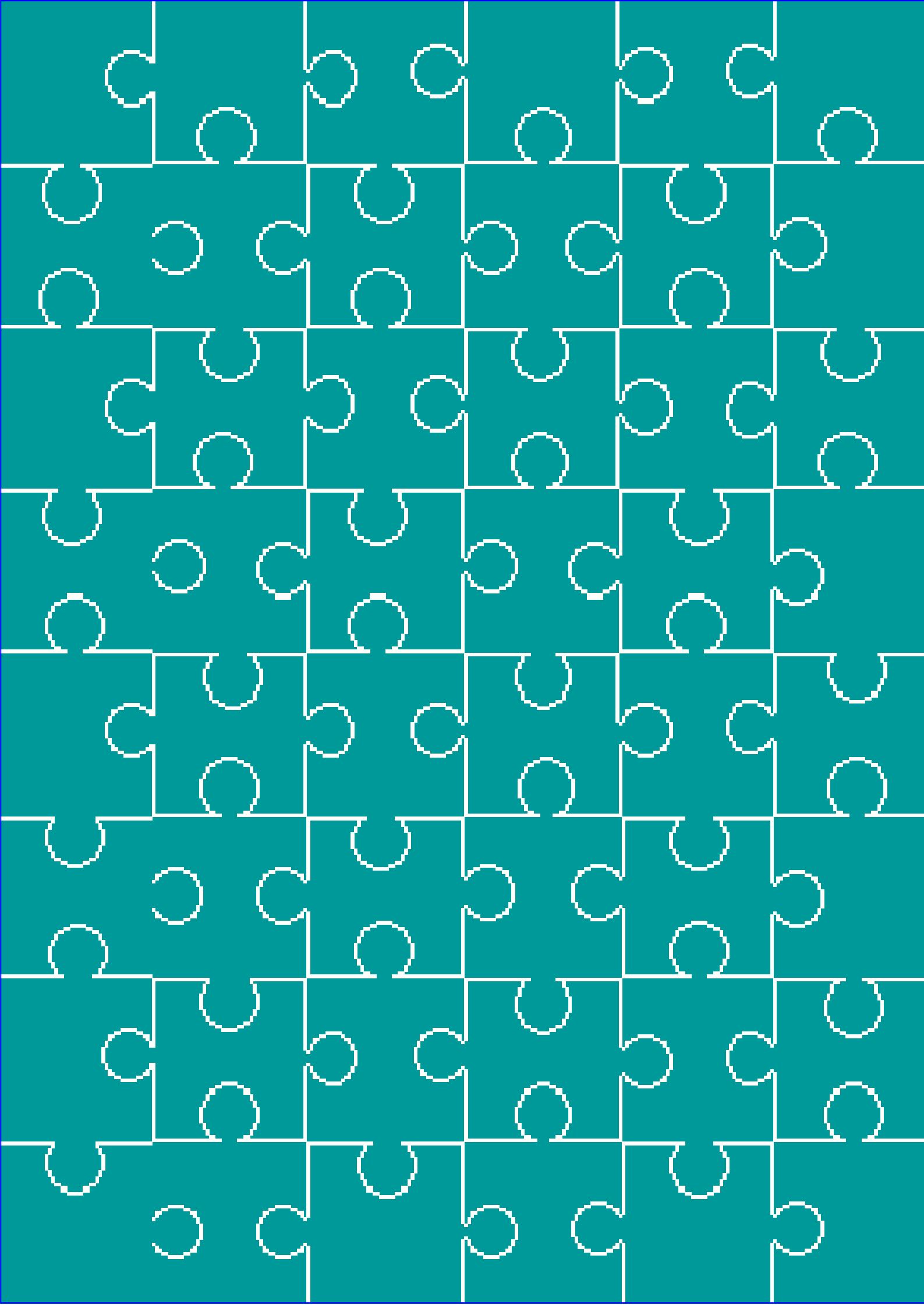
A piece of Sturdy cardboard

And a nice adult to print you two pictures from a computer.

Ask an adult nicely to print out the jigsaw grid on the next page. Then find any picture (of a Dragonfly if you like :)) and print it to the same size as the grid (A4). Stick the two printed bits of paper to a piece of sturdy cardboard, one on the top side and one on the bottom. Cut any extra bits of cardboard that you don't need off the edges. This is the fiddly bit! Next cut around all the jigsaw piece edges so that you have 48 different little bits of your picture! Once you've done that, you can have hours of fun trying to fit them all back together again!

There are pictures galore on our website that you can use - like this one by Johnny Wilson
[www.webjam.com/bdssx/photos/\\$sussex_dragonfly_group__members_photos](http://www.webjam.com/bdssx/photos/$sussex_dragonfly_group__members_photos)





Dragonfly Events 2012

Meandering along the Cuckmere Valley

The Cuckmere walk on 9th September was also going to be a bit speculative given the number of species on the wing is much lower by this stage of the year but the weather, for once this year, was great with a cooling sea breeze. We saw the expected late season species, Common Darter, Migrant Hawker, Southern Hawker and Blue Tailed Damselflies. Common Darters and Migrant Hawkers were seen in good numbers, even in the brackish lagoons behind the shingle beach.

We witness some very inquisitive southern hawkers from close range and had great views of coupled common darters and 'wheeled' migrant hawkers.

We were not lucky enough to find any vagrants on this short notice, hastily arranged event, but this was made up for by the good company, good conversation, good cream teas and a sprinkling of unexpected sightings; Hobby, Wasp spiders and Curlew Sandpiper.....(9 attended)



Image © B Rainbow



Image © P Green

Burton & Chingford: Slow start, Great Finish!

With the sun blazing after a prolonged wet spell we were chomping at the bit to see what Odonata Burton Pond and surrounds had to offer in mid July.

We made a good start to the day by straight away spotting a Brown Hawker 'hawking' around Burton Ponds margins whilst Large Red Damselfly and Azure Damselfly were seen skulking around the lush marginal vegetation. Burton Pond has a fantastic diversity of wetland plants including the architecturally beautiful but very poisonous Cowbane.

Making our way up the nature trail we saw Southern Hawker feeding in the tree scattered heathland before spotting a good number of Common Blue and Blue-tailed Damselfly in the wet grassland at Snipe Bog.

Half way through the day the dragonfly fauna couldn't have been scarcer, with a fleeting view of a hawker from the dam at Chingford. Black Hole was almost devoid of dragonflies; after a good 20 minutes of spotting we saw one Large Red Damselfly. Two very obliging Hobby gave us a fleeting view during our lunch.

One our eagle-eyed group spotted a Migrant Hawker feeding along the old sunken road on the return to the car park. Two bird watchers joined us and gave us a great view of the otherwise distant insect as it perched up near the top of an Oak tree. It is amazing what you see when you start to study an area, a few metres away we saw a Beautiful Demoiselle perched in the Oak tree too – despite not having seen any around the pond edges!

Later in the afternoon the heathland pond at Lords Piece proved very fruitful. Species on the wing included Four-spotted Chaser, Broad Bodied Chaser and Black-tailed Skimmer. There were also Emperor, Common Darter and a bonus Emerald Damselfly. Interestingly, the algae in the pond here seemed to tangle around a few dragonflies and damselflies barbed legs, causing them to get tangled up in the water. It didn't seem to put them off as we observed plenty of copulation and ovipositing around the pond edges and ditch.

Thank you to everybody who joined us on the day.

Image © B Rainbow



A Bimble on the Brede

Members of the Sussed Dragonfly Society were lucky enough to be invited to a private site in the Brede valley for a private tour of some of the best wetland habitat in Sussex. We weren't disappointed - the day was fine, the wind stayed calm and we spent considerable hours with over 20 people rummaging around pools, seeps, springlines, ditches, rivers and ponds, to see what winged wonders we could find.



We managed to chalk up an impressive 15 species, including the Southern hawker, Four-spotted chaser, Brown hawker, Variable damselfly and Emerald damsels too.

Not wanting to be too focused on the dragonflies we took note of some of the other marvellous flora and fauna around us which included the dragonflies nemesis, the Hobby treating us to a marvellous display of aerial capture and feasting, green sandpiper, Roselle's bush cricket and quick test of people's taste buds with a chew on the firey Water pepper.

The day finished with the inimitable Phil Belden giving us an awe inspiring summary of the characteristics and traits of the dragons and damsels that we managed to see during the day (image right) . Many thanks to all those who took part, it was a thoroughly enjoyable day.



Dragonfly Events

Local

Visit to National Trust at Sheffield Park Sunday 11th November 2012

John Luck (BDS) and Crispin Scott (National Trust, Wildlife & Countryside Adviser) will lead a walk and discussion to look at the NT's Sheffield Park river restoration project. The NT is keen to hear your feedback on how the project plans to restore some meanders on the River Ouse as part of some catchment-wide improvements. The event will begin with a brief presentation about the work followed by a walk to the site. We will meet at 10.30 and aim to finish by 1.00 p.m. There will be no charge, but booking is essential.

To book please contact pennygreen@sussexwt.org.uk or call 01273 497521

**See also www.sussexwt.org.uk/events/courses_diary/index.htm
for other wetland events and courses**



Image—Southern Marsh Orchid

New to Recording Dragonflies?

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

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

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



First and Last

So far the earliest Odonata record that we've heard of for 2012 is from Julie and Malcolm Redford, who spotted a Large Red Damselfly at their Cuckfield garden pond on 1st April.

The last record we have at the time of press is of a Common Darter which was photographed as it basked on a road verge near Washington, West Sussex by Ben Rainbow.

Here Be Dragons:

Dragons and Damsels Mini Quiz 2 - Guess the species from the snapshot!



1. A common species in Britain and Sussex. Found skimming over the surface of open lakes, ponds and streams,

2. One of the largest dragonflies in Britain. Scarce in Sussex, it frequents heathland areas.



3. Common in England and Wales, less frequent in Scotland. This species often perches for long periods of time and repeatedly returns to the same spot.

4. This species is locally common in Britain, but rare in Sussex. As such, it is listed in the *Sussex Rare Species Inventory*. This dragonfly tends to inhabit heathland areas with acid pools and streams, such as Ashdown forest.



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



6. A new species to Sussex. This dragonfly has a characteristic fluttering flight and is found at ponds with floating vegetation.

A big thank you to Ben Rainbow and Jon Wood for the fantastic photographs used in this quiz



Answers: 1. Male Common Blue Damselfly 2. Male Golden-ringed Dragonfly 3. Common Darter
4. Female Keeled Skimmer 5. Male four-spotted Chaser 6. Male Small Red-eyed Damselfly

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: Parrotsfeather, 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.

Please send your 2012 records in soon!

We are working hard to make sure that all of the 2012 Sussex dragonfly records get off to the British Dragonfly Society in time to be included in the National Dragonfly Atlas. Currently, Sussex 2011 records are with the group's rarities committee and we're hoping to get the 2012 records off to them before Christmas in order that we can get them checked and sent off to the BDS to meet their deadline of 31st January, This is where you come in! Please, please send your 2012 records to me no later than 30th November. It's not been a great year for getting out recording, so any records you do have will be very valuable additions to the database.

Thanks to all of you that have sent your records in already and thanks to all of you that are preparing your records ready to send in soon. If you are sending records of Brilliant or Downy Emerald dragonflies then a photo to support the record is preferable (even blurry in-flight shots can do the trick!) Please send your records to pennygreen@sussexwt.org.uk or Penny Green, SxBRC c/o Sussex Wildlife Trust, Woods Mill, Henfield, BN5 9SD. Thank you!

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)



Contacts

Core Group

Chairman:	Phil Belden - Hobhouse, 47 Arundel Street, Brighton BN2 5TH
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Sussex BRC:	Penny Green - 01273 497521; pennygreen@sussexwt.org.uk
Website:	Victoria Hume — Please contact via Fran Southgate
Press/Publicity:	Ben Rainbow — Ben.Rainbow@westsussex.gov.uk
Pond Conservation Advisors:	Jon Wood - jonwood555@hotmail.com / Bev Wadge - ponds@sussexwt.org.uk

Other useful Contacts

Wildcall – Free advice on all wildlife issues. 01273 494777; WildCall@sussexwt.org.uk
British Dragonfly Society - bdssecretary@dragonflysoc.org.uk
Booth Museum - boothmuseum@brighton-hove.gov.uk. 01273 292777
Ouse & Adur Rivers Trust — peter.king@oart.org.uk
Pond Conservation Trust — www.pondconservation.org.uk
Sussex Wildlife Trust — www.sussexwt.org.uk
Sussex Wetlands Project — www.sussexotters.org
National Insect Week — www.nationalinsectweek.co.uk
British Dragonfly Society Shop — www.dragonflysoc.org.uk
Sussex Biodiversity Records Centre - <http://sxbrc.org.uk>

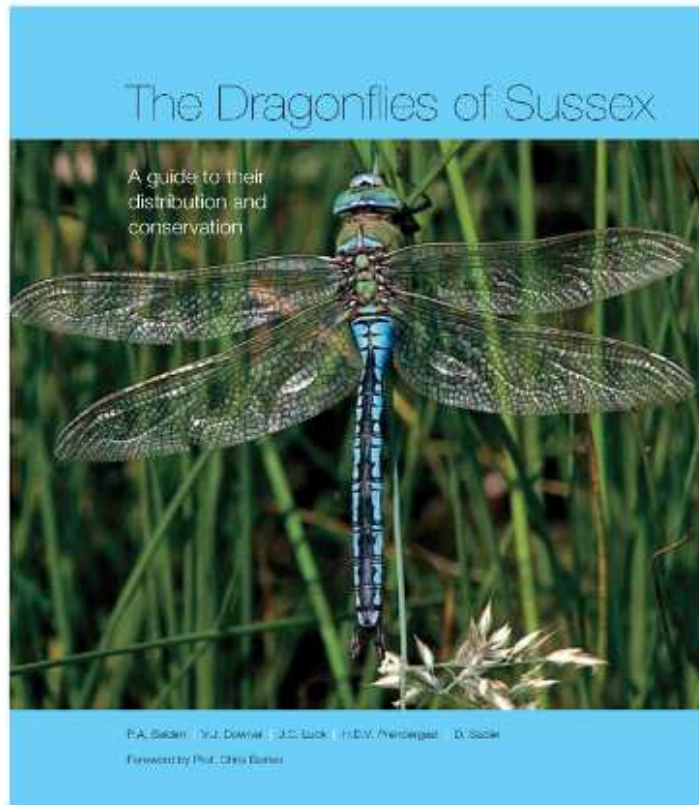
Donations

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 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
- Field Guide to the Dragonflies & Damselflies of Great Britain & Ireland. S Brooks & R Lewington.
- Guide to the Dragonflies and Damselflies of Britain. Field Studies Council
- Dragonflies: New Naturalist. PS Corbet. Collins
- How to encourage dragonflies and damselflies on your land — www.sussexotters.org/wildlife/dragonflies.htm
- "British Dragonflies" 2nd edition. D Smallshire and A Swash.

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Proceeds go to dragonfly and wetland conservation

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Sussex Dragonfly Society Newsletter