

Dragonfly News 168

The Magazine of the British Dragonfly Society
Autumn 2015
www.british-dragonflies.org.uk



**BDS wins
conservation
award at Rutland
Birdfair**



**Meet the new
Conservation
Officer - Genevieve
Dalley**



Dragonfly News 68

The Magazine of the British Dragonfly Society

Published twice a year, in April and October, *Dragonfly News* covers all aspects of the British Dragonfly Society's field, recording, monitoring, research, conservation and social activities, as well as information from the wider dragonfly, natural history and conservation world. The emphasis is on dragonflies recorded in the UK.

The British Dragonfly Society aims to promote and encourage the study, conservation and understanding of dragonflies and their natural habitats, especially in the UK, and to raise public awareness of dragonflies.

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* An asterisk indicates a change since the last issue

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All Change



Henry Curry

Another summer, during which we've seen the usual crop of interesting sightings, is coming to a close. The Migrant Hawkers are whizzing around our front garden in a superb display that looks choreographed, and Common Darters begin to hug the old fence for every last ray of sunshine as the shadows grow longer. It's a fact of life that change is inevitable, but I suppose we mostly do our best to maintain a 'dynamic equilibrium'. We have seen quite a few changes to the Society recently, and the latest is the departure of Claire Install and appointment of our new Conservation Officer, Genevieve Dalley. Claire joined us back in 2009 and since then worked hard on multiple tasks of conservation projects, answering public queries, education and managing the media. She left us on 20 May, having been appointed as Senior Conservation Officer with Leicestershire and Rutland Wildlife Trust. We are very sorry to lose her services but thank her for her contribution to the BDS and wish her every success in her new role. Our new 'Consoff' Genevieve - happy to be called 'Gen' - who comes to us with a good grounding in wildlife and plenty of dragonfly & freshwater invertebrate experience, introduces herself in an article elsewhere in the magazine. After a significant selection process and interviews (there were over 70 applicants!) she was appointed on 13 July. Amongst other things she has already visited the Dragonfly Centre at Wicken Fen for Dragonfly Day, stood duty at the Rutland Water Bird Fair, and been to some key dragonfly sites. She has significant challenges ahead in this demanding role, but I am sure she is very

capable of meeting these challenges, and we all wish her well in this fascinating job.

By the time you read this our Scotland Officer, Daniele Muir, will also have left us, for personal reasons. We are also particularly sorry to say goodbye to Daniele. In her relatively short time with us she has been an amazing and dynamic representative for the Society north of the border, and she has impressed everyone with her energy and enthusiasm. We'll be looking for someone to take over this role and carry on the good work as soon as possible.

As I mentioned in the last issue of DN, our Records Officer Steve Prentice has now retired. I've temporarily assumed a Records Co-ordination role to make sure we have continuity. Our recording process is also going through fundamental changes, and whilst the transition period from existing systems may last some time – probably rather more than the original rather optimistic estimate - I am convinced that iRecord is the right way forward and will ultimately be the central input point for our records, stored in the Indicia data warehouse and available via the NBN Gateway. We'll hear more about this soon and I hope to discuss guidance and training with Vice-County Recorders.

We have some marvellous communicators in the BDS, and we now need nominations for the Longfield Certificate for this year. Is there someone in the Society who should receive this award, given for their outstanding contribution in educating the public about dragonflies? Please let me know who you think should receive the award.

Now for one of those shocks that you get in life; they don't come very often, but when they do you are left momentarily dumbstruck! I opened a letter in July and was amazed to see that the BDS has benefited further from a legacy which had already allocated us a generous sum last year, from the estate of a member who passed away. It's particularly gratifying to realise that all the hard work of everyone involved in the Society is valued, and I believe that many of our aims and activities will now be secured much further into the future on a more sound financial footing due to this additional sum. I am sure this bequest will allow the Society to increase its influence and expand its staff so that we can grow, and the Trustees have spent considerable time discussing how best to use this money.

Which brings me nicely on to the subject of the Trustees and our meetings.



BDS Trustees at the August Trustees meeting. Left to right: Mick Parfitt, Nigel Scott, Henry Curry, Stuart Irons, Brian Walker and Genevieve Dalley.

Apart from an occasional plea that you'll see in this magazine, asking for new folks to replace those who have completed their term of office, as a team we decided that it's probably not obvious to anyone outside our meetings exactly what we do and how we go about our business. So I thought I'd share some thoughts on this and give you a flavour of how we operate. We aim to meet 'face to face' around four times a year, more if there is urgent business to discuss and decisions to be taken. Traditionally one of these is usually after the Annual Meeting as we are all in one place then. At our August meeting, held on this occasion at my house in Peterborough, the small group of six of us who were available ran through our financial report, looked at staffing, fund-raising, the Constitution, how we could attract younger people to the Society, production of an e-newsletter, how we can review and improve our website, where we could hold the 2016 Annual Meeting, ideas for the Spring (Recorders') meeting, and refreshing the Dragonfly Centre at Wicken. Quite naturally, the financial section took up some considerable time in the light of the legacy as mentioned earlier. And I hope you'll see that some of the items have already turned into actions – witness the first e-newsletter produced by Genevieve Dalley, which is already receiving excellent feedback. By the next meeting, scheduled for 15 November (the day after the Annual Meeting), we hope to show progress on many of these items. I'll keep you posted. But please don't forget that the Society belongs to all of us. You'll see with this mailing we've included a questionnaire. Please take some time to give us your thoughts regarding these questions and any ideas you have. And we usually ask at the Annual Meeting, but please, please, grab one of the Trustees and give them your further thoughts and ideas. Don't be put off if you can't make it to the meeting, contact us by e-mail, or ring, or write. I'm happy to copy all your thoughts to the team and make sure we know the views of the membership. Have we got it all wrong? Should we change, and if so how? We really need your input! **DN**

From the Conservation Officer



Hello! I am Genevieve Dalley, the new Conservation Officer for the British Dragonfly Society and following in the footsteps of Claire Install. I am into my third week working for the society and have already met some of you at the Dragonfly Day at Wicken Fen or been in touch via email. However, I am now going to take this opportunity to introduce myself to you all.

I am originally from a village in Hampshire called Warsash, on the coast between Portsmouth and Southampton. With its wonderful mix of woodland, coastline and chalk streams, Hampshire was a brilliant place to grow up for someone interested in the natural world and I loved every minute spent outdoors.

I went on to study at the University of Southampton for a BSc Degree in Zoology. To collect data for my final year project, I went to Belize, Central America. I helped with research work aimed at creating a wildlife corridor. This project was led by Professor Doncaster, of the University of Southampton, and Panthera, the global cat conservation charity. Here I experienced a totally different way of life and learnt a whole host of new things, such as how to live-trap mammals and radio-tracking. My project looked at the interactions of three of the country's wild cat species, Ocelot, Jaguarundi and Margay, and how humans impact upon them.

After graduating, I carried out six months of residential volunteering at RSPB Exe Estuary and Aylesbeare Common Reserves in Devon. This was a steep learning curve in practical conservation, where I was primarily involved in tree removal on heathland

and the erection of an electric fence to protect breeding waders. While I was here, one of the other volunteers, David Tompkins, was carrying out freshwater invertebrate surveys. In helping him, I discovered a fascination for this subject, which has become a constant thread throughout my career.

Following this, David and I went on to work as wardens for the RSPB on The Skerries, a seabird colony four miles off the coast of Anglesey, Wales. With us two the only people on the islands, it was an amazing experience! We lived in the lighthouse and were chiefly employed in protecting and studying the breeding common and arctic terns, as well as puffins, three species of gull, shags and various passerines which nested here. The islands were also frequented by grey seals. I loved hearing their haunting cries drift up from the rocks through the early morning mist.

The Skerries was followed by five months volunteering, this time at RSPB Lake Vyrnwy in Wales. One of my main projects on this wild reserve was conducting freshwater invertebrate surveys of the moorland streams. Here, I got a better grasp of the identification of invertebrates, which usually requires the use of a microscope.

I returned to the Skerries for the summer of 2013 and spent much of the following winter carrying out volunteer work, such as dragonfly larvae surveys at RSPB Otmoor Reserve, Oxfordshire, and riverfly and dragonfly larvae surveys in the New Forest.

In April 2014 I moved to Scotland for 9 months to work for the RSPB as a trainee ecologist, specialising in freshwater invertebrates. This was one of the Heritage Lottery Funded 'Nature Counts' positions. Based in Edinburgh, but travelling the length and breadth of Scotland (and occasionally dipping into England), I visited RSPB reserves to produce species lists, find rare species and carry out relevant projects. I was also able to learn from RSPB staff and volunteers and external experts such as staff from the charity Buglife, the water beetle expert, Prof. Garth Foster, and caddisfly expert, Dr Ian Wallace. One of the highlights of this job was probably discovering a species of caddisfly never



before found in Scotland, at RSPB Insh Marshes.

My final move before working for the BDS was to Buckinghamshire, where I carried out a variety of volunteer work for the RSPB, Wildlife Trust, Freshwater Habitats Trust and Thames Valley Records Centre.

Starting this job is an exciting next step in my career and it will be brilliant to carry on working with freshwater invertebrates. I am looking forward to learning more about dragonflies, to working with a great community of dragonfly enthusiasts and to opening up this fascinating world to even more people.

So far, I have been supplying identification, surveying and pond-digging advice and produced a press-release about a Southern Damselfly reintroduction project which happened this summer in Devon, with thanks to David Smallshire for providing the information. I have also begun organising Recorders Day 2016 and have started looking into potential funding for monitoring work of Southern Damselfly and Norfolk Hawker. In addition to this, I am currently putting together my ideas for how the BDS can evolve and continue to grow over the next few years, as well as booking up my diary with various upcoming events, meetings and trips!

I have once again moved to a different part of the country and am now living in beautiful Shropshire. Everyone I have met or corresponded with so far has been brilliant; always welcoming and helpful. I look forward to meeting more of you, particularly at the upcoming Members Day, which looks to be a fantastic event! **DN**

Danièle Muir - Scotland Officer



Working with 'The Bog Squad' at Logierait Mires SSSI

On 20 June, a number of BDS volunteers teamed up with Butterfly Conservation's Bog Squad to carry out some practical work to improve Logierait Mires SSSI for dragonflies. The Bog Squad is a group of volunteers who carry out bog and peatland restoration work across central Scotland.

The SSSI consists of several ponds located within woodland and is home to a colony of Northern Damselfly, whose UK distribution is restricted to ponds and lochans in a few areas of highland Scotland.

One of the Logierait ponds has begun to 'fill-in' with peat, leaving fewer areas of open water for the damselfly to breed in. An artificial ditch draining water from the pond had been identified as potentially having a negative effect so the Bog Squad was called in to block it.

The day began with a stiff climb up a landrover track in the forest which with all the tools and materials turned out to be a quite a haul and a few breaks were needed! Once on-site a plan was hatched to create two dams, one on the very edge of the pond, with another a short distance down the ditch. In the end this second dam was reinforced with some mineral soil in order to create a better blockage as despite plenty of hard effort, the plastic wouldn't go as deep below the level of the ditch bottom as required!

As the day wore on it began to brighten up and we started to see some of the site's wildlife including Four-spotted Chasers, Large Red Damselflies and exuviae of Common Hawkers. Later on,

as we passed Logierait Curling Pond where the main population of Northern Damselfly is found, we were lucky to net a Northern Damselfly for a close look – a superb end to a very worthwhile day!

As the Bog Squad regularly spot dragonflies while carrying out their excellent work, we are carrying out a training day in late July at Flanders Moss, near Stirling, to help with ID skills and recording methods.

BDS Outdoor Education Resource Pack for teachers and youth workers

As part of our work with Scottish Natural Heritage, we have produced an outdoor Education Resource Pack for teachers and youth workers. This pack aims to link into the Biodiversity & Interdependence strands of the Curriculum for Excellence (suitable for p4 upwards) through the following topics:

- Life cycles
- Food chains & webs including interdependence
- Simple classification & differences between dragonflies and damselflies
- Easy ID tips for use on site visits
- Simple conservation

Details can be found on the website at <http://www.british-dragonflies.org.uk/content/educational-resources-teachers-and-children> where the sheets can be downloaded. Although aimed at the Scottish curriculum, the games can be used by anyone interested in dragonflies and are already being tried out in Australia!

Training with the Inner Forth Landscape Initiative at Devilla Forest, near Kincardine.

The Inner Forth Landscape Initiative is all about conserving, enhancing and celebrating the unique landscape and heritage of the upper reaches of the Firth of Forth. Between May 2014 and April 2018, fifty discrete but inter-related projects are taking place around the Inner Forth area, with the following aims:

- Conserving and restoring the built and natural heritage features that define the Inner Forth Landscape.
- Increasing community participation in our local heritage.
- Increasing access to the landscape and learning about its heritage

The Conservation Officer post is sponsored by:



Environment Agency



- Increasing training and development opportunities in heritage skills

The BDS was asked to run a training course in Dragonfly ID and Recording, which took place on 25 July. The morning was spent indoors in Kincardine Town Hall looking at the species found locally to the Inner Forth and how to identify them, with recording methods also covered.

The skies looked overcast as we drove to Devilla Forest, just a few miles up the road from Kincardine, for lunch in the new Forestry Commission car park/ picnic spot. There was a very heavy downpour as we set off along the Red Squirrel Trail to Bordie Loch which we'd been told was an excellent site for dragonflies.

As soon as the rain stopped we managed to find our first damselflies – lots of Common Blues, followed by quite a few Emeralds. As the afternoon warmed, up it got better and better with Large Red Damselflies and Black Darters being caught and studied in the magnifiers, a number of Four-spotted Chasers buzzing about and the grand finale of the day, a Common Hawker patrolling up and down the edge of the loch just a few metres from us.

Everyone tested their new-found ID skills, had a fun afternoon and many people went away keen to record their future dragonfly sightings. Thanks to IFLI & Forestry Commission for making it such a successful day. **DN**

Hot Spots

In this new section for Dragonfly News, readers are invited to share details of publicly accessible sites in their area that are important, locally or regionally, for particular species or that offer good viewing opportunities. These sites are not necessarily the same as Hot Spots or Key Sites as defined by the BDS.

If you have an important site, please send details including a habitat shot to the Editor.

BDS Scottish Officer Daniele Muir describes an important Hot Spot north of the border.

Morton Lochs

Key Species: Common Darter



The Site: Morton Lochs is made up of three small lochs fringed with reeds, which provide shelter and protection for many birds and animals. The lochs were created in 1906 by the local landowner, who flooded an area of the dune heath for fishing. The lochs quickly became an important freshwater habitat, attracting large numbers of breeding and wintering wildfowl. In 1952 the importance of Morton Lochs was recognised and the area designated a National Nature Reserve, only the second in the UK at the time.

Getting there: Head south from Tayport on the B945 for 1.7 miles then take a sharp left onto a minor road which leads to the car park (total distance = 2.5 miles). The road to the car park is single track, with limited passing places and an aggregate surface. By public transport - the nearest bus stops are in Tayport and Leuchars. Buses will stop by request at the Morton Lochs road end. The nearest station is Leuchars on the Edinburgh - Aberdeen line.

When to visit: The earliest emerging damselflies can be seen from around mid-April onwards. Sunny days in July and August are most likely to result in the highest number of species spotted – Common and Black Darters can be easily spotted along the woodland rides close to the lochs and hunting in the adjoining open areas.

Also good for: There are five wildlife hides around Morton Lochs – all great places to watch wildlife or to just relax in the peace and quiet. Water rail, little grebe, tufted duck, goldeneye, marsh harrier, ospreys, kingfishers, red squirrels and otters are all regularly seen on or around the lochs. Other dragonfly species found here include Black Darter, Common Hawker, Four-spotted Chaser, Golden-ringed Dragonfly, Large Red Damselfly, Common Blue Damselfly, Azure Damselfly, Emerald Damselfly and Blue-tailed Damselfly. Emperors and Red-veined Darters have been recorded here, which are amongst their most northerly sightings on record.

The Scotland Officer post is sponsored by:



Obituary

Betty Smith, doyenne of dragonfly studies in Scotland by Pat Batty, Mo Richards, David Clarke

Betty Smith died in Edinburgh in June 2015, aged 93. She had been a key mover in the study of dragonflies in Scotland for almost half a century and Recorder for Scotland for much of that time, handing over to the present Recorder in 2003. To all those who met her, Betty was inspirational. Whether in the field or through talks or written work, her natural authority shone through. The mild and friendly manner belied a steely insistence on accuracy and precise observation, but her knowledge, enthusiasm and patience drew many people to develop a lasting interest in dragonflies.

Born Elizabeth Munro Gall on 27 February 1922 in Edinburgh, Betty had an early introduction to the natural world with her frequent trips to the nearby Royal Botanical Gardens with her mother and auntie who were keen amateur botanists. She studied science at Edinburgh University, completing her education at Moray House teacher training college. Her first teaching post was in wartime at Buckie, where she taught biology. She returned to Edinburgh to continue

her career as a science teacher, finally finishing up at Dalkeith High School in the early 1980's. She joined the Edinburgh Natural History Society in 1950's where she met her soulmate and future husband Bob Smith. She made valuable contributions as an excursion leader and as a lecturer - in which she demonstrated her infectious passion for natural history. Betty enjoyed a long and distinguished membership of the Society, including offices on its Council and a period as President. Fascinated by all wildlife, she shared Bob's passion for birdwatching, participating for many years in the annual census of seabirds on the Forth Islands. Her interest in dragonflies was ignited when a fellow bird enthusiast captured a couple of them and stored them for safe-keeping in a shoebox: as he had no idea what they were, he asked Betty and Bob for advice.

Along with Bob (who died in 2001), Betty did much pioneering work on the dragonflies of Scotland. Not content just to record them, she wanted to find out all about the species, their habitats and development, concentrating especially on the scarcer ones. Together they made huge breakthroughs in the study of the elusive Azure Hawker, Northern and Brilliant Emeralds and Northern Damselfly, regularly visiting study sites and painstakingly measuring large samples of larvae. Betty introduced the highly successful use of a colander to 'guddle' for larvae in bog pools – now standard equipment for this purpose. Bob and Betty spent many days in the field observing and studying. They had a dogged determination to find out all they could, searching for the tiny early instar larvae, and even for eggs, amongst Sphagnum samples. Having to break ice on an early season visit was no deterrent. A diver friend was once 'encouraged' to look for larvae of Brilliant Emerald when they could not be found near the bank!

The Smith's trusted camper van took them to many remote and relatively inaccessible places, and became a familiar feature of BDS meetings in Scotland. In it they explored literally the length and breadth of their area, from Galloway in the south to the Highland lochs and pine forests, and the great northern bogs of Caithness and Sutherland. This friendly haven from rain and midges had just enough space for a couple of visitors, with a welcoming cup of tea and home baking after lots of bog-pool 'bashing'. Many of these miniature expeditions added significantly to the knowledge of the distribution of the dragonflies of Scotland.

Betty was diligent in the investigation of old records, chasing up 19th century journals, original archives and museum specimen data - which often led to successful re-finds from very scant information. She took the modern developments in computerised records in her stride. The accumulated knowledge resulted in a number of written accounts, especially in the Journal of this Society. Various compiled with Bob and other associates, these brought notable contributions to knowledge of the natural history of the Azure Hawker (in vols. 6.2 and 16.1), Brilliant Emerald (vol. 11.2) and Northern Damselfly (vol. 15.1).

To the end, Betty always kept up her love of dragonflies. When confined to a wheel-chair, she had her daughter Mandy and partner Drew accompany her to sites, to bring her larvae and take photos. She was an amazing lady and an inspiration to us all. Without her, our knowledge and appreciation of dragonflies, and especially the specialities of Scotland, would be much the poorer.



A memorable partnership: Betty and Bob Smith 'guddling' for Azure Hawker larvae at Grudie Bog, Loch Mareeside, July 1995. Photo: Mo Richards.

InBox

The Editor welcomes your letters and e-mails.

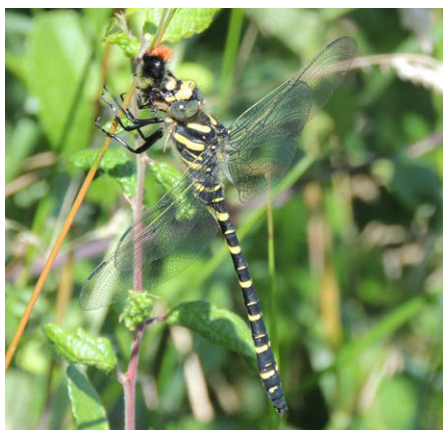


Bee Eaters - part 1

In DN67, Isabell Buenz sent in a shot of a Golden-ringed Dragonfly, via Ruary, who questioned whether this was a unique event. Well, looking at the Dragonfly News InBox suggests not!

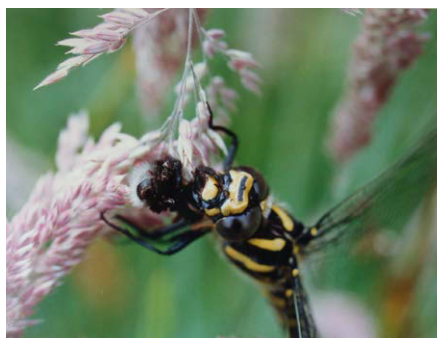
I was interested to see the picture of a Golden-ringed Dragonfly eating a Bumblebee in Dragonfly News 67. Attached is a picture that I took near Taunton, Somerset on 10 July last year. I also saw one eating a Buff-tailed Bumblebee at Haddon Hill on Exmoor on 28 June 2014.

Nigel Cottle



The item by Ruary in Notes & Observations about Golden-ringed Dragonfly preying on a bumble bee, reminded me of a photograph I took in June 1990 near St John, Cornwall showing a similar incident. I don't think I've witnessed anything similar since. the photograph is a scan of a print from a film camera back in pre-digital days!

Leon Truscott



Reading Notes and Observations in the latest Dragonfly News I see Ruary was surprised by Golden-ringed eating bumblebees. I came across this female having a good feast back in July 2011. When eating, this species really does not mind the photographer getting up close!

Barry Watts



Bee Eaters - part 2

I am privileged to have Bee-eaters nesting close to me in Cumbria. Natural England have recently done work on a wetland site called Unity Bog close to the Bee-eaters nest site and within 1 hour of watching I saw 5 species of odonata at the bog. I was surprised to see an adult Bee Eater bring a Migrant Hawker to feed its young.

As the season is coming to fledging I was wondering if anyone has any records of the dragonflies caught by Bee-eaters at any of the other sites used in Britain and wonder about their importance for successful British Bee-eaters?

John Miles



BDS Yorkshire Branch

The Yorkshire Branch of the BDS welcomes any British Dragonfly Society member on their field trips and would encourage members of the BDS who live in and around Yorkshire to join the Branch. Membership is still only £3 per annum and for that small fee, you receive the annual Branch newsletter 'Skimmer' and can attend the two indoor meetings. Various field trips and other events are organised throughout the year. Details of all the Yorkshire Branch field meetings can be found on the Yorkshire Branch of the BDS website at www.yorkshiredragonflies.org.uk or on the Diary page of the BDS website.



First Dates for 2015

Adrian Parr rounds up the first recorded dates for each of the common UK species.

Over large parts of Britain, winter 2014/15 was unremarkable but both March and especially April were relatively mild. The dragonfly season got underway with the appearance of Large Red Damselfly at several sites on the south coast on 5 April; this is a relatively typical first date by modern standards, though by the end of April some 11 species had been observed, slightly above the modern average of 8-9 species. May and June then turned more unsettled, with mean temperatures slightly below the recent norm. First dates for most of the later-emerging species were to be fairly routine, though several of the hawkers did seem to be just a few days late in appearing. Finally, late June-early July saw a period of very hot weather, which encouraged the final species of the year, such as Willow Emerald Damselfly and Migrant Hawker, to start emerging. So, all-in-all, it was a very average start to the flight season during 2015. **DN**

All first dates currently known to me are detailed below:

SPECIES	FIRST DATE	PLACE	Observer
Banded Demoiselle	20-Apr-15	Surrey	J. Bryan <i>et al.</i>
Beautiful Demoiselle	01-May-15	Devon	L. Chapa
Scarce Emerald Damselfly	06-Jun-15	Kent	M. Heath
Emerald Damselfly	30-May-15	Cheshire	R. McHale
Willow Emerald Damselfly	03-Jul-15	Suffolk	A. Parr
Azure Damselfly	16-Apr-15	Kent	M. Heath
Variable Damselfly	20-Apr-15	Somerset	J. Hawker
Red-eyed Damselfly	24-Apr-15	Cambridgeshire	I. Dawson
Small Red-eyed Damselfly	18-Jun-15	Gloucestershire	L. Wheatland
Large Red Damselfly	05-Apr-15	Cornwall/Kent	G. Barlow/K. Gill/M. Heath
Common Blue Damselfly	20-Apr-15	Devon	R. Proctor
Blue-tailed Damselfly	21-Apr-15	Hampshire	P. Ritchie
Scarce Blue-tailed Damselfly	06-Jun-15	Hampshire	P. Winter
Small Red Damselfly	12-Jun-15	Berkshire	J. Ward-Smith
White-legged Damselfly	13-May-15	Surrey	G. Droual
Southern Hawker	12-Jun-15	Norfolk	Anon.
Brown Hawker	17-Jun-15	Cambridgeshire	J. Hoare
Norfolk Hawker	17-May-15	Cambridgeshire	J. Stevenson
Common Hawker	27-Jun-15	N. Yorks./Perthshire	T. Hubball/Anon.
Migrant Hawker	03-Jul-15	Norfolk	M. Smith
Emperor Dragonfly	12-May-15	Dorset	M. Cade
Hairy Dragonfly	20-Apr-15	W. Sussex/Kent	P. Stent/B. Hunt
Common Club-tail	07-May-15	Berkshire	P. Ritchie
Golden-ringed Dragonfly	26-May-15	Hampshire	Anon.
Downy Emerald	27-Apr-15	Wiltshire	S. Covey
Brilliant Emerald	21-May-15	Surrey/Kent	M. O'Mahony/W. Baker
White-faced Darter	14-May-15	Shropshire	C. Payne
Broad-bodied Chaser	18-Apr-15	Dorset	M. Cade
Scarce Chaser	11-May-15	West Sussex	S. Patton
Four-spotted Chaser	23-Apr-15	Somerset	M. Robinson
Black-tailed Skimmer	20-May-15	Somerset/I. of Wight	J. Hawker/P. Hunt
Keeled Skimmer	16-May-15	Hampshire	S. Birt
Black Darter	16-Jun-15	Dorset	P. Ritchie
Ruddy Darter	11-Jun-15	Somerset	P. Woodgate
Common Darter	16-May-15	Glamorgan	D. Batchelor

Migrant and New Colonist Update

Adrian Parr reports on the activities of migrant and new colonist dragonflies for spring and early summer 2015.

Following the good spring and early summer for migrant species in 2014, the early part of 2015 again proved to be rather eventful. Sightings of three unidentified medium/large dragonflies during mid April (two in Suffolk and one in Berkshire) coincided with the arrival of Saharan dust in the UK, and may perhaps have related to Vagrant Emperors. With the first confirmed Hairy Dragonflies being seen only a week later, this must however remain rather speculative. The identity of a red dragonfly seen in Wiltshire during early May must similarly remain unproven, though in this case it seems quite likely to have been a Red-veined Darter. Substantial early season arrivals of this species are now pretty much annual in Britain, and by early June it had become clear that 2015 was to be no exception. Over the next 6 weeks Red-veined Darters were reported from some 50 sites as far north as Scotland, where a male was seen at Aberlady Bay, East Lothian, on 7 July. This makes the influx one of the most widespread ever seen in the UK, though a significant proportion of sightings referred just to singletons, so that the absolute numbers involved were still some considerable way short of the record set in 2006. At several sites where larger numbers of dragonflies arrived, individuals clearly stayed around to breed, and with luck there will be substantial emergences of locally-bred Red-veined Darters this autumn.

As well as the Red-veined Darter, our other currently regular migrant, the Lesser Emperor, also appeared in good numbers during early 2015. Records were thus received from roughly 15 sites by the end of July, though interestingly

a number of these records may have actually referred to 'home-bred' individuals rather than to immigrants. Several Lesser Emperors were, for instance, seen around the Trinity Broad complex in Norfolk, where good numbers had similarly been present in 2014, and oviposition had been observed. The simultaneous appearance of migrant Red-veined Darters in this area of Norfolk around the same time however complicates interpretation. Records were additionally received from several other sites in England where the species had been seen in 2013 or 2014, but perhaps the strongest evidence for the presence of locally-bred individuals was the discovery of an immature male with one un-inflated hindwing near Aylesbury, Buckinghamshire, on 10 July. Although it could still fly, it seems unlikely that this individual had come far.

In addition to news of our regular migrants, there were several other interesting sightings made in early 2015 that relate to our new colonist species. In Kent, several exuviae of Southern Emerald Damselfly were discovered at Cliffe Marshes during June, so providing formal proof that the species is breeding at this now well-known site. The discovery of a male Southern Emerald at Gunner's Park in south Essex on 21 July was, however, less expected, and may indicate continuing immigration into the greater Thames Estuary area. Sightings of Southern Migrant Hawker from the North Kent Marshes near Cliffe, and also from Wat Tyler Country Park and Hockley Wood in Essex no doubt refer to the local breeding populations that have also recently become established around the greater Thames Estuary. The spectacular discovery of a female Southern Migrant Hawker on the coast near Ainsdale, Lancashire, on 10 July must however reflect a fresh wave of immigration, and it will be interesting to see whether any new breeding sites become established. Finally, it is encouraging to note that Dainty Damselfly was once more seen on the Isle of Sheppey, Kent – showing that the species had managed to survive its 2014 low point when no flying adults were observed during the year.

Clearly, early 2015 was a very exiting time for our migrant and recent colonist species. A downturn in the weather towards the end of July put a temporary hold on events, but hopefully the second half of the season will continue in productive vein. **DN**

Fancy watching dragonflies in Madagascar?

During the summer, Phil Benstead (who co-led a dragonfly tour to Malaysia with Dave Smallshire in 2013) launched a new company devoted to dragonfly tours: Odonatours. His first excursion, in the company of K-D Dijkstra, is to that hot-bed of endemism, Madagascar, from 7-20 January 2016 (see odonatours.com for further details).





Favourite **Days**

How early would you get up to see one of nature's spectacles? The appropriately named *Jerry Hawker* witnessed mass roosting of Four-spotted Chasers, and their first flights.

A friend of mine, Steve Balcombe indicated he was considering a very early start, (before Sunrise) to search for, and hopefully photograph, Four-spotted Chasers, which can sometimes be found in large groups, in the reed beds at the RSPB Ham Wall reserve in Somerset. The weather forecast for the morning of the 27 May this year looked promising with sunshine and almost no wind. Sunrise on that day was at 0504hrs, and not knowing exactly what to expect, we agreed to meet at 0430hrs in the car park, allowing time to walk to our chosen starting point.

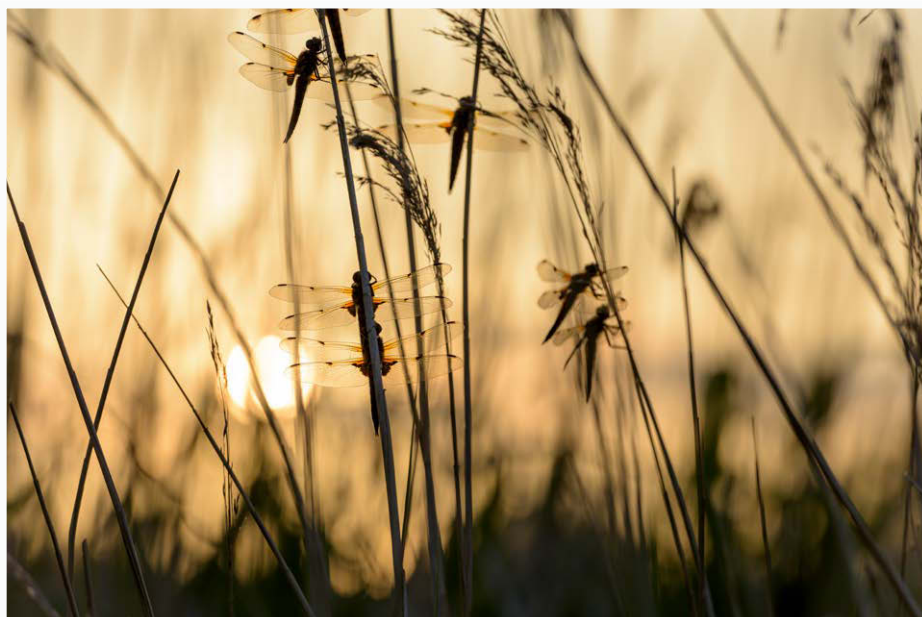
On the approach to the viewing platform the path splits around two small ponds, which are surrounded by tall reeds. We observed a few individual Four-spotted Chasers just clinging to the reeds. Placing our photographic gear on the bird viewing platform, we started our search and found a group within a few metres. As we watched a cluster of 25 plus Chasers, which were climbing extremely slowly up the reeds to reach the fast approaching sunlight and warmth.

We set up our cameras and started to shoot this amazing phenomena, which was quite a challenge as the sun had yet to break the horizon and the light levels were low. Flash had to be used in order to obtain a high enough shutter speed. Finding a good position to get a reasonably uncluttered shot amongst the reed was quite difficult too, but luckily a few of the groups were quite close to the path, so we could keep from trampling the undergrowth.

At daybreak and within a few metres of our location, another couple of groups were found nearby. Searching for others slightly farther away, we found that there only appeared to be individuals dotted about, and nothing like the other groups we had previously encountered. On this particular morning everything happened within a very small area.

A few minutes before 0700hrs, and with temperature climbing, the Chasers started to disperse, leaving one by one from each of the clusters. As we left there were Chasers flying up from the edges of the path, so many in fact, it would be difficult to even estimate the numbers present.

It was an amazing spectacle to witness. I have never before seen clusters of 25 plus dragonflies together in such a tight formation, and well worth the very early start. **DN**



Identifying Dragonflies

a personal journey from late 1960s to the present

Field guides are an invaluable source of education and information, and *Brian Walker* gives a personal account of how they have developed and shaped his identification skills.

I was recently trawling through photographs of insects that I had taken on a trip to the New Forest and trying to identify using a stack of field guides and an occasional google search on my laptop and it suddenly struck me how different this was to when I first became interested in natural history in the 1960s. My interest first developed when I went on bird watching trips to local sites, organised by Mr G.B. Rimes, a latin master at my school in Kent, who was responsible for introducing many boys to birdwatching as a life-long hobby. I went on my first trip almost by accident, but was hooked and I saved up my pocket money to buy a copy of Peterson's Field Guide to the Birds of Britain and Europe and a pair of binoculars. Peterson's field guide to the birds was like nothing before as a guide to identification of birds.

Birdwatching took a back seat while I was at University and living in the East End of London, but I renewed my interest when I started work and was living in the country. I purchased a single lens reflex camera and attempted to take pictures of birds, but also photographed other wildlife such as butterflies, hoverflies and dragonflies. If I took what I considered to be a good photograph and showed it off then the inevitable question was "what is it?" and this, and a natural curiosity, meant that I tried to identify the photographs I had taken. This was not too difficult for butterflies, but not easy for dragonflies or other insects. I had a copy of the Observer's Book of Pond Life (another birthday present from my school days), which had two plates with tiny pictures of dragonflies, but no pictures of damselflies which is what I mostly

managed to photograph. I recall taking a number of pictures of female Blue-tailed Damselflies in my early days, thinking the different colour forms were different species, only to realise the truth on a later visit to the Natural History Museum in London and seeing specimens in a display case.

Life changed in 1977 when "The Dragonflies of Great Britain and Ireland" by Cyril Hammond was published with large coloured drawings of both males and females of British species. I could now identify dragonflies with some confidence and my interest increased and finding and photographing dragonflies became an objective rather than a fall back activity when there were no birds in range. Hammond was updated and republished in 1983, with only modest changes. I continued to rely on this guide to identify what I saw for many years, although I also bought other books about dragonflies to expand my knowledge.

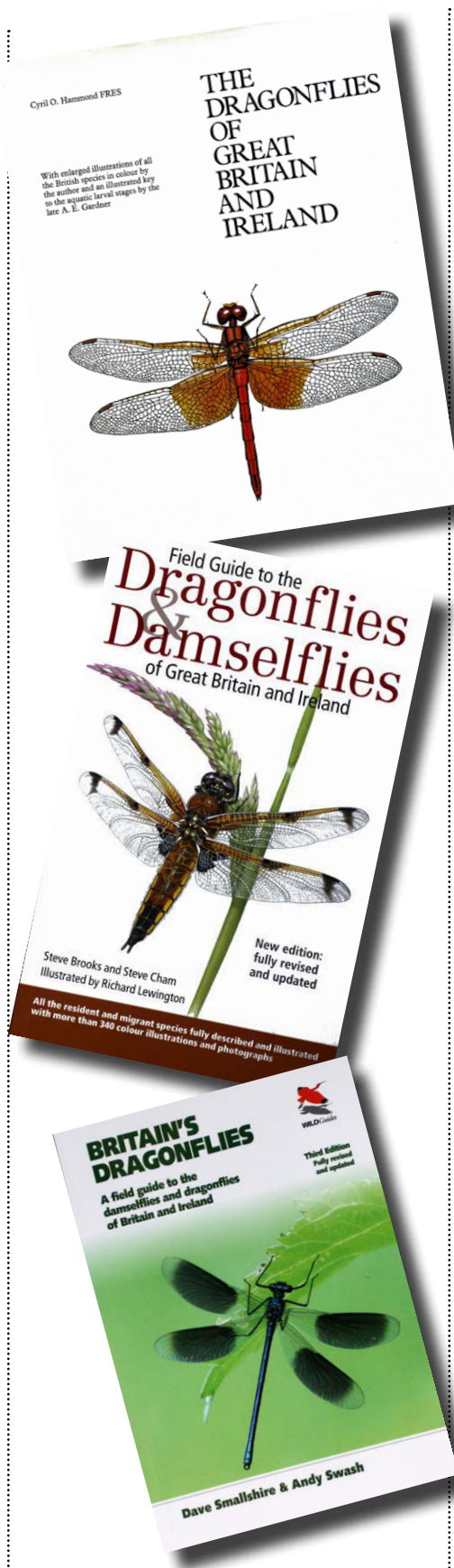
It wasn't really until 1997 that I found another field guide to use with the publication of "Field Guide to Dragonflies and Damselflies of Great Britain and Ireland" by Steve Brooks with illustrations by Richard Lewington. The illustrations were smaller than those in Hammond but the detail was brilliant and key features were shown enlarged. Then 2004 saw the publication of "Britain's Dragonflies" by Dave Smallshire and Andy Swash which used photographs as illustrations rather than drawings. In the birding world there was a debate about the best approach when the first photographic guides appeared. This was in the days before digital photography and the photographs tended to be



only of males and often with rather cluttered backgrounds or of obviously captive birds. Photographs have still not displaced drawings in the majority of bird field guides, but for dragonflies the advent of digital photography and improved photographic techniques means that there are a large number of clear images available that show the insects in characteristic poses. I slightly favour photographic guides for insects, other than butterflies and moths, because they show textures more readily than drawings can, but it is a close call between the two types for dragonflies. Both Brooks (with Steve Cham now as co-author) and Smallshire have been revised and re-issued to include the species that have recently started to appear in Britain and with further illustrations to cover different forms and poses. Making a choice between them is difficult. Photographs give a very good idea of how the species will look in the field but Richard Lewington's drawings provide a better guide to key identification details. The two guides also approach issues in different ways and the combination of the two provides a greater insight. I tend to consult both when I am looking something up.

For people beginning an interest in dragonflies, digital photography has made a world of difference. In the past you might have asked someone what you had seen by providing them with a vague verbal description that even if accurate, probably missed some key aspect. Now you can produce a photograph that in most cases will allow identification with 100% certainty, based on experience of the photos being sent to BDS for identification. And this illustrates another advance. The web means that expert help for identification is only a click away, via BDS or iSpot, if you have a photograph. The web is also a source of a range of photos if you have an idea what the species might be and want to compare it – but beware the fact that some posted photos on the web are misidentified. The next development is already appearing in the form of Apps for mobile devices to help identify dragonflies and to record where it has been seen using built in GPS data. The pace of developments has certainly accelerated in recent years.

So, for the person newly interested in dragonflies, the route to greater



knowledge and hence enjoyment, is much easier than when I was starting. Hopefully those building their knowledge will also progress more rapidly to recording what they see and contribute these records to the BDS database so that we continue to build our knowledge of populations and distribution to help protect our species for the next generation to observe and identify. **DN**

Illustrated:

The Dragonflies of Great Britain and Ireland - Cyril Hammond, published by Harley Books. ISBN 978-0946589142.

Field Guide to the Dragonflies & Damselflies of Great Britain and Ireland – Steve Brooks and Steve Cham, illustrated by Richard Lewington, revised edition 2014 published by British Wildlife Publishing Ltd., ISBN 978-0-95649-028-5

Britain's Dragonflies A field guide to the damselflies and dragonflies of Britain and Ireland (3rd edition) – Dave Smallshire & Andy Swash, Princeton University Press 2014, ISBN 978-0-691-16123-5



Notes & Observations

Compiled by Mark Tyrrell

On 30 May, at 1640hrs, whilst weeding a flower bed by my pond, I found an emergent Broad Bodied Chaser, clinging to its exuvia and I estimated the larva must have travelled approximately two metres from the water to get to its final emergent site. This would have involved a climb up, along, and down the stone side of the pond and then across the soil of the flower bed to where I found it.

At 2055hrs the emergent was still present and was exactly as found. However, its abdomen colour was more pronounced and the veins in the wings were becoming more noticeable.

Having rained overnight, the dragonfly was still present at 0745hrs, in the same position as it was the night before. By 1045hrs, it had extended its wings. The individual was checked again just before midday after another shower of rain. The wings had been partially closed, but because leaf and plant stems were in the way, full closure was prevented.

After a short period of drier conditions, the wings were extended out and all rain droplets had disappeared. The individual was checked again at 1520hrs and at 1930hrs it had moved on the stem it was gripping.

At 0650hrs on 1 June the Chaser was still present, but by 0820hrs had turned towards the rising sun from the east, with wings outstretched. By 1010hrs this individual had disappeared despite the windy conditions. So, the total emergence time was over 1 day, which at this vulnerable stage the Chaser was very fortunate not to have been some bird's or ant's dinner!



Chris Emary



I spent a few hours last week photographing Red-eyed behaviour on a local pond covered in white water-lily leaves. One pair 'in tandem' were sitting in their usual pose on a water-lily leaf when the male suddenly reared up and launched some kind of attack on the female. No idea why it did it, because after the attack it resumed the tandem pose and remained like that until they moved on. No idea either whether they had previously mated or where about to do so.

Tony Clarke



We were tweeted a very interesting photo by Damian Waters, which shows a male Brown Hawker attempting to mate with a female, who's far more interested in eating an enormous Migrant Hawker that she'd presumably just caught and it certainly generated quite a bit of comment on Twitter.

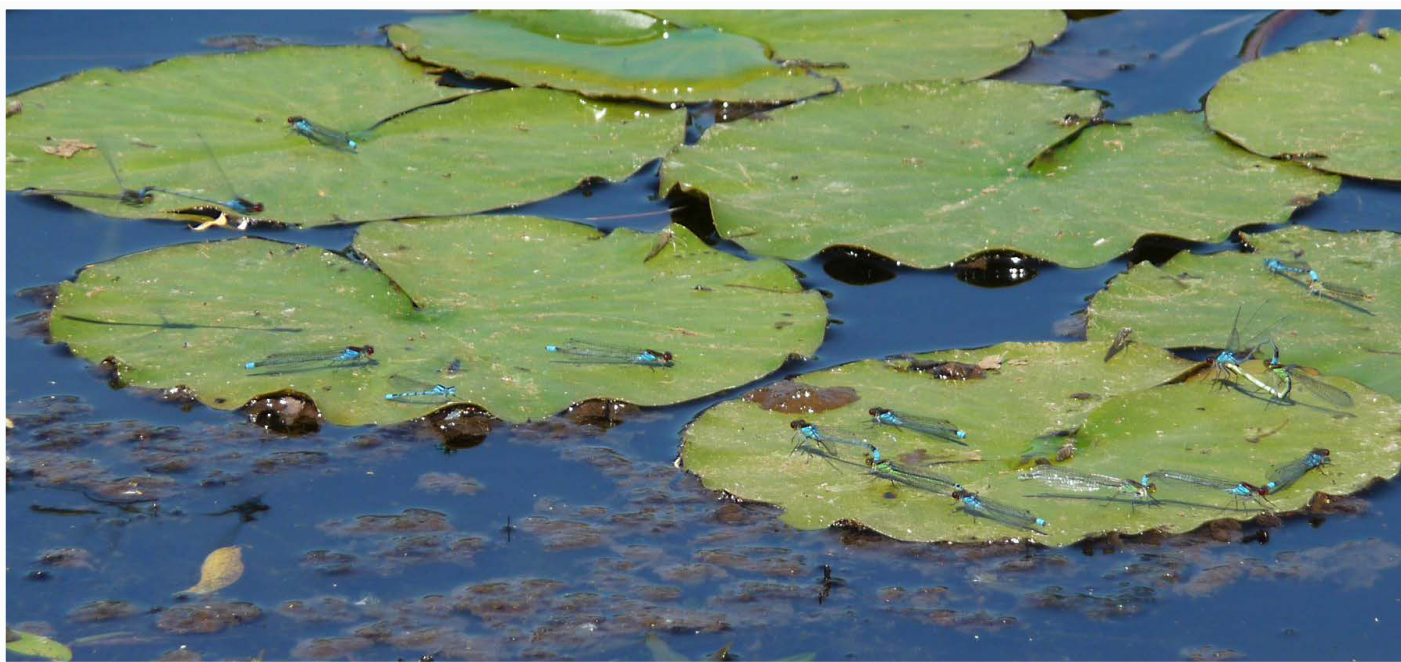
Peter Sketch
(www.drumimages.com
for more of
Damian's shots)

I saw this male Emerald Damselfly clasp the male of a mating pair of Blue-tailed Damselflies at Crowle Nature Reserve, Lincolnshire. A case of mistaken identity I am sure, but how similar does a male Blue-tailed Damselfly look to a female Emerald I wonder?

Stephen Routledge



On the Colonisation of Red-eyed Damselflies at Moors Valley Country Park



**Colonisation by
a new species
is always an
exciting event,
especially when
it is followed
through over
12 years, as
described by
Keith Powrie.**

I have been monitoring Odonata at Moors Valley Country Park since 2002. In the first year no Red-eyed Damselflies were seen on any of the lakes monitored. They had been reported in previous years but their numbers were in decline. 2003 saw their return, with a single male found resting on the floating vegetation of Golf Lake. It is a small 'ox-bow' lake, which bends around the 16th green of the golf course. There is good emergent vegetation around the margins, extending some distance into the centre of the lake in places, which dies back over winter, producing plenty of floating vegetation by the following year. This flotsam was obviously to the Red-eyed Damselflies' liking, as their numbers grew steadily over the following years, reaching a count of 14 by 2008, with a peak of 21 in 2006.

The sightings were mainly of males, perched characteristically on the patches of floating vegetation. In a good year one could be lucky enough to spot a pair in tandem!

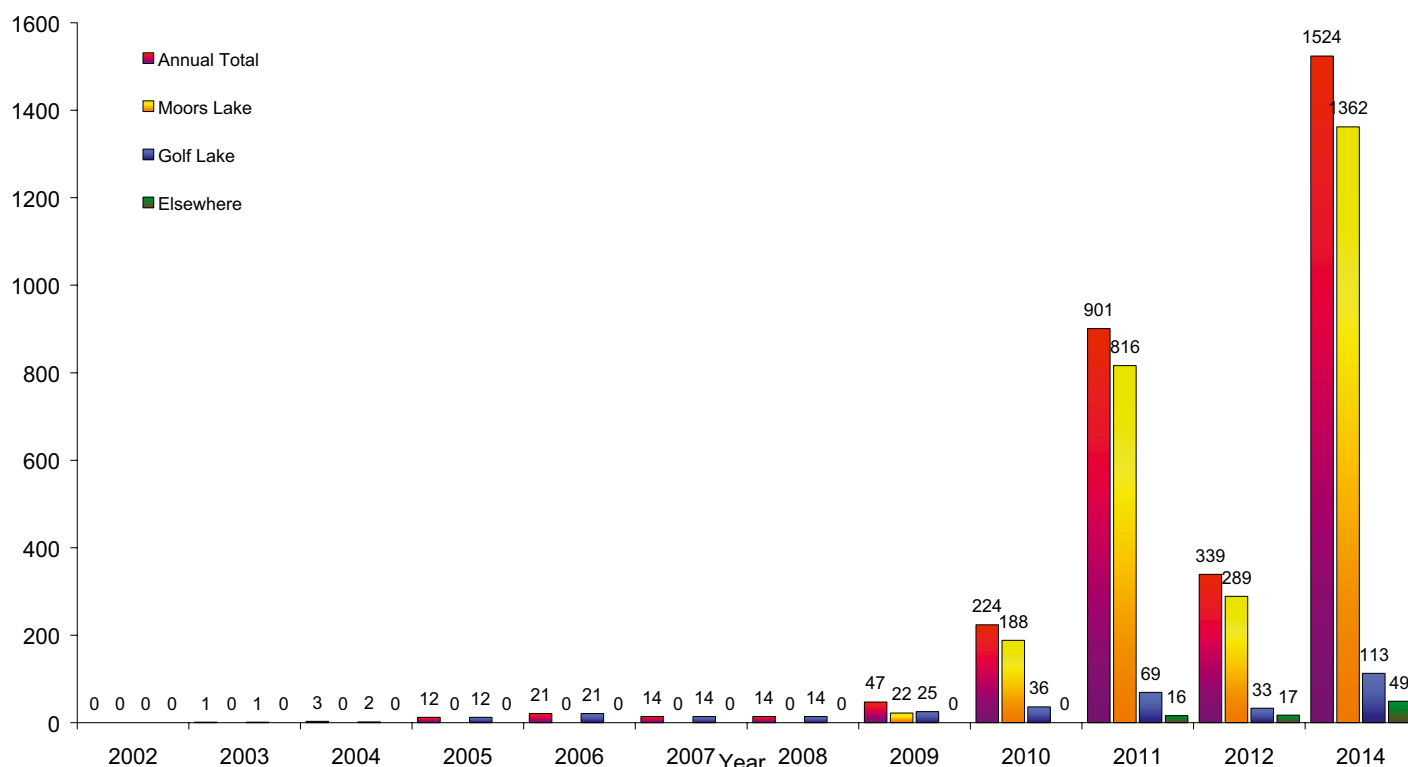
Unfortunately, in 2008 it was decided to clear out the 'rubbish' from Golf Lake and to cut back some of the peripheral vegetation as a 'tidying up' operation.

Fortunately, during the same year it was decided to plant some Water Lilies (*Nymphaea alba*) at the behest of the anglers who regularly fished the nearby, much larger, Moors Lake. Apparently they attract the fish into the shade of the leaves during warm sunny spells. As the lilies were planted close to the shore it brought them within reach of the anglers lines. It also made it easier to observe what was to happen as a result of these plantings.

Finding their favourite resting places gone from Golf Lake, the Red-eye's looked elsewhere for suitable perches and managed to find them not far away on Moors Lake. The clusters of lily leaves were very much to their liking and they took up residence with enthusiasm. Over the next 3 years their numbers increased exponentially to an astounding count of 901. Moors Lake held 775 and the remainder was seen on nearly all the other sites throughout the park, as a result of expansion from this now overcrowded stretch of water.

It was hoped that perhaps 2012 would see the count reach 1000. However, the summer weather of that year was terrible





Above: Chart showing the growth in counts of Red-eyed Damselflies at the four ponds.

and the total count was only 339, of which, 289 were on Moors Lake. The following year, due to ill health, no monitoring was carried out. So it had to wait until 2014 before the count reached four figures. The final count amounted to 1,524 throughout the Park, with 1,359 being seen on the overcrowded lily pads of Moors Lake. This included a staggering 216 pairs in tandem!

The photograph shows just a few of the crowded lily pads, with several pairs in tandem - and it was taken a week or more after their peak count!

Amid this plethora of Red-eyed Damselflies, two Small Red-eyed Damselflies were discovered – but that's another story!

iRecord Dragonfly: an update on a new dragonfly recording app

In DN67 I reported on the development of a new dragonfly recording app – iRecord Dragonfly – by the Centre for Ecology and Hydrology (CEH). This will enable dragonflies to be recorded on smart phones and tablets, either in the field or later at home. While a basic version was tested in the spring, it was decided that a full version should be developed before release, allowing recorders to submit multiple species records for all life stages. At the time of writing (early August), this was well in hand. A link to the app will appear on the home page of our website when it's ready to use. If you have any feedback on the app, please send it to Dave Smallshire (for contact details, see inside front cover).

Following Steve Prentice's retirement, arrangements have been made for the Biological Records Centre at CEH Wallingford to curate the Dragonfly Recording Network database, to which records via iRecord Dragonfly will be added directly. In addition to being able to submit records via iRecord Dragonfly, you will be able to submit records online in spreadsheet format through iRecord. Vice County Recorders will continue to validate records as previously and batches of new records will be sent at intervals to the NBN Gateway for public access.



White-faced Darters break through the "TK barrier" at Foulshaw Moss



David Clarke updates us on the great progress with the re-introduction of White-faced Darters at Foulshaw Moss

When the monitoring team (Heather and Tony Marshall) counted some 500 exuviae in 2013, we thought this was a good result for year 4 of the Cumbria re-introduction project. It also gave cause for quiet optimism that the two-year life cycle would yield equally good results in 2015. 'Quiet optimism' now sounds almost pessimistic: the team encountered more than twice that number this season. Their actual count was 1071. By its very nature this a minimum figure: the real one must have been significantly greater. This is a wonderful boost for the prospect of a self-sustaining population. Clearly the site suits the species well. Things have moved on at Foulshaw even since we started the project. The Cumbria Wildlife Trust's major re-wetting

programme was completed in 2014, and there is now more water than ever. Already it is apparent that the Darters have found pools beyond the five we chose for them initially, but monitoring these as intensively as the original ones is not a practical option, and perhaps not really necessary. The two-year life cycle means that there are in effect two populations living side by side. The 2014 emergence was not as high as that of 2013, so we have to wait until at least 2016 to discover how well this 'alternate generation' is doing, and then assess whether further stock should be translocated. There is an intriguing possibility that there could be some 'crossover' between the generations - by means of faster or slower than average rates

of development of some larvae. If this does occur, it could begin to smooth out differences between years, but acquiring evidence for such a phenomenon is not a simple matter. Whether this does or does not occur, the future for the species at this site is looking ever more hopeful. The main route through the Moss is a boardwalk, and it is here that visitors have the main chance to see this and many other dragonflies: we are hoping that some further extensions of this system will be possible - increasing the prospect for sightings of this alluring and very scarce species. The project to the end of 2014 was reported in the *BDS Journal*, vol. 30(2), and a 'thread' of updates has appeared in *Dragonfly News* 60, 62 & 64.





Opposite: Foulshaw Moss from the viewing platform. Photo: David Clarke

Above: A fine male White-faced Darter, 12 June on a log near the car park at Foulshaw. Photo: Ben Williams.

BDS at the Birdfair 2015

The BDS team ran a very successful double stand yet again at this year's British Birdwatching Fair at Rutland Water from 21 to 23 August. This took a lot of planning and organising! Five people were on duty, including leader Mick Parfitt, Sue Parfitt, David Goddard, and Conservation Officer Genevieve Dalley. The weather was mostly kind and the stand was very busy, with activities for children, a special membership offer, BDS shop sales, competitions and photo displays. The team were bombarded with questions and were able to make use of charts & resin-encased specimens of adults and exuviae to demonstrate key features and life-cycle.

I am particularly pleased as they received the show's award for second place in the Best Conservation Stand section. This is not just awarded for how the stand appears but also for the high level of interaction with the public. Congratulations to everyone involved



Henry Curry

Autumn 2015



members' gallery

Dragonfly News Editor, and passionate photographer Mark Tyrrell presents his portfolio of images that chart the important events in his tenure of County Recorder in his home county of Northamptonshire.

1) I found the first Scarce Chaser on the River Nene in July 2007. The following year, I confirmed that they were breeding by finding this teneral. I deliberately included the exuvia just out of focus to establish that this is a teneral and also, make a more pleasing shot.



2) Small Red-eyed Damselflies appeared in Northants in 2004. I have tried to recover exuviae to prove breeding, without success. This ovipositing pair were the first I found that I could photograph, which while it doesn't prove breeding does help establish that this is happening especially as I have seen



3

this at the same site every year since.

3) On a windy Saturday in late June 2009, I received a call about the discovery of a group of Red-veined Darters just outside Northampton. This group created a great deal of excitement in the coming weeks. In September, I returned to the pond to find a number of emergent adults, including this beautiful female. In the coming 10 days I found 20 exuvia.

4

4) A sighting of Downy Emeralds at Yardley Chase by the Northants Butterfly recorder got me really excited. It took a few years to get a permit for free access and my first task was to establish breeding. This is the first teneral I found, and like the Scarce Chaser above I included the exuvia in the picture.

If you would like to share you best images with other BDS members, please send a selection of jpgs with words explaining what the photo means to you, to the editor at the address on the inside front cover.

Egg parasitism of Scarce Emerald Damselfly



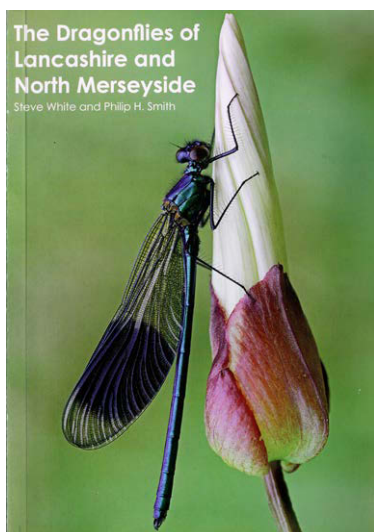
On 24 June 2015, during my 'Bulgaria's Dragonflies' Naturetrek tour, I photographed a pair of Scarce Emerald Damselflies ovipositing into the soft tissue of a Water-plantain *Alisma plantago-aquatica* flower stem. At the time, I noted that a series of puncture marks, made by the female as she inserted her eggs, was clearly visible down the stem on my images. That evening, however, when reviewing a burst of nine images taken over a three second period, I also noticed the appearance and movement of a tiny object next to one of the oviposition marks between the two damselflies. On zooming in the image, the tiny object is clearly a small, wasp-like insect. With its pointed 'rear end' over the puncture, the obvious conclusion is that was parasitizing the recently-laid eggs.

In 'the bible' (Dragonflies: Behaviour and Ecology of Odonata), Philip Corbet quotes egg parasitism in five Canadian Lestes species. The parasitoid larvae are able to consume and develop at some leisure, as the host eggs are destined to overwinter before hatching. Of course the eggs of most Odonata are laid into water or into plant material in water and many of these hatch relatively quickly; both of these factors should give substantial protection from parasitism at that stage and indeed most references quoted by Corbet refer to Lestes species, including dryas in North America. However, he also lists other damselfly hosts, including Beautiful Demoiselle, White-legged Damselfly, Variable Damselfly and Red-eyed Damselfly, in addition to several Aeshnidae (but notably not other Anisopteran genera, which lay directly into water).

As to the identity of the parasitoid, which I estimate to be only about 1.2 mm in length (excluding antennae and any ovipositor), my Lumix FZ200 struggles with the sort of detail necessary for that – we're definitely out of the realm of photographs and into that of the microscope! Corbet lists over 20 possibilities, mostly Chalcid wasps. None of the records he quotes concerns Bulgaria, or indeed Britain, so there is much potential for new observations. This is the first time that I have noticed this sort of thing, but then how often do any of us look that closely? And if you think this wasp is small, note that there are often even smaller hyperparasites around to parasitize parasites!

Another point to boggle the mind even more is that the site in question was one of two small, isolated, spring-fed stock-watering ponds on an otherwise dry, scrubby hillside in the Eastern Rhodope mountains. Scarce Emerald Damselflies are frequent in the rushy margins of ponds in the area, but they must disperse occasionally and colonise suitable sites. So if they move around, do their parasites disperse too, and what are their chances of happening up an ovipositing pair of Lestes? **DN**

Reviews



The Dragonflies of Lancashire and North Merseyside

Steve White and Philip H. Smith

Lancashire & Cheshire Fauna Society 2015
103pp, £10

Review by Brian Walker

This new Atlas is the result of 6 year's effort organised by the Lancashire and Cheshire Fauna Society which has achieved very good coverage over the bulk of the area. The resulting Atlas is a comprehensive record of the current status of odonata in the area and a commentary on changes that have occurred.

The book follows the established pattern for recent Atlases with sections on key habitats and sites followed by individual species accounts. These provide distribution maps and the timing of records. The Atlas is particularly interesting because thirty years ago Lancashire was north of the range of many more southerly distributed species, but by the end of this project their ranges have extended through Lancashire. It therefore provides more detailed information on how they have expanded their range in this area than was possible in the national Atlas. For appropriate species the Atlas includes maps showing the time periods when the species was first recorded. Thus it is easy to see at a glance that Migrant Hawker first spread

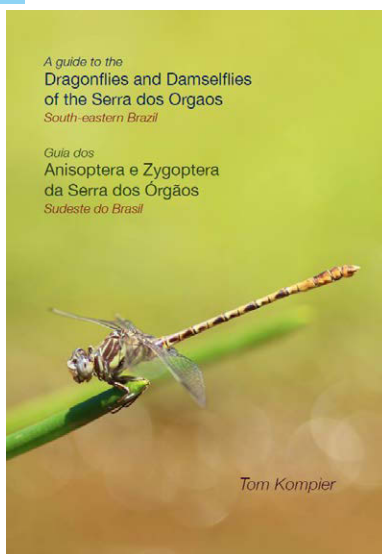
north along the coastal strip before being recorded inland across the whole region. The text then notes that its status has changed from being a major rarity to being the 10th most widespread species in a little over 20 years.

I was particularly interested in the account for Broad-bodied Chaser. I was living in the north-west until 1990 and recorded only one individual in north Cheshire before I left. It was a scarce species at this time. The Atlas shows that it expanded fairly rapidly thereafter and is now firmly established and widespread up to the northern border of Lancashire.

The species accounts are tailored to provide information relevant to the particular species. Thus range changes are illustrated only where there has been a clear change. Similarly maps indicating relative abundance are only included for widespread and relatively common species. The text is helpful in highlighting key information and indicating the most productive sites. The book is illustrated with high quality photographs throughout.

This Atlas is a very worthwhile acquisition for anyone living in the area or planning a visit and is of more general interest through the information it contains. It is available from the BDS Shop at £10 plus £1.50 post and packing.

DN



A Guide to the Dragonflies and Damselflies of the Serra dos Órgãos South-eastern Brazil.

Tom Kompier. REGUA

Publications. Belgium.
ISBN 978-0-9568291-1-5.
Softback.
379 pages.

Review by Dave Smallshire

In my article about a recent visit to REGUA (Reserva Ecológica de Guapiaçu) in the last issue of Dragonfly News, I mentioned that the group had pre-publication access to an electronic version of Tom Kompier's imminent new book. Referring to the book in the field on smart phone, at the lodge in the evenings and back home on a desktop was very helpful, but not as good as having the 'real thing'! As our group had added a number of significant new records, it wasn't until June that the book finally arrived.

The final product was a joy to behold. It has been very attractively produced at A5 size, so is a suitable size for use in the field. Tom was helped with the design by his partner, Kameliya Petrova, who used to work at REGUA. The book is the result of a project undertaken by Tom since December 2011, during trips to REGUA and its immediate surroundings in the Serra dos Órgãos in Brazil's Atlantic Rainforest. REGUA, which covers less than 200 sq km (that's equivalent to two hectads), has yielded nearly all of the 204 species found in the area to date. That's hard to imagine in a country like Britain, where we're lucky to find 20 species in a similar area!

The Foreword is by Alcimar do Lago Carvalho, of the Entomology Department of the National Museum in Rio de Janeiro. He describes how Brazil's dragonfly fauna has only been studied since the middle of the last century and how accessible taxonomic publications were not available until about 10 years ago. Tom is described as 'an amateur in the best sense of the word'; having seen both his determination and expertise in the field and now this publication, I wholeheartedly agree.

The Preface, a section about the development of the reserve at REGUA and the Introduction are given in both English and Spanish, while the remainder of the book is in English. A short section on nomenclature follows, detailing the taxonomic quandaries Tom has faced and explaining how he and Dennis Paulson came up with vernacular names (the use of which, readers may know, I am passionately in favour of). Anatomical



terms, including many which we don't have much cause to use in Britain, are very clearly illustrated over the next four pages.

Not surprisingly, in view of the number of species and the current state of knowledge, the book is an identification guide to adults only. Its 379 pages are profusely illustrated with photographs, which dominate the appearance of the book. Over 560 images, mostly taken by the author, are to be found in the main section of the book: the 'species guide'. Each species is illustrated typically by two or three images, although some of the very variable dragonlets *Erythrodiplax* have up to six. The quality and reproduction of the images is generally very good. Most have been taken in the field, including some in the hand, but a very small number are of specimens.

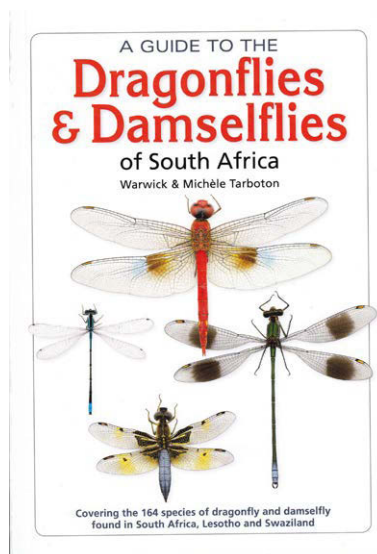
The species descriptions typically extend to about half a page and are grouped under four headings. 'General appearance' gives a detailed, but succinct, description of the features. 'Similar species' usefully highlights any confusion species, describing any differences to look out for. 'Habitat and behaviour' combine brief details of the known habitat with notes on where to look for the species and other useful field tips. The final 'Status' line is brief, giving abundance and flight period.

An additional 125 illustrations follow over the next 20 pages under the heading 'Additional features'. These comprise multi-species plates and include close-ups of critical identification features. The final sections cover 'Additional reading and references', glossary and species index.

This has been the first occasion when I've been able to use an electronic version of a field guide before receiving the 'hard copy'. Having returned from our trip in January with nearly 10,000 images, I was still editing and labelling them when the book arrived. Limited use of it so far has proved how much easier it is to refer to a real book than a series of PDF chapters on screen. Flicking between paper pages to check similar species is easy. However, carrying and using a fully hyperlinked e-book version is no extra weight to carry in the field and it should be more durable in the humidity of the tropics. I want both for the foreseeable future!

If you want a taste of what dragonfly delights await in South America, this is a great book, but better still buy a copy and try it out in the field at REGUA! **DN**

Available from the BDS shop at
£27 plus £3 p&p within the UK.
All profits go to REGUA.



A Guide to the Dragonflies & Damselflies of South Africa.

Warwick & Michèle Tarboton.

Struik Nature, Cape Town.

ISBN 978-1-77584-184-5.

Softback. 224 pages.

NHBS price £15.99

(Also available as a PDF download at <https://penguinbookssa.snappify.com/product/9781775841852>)

Review by Dave Smallshire

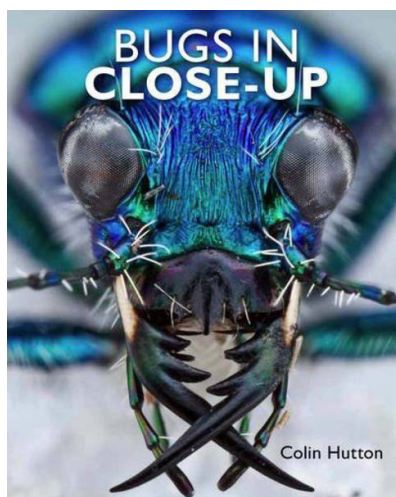
The Tarbotons have already published separate field guides to South Africa's dragonflies (2002) and damselflies (2005), followed by a nifty fan-fold 'Quick Guide' to dragonflies in 2009; all of these were reviewed in DN. A damselfly Quick Guide never materialised and the field guides are now out of print, but this new publication combines the two groups and updates the taxonomy and distribution. In addition, many more illustrations are included, combining high-resolution scans with excellent field images (where available) of all 164 species found in South Africa, Lesotho and Swaziland. My only criticism is that the rather large format of the original books has been retained: 240mm × 169mm is a little on the large size for a field guide.

The basic format comprises two species per double-page spread: text, map and photos are on the left, scans and (for male damselflies) line illustrations of anal appendages are on

the right. This layout works really well, with identification points in the text and images side by side. Next to each map is a paragraph on 'Occurrence' that describes the range within and beyond South Africa, as well details of habitat, habits and phenology. The maps contain a surprising amount of detail, considering their small size, and can be compared with rainfall, temperature and biome maps given earlier. Of interest to readers outside South Africa is the inclusion of the 'DBI', or Dragonfly Biotic Index, by which species are scored between 0 (widespread, abundant and tolerant of habitat change) and 9 (restricted in range, threatened and sensitive to habitat change). The mean score for a site is used to indicate its value as a dragonfly habitat - food for thought for the DCG, perhaps?

To help the reader to identify which family, genus and hence species they might be looking at, there are double-page spreads preceding Zygoptera, Anisoptera and each family. The pages introducing the 59 Libellulids are noteworthy, as they take the form of a pictorial key based on wing venation (and finally pterostigmata for some genera). I hate keys, but this one is about as user-friendly as you can get. Nevertheless, I doubt that even this key could be used in the field, though it might help someone really stuck if they have a clear image or specimen in the hand to work from. One of the two pages devoted to skimmers Orthetrum - the scourge of photographers in Africa! - has illustrations of secondary genitalia; scans of these are also given on the species' pages, but I wonder how many can be identified from images taken in the field as opposed to using a net and hand lens!

Warwick & Michèle have done a fantastic job. One should never use the term 'ultimate' when describing field guides, but residents and visitors to South Africa most certainly have a superb field guide at their disposal now. **DN**



Bugs in Close-Up

Colin Hutton

Published by Reed New

Holland Publishers

Hardback, 240pp,

ISBN 978 1 92151 738 9

Review by Lynn Curry

Bugs in Close-up is a collection of over 200 stunning images of some of nature's intriguing and bizarre-looking creatures. Using his macro lens to transport viewers into the tiny world of insects and spiders, Colin creates surprisingly expressive portraits of these strange and lovely animals that are often overlooked. The book also includes tips and practical insight for aspiring macro photographers and bug hunting enthusiasts.'

That is what the cover of the book tells you, but what do I think ?

The photography is absolutely amazing, but then it should be as that is what the book is all about. Colin likes to take a lot of his shots head on. This makes some of the insects (including the damselflies) look cute!

The book has 240 pages and I know there are a lot of insects out there, but of these only 15 pages are devoted to dragonflies and damselflies. Tips on macro photography occupy only 3 pages.

In summary, for me it is a nice book to look at but I would want to borrow it, not to own it. You may like this book if you are a collector and want a nice glossy coffee-table item full of lovely pictures, or if you are a photographer and want to see macro photography at its best.

The book is currently on special offer with NHBS at £11.89. **DN**

Canon 100-400mm f4-5.6 II L USM.

Canon (UK) Ltd.

£1999

Widely available.

Review by Mark Tyrrell

To my knowledge, Dragonfly News has never included a review of camera equipment, so I thought I would write my assessment of a new DSLR lens that I have been anticipating for some time in my search for the "ideal" general purpose dragonfly lens. But what is an "ideal" dragonfly lens anyway? Every photographer will have a different perspective on this but for me it is a lens that allows focus all the way down to frame filling shots of the smallest damselfly up to in-flight shots, and beyond for other wildlife such as birds without having to make any additions (such as filters, extenders or extension tubes) or lens changes

The original Canon 100-400mm L lens is well regarded as a great allround wildlife lens, covering a useful focal length range in a modest size that is very portable. However, with its 1.8m close focussing, it never really made the grade as a dragonfly lens. The Canon 300mm f4, focusing to 1.5m is much better. A more typical lens for dragonfly photography would be a macro lens of around 100mm in focal length, or for better results a 150mm or 180mm macro gives more working distance. These lenses are capable of going from life-size magnification to a frame filling full body shot and onto infinity in one lens, however I find that I prefer to use a longer focal length, and since swapping from a

180mm macro to the 300mm my number of shots increased over 3 times because the increased working distance reduces the chance of spooking these wary insects. I still use a macro, for example on emergence sequences but my main lens will always be a long telephoto.

When Canon announced version II of their 100-400mm L lens, with a close focus of 0.98m, in 2014, my excitement really grew and it became the must have kit for my camera bag, not only for odonata but as a general purpose lens too. Coupled with a crop sensor Canon camera, you get an equivalent full frame focal length range of 160-640mm which makes it a very powerful wildlife lens.

The new lens sports a claimed 4-stop image stabiliser, which works well for close-up shots, unlike image stabilisation on macro lenses that tends to be less efficient as you focus closer. This means hand-holding down to 1/40th sec shutter speed should be possible. For me though I have found this optimistic but I know others will find different. I always use a monopod anyway because this a heavy lens and the extra support helps with framing and composition as well as obtaining a sharp image.

I have found that having a zoom is indispensable because the ability to adjust image magnification from a fixed position allows much more flexibility than with my Canon 300mm f4, and I have got pictures with this lens that I wouldn't have on any other lens.

This lens is sharp on a modern high-res DSLR, unlike my 300mm f4 which is soft on my 20.2MP Canon 7D mark II, and is capable of producing some great looking images, although I have noticed that sharpness is reduced slightly at close-up distances.



Image from Canon.co.uk media resources



Autofocus is quick, and much better than the 300mm, and in-flight photography is just that bit easier which for anyone attempting it will appreciate any advantage they can get.

The 0.98m close focusing is really valuable and the magnification at this distance is very useful, however this lens suffers from a degree of "focus breathing" which means the focal length reduces as the minimum focus distance is reached. Maximum magnification is not therefore as great as expected. I estimate that the maximum focal length decreases from 400mm to around 350mm. At 0.98m, 350mm still gives an improvement over my 300mm at 1.5m though.

At its highest magnification - 400mm @0.98m - small damselflies such as the Small Red-eyed probably are a little too small in the frame and a little cropping is warranted for a more pleasing shot. An extension tube can be added to improve this, however this makes the autofocus a little unpredictable, means you lose infinity focus and of course you have to carry an extra gadget. However a mating pair of Blue-tailed Damselflies can be framed perfectly without cropping. With today's high megapixel cameras, cropping is no longer the problem it used to be so I am happy to crop to get the image I need.

To go from photographing a perched damselfly without spooking it, to then be able to capture an in-flight shot, such as these Red-eyed Damselflies, in one lens is of great benefit. No macro lens will let you do this.

So, does this lens meet my criteria as the ideal general purpose dragonfly lens? It is expensive lens and is therefore aimed at the dedicated enthusiast, but build quality is such that it will last a lifetime. The focus breathing issue is a disappointment for a lens of this price and quality, as is the slight sharpness drop at close focus distances. So, it just misses out on the ideal moniker. Ultimately though these issues aren't sufficient to prevent this being my lens of choice for dragonfly photography. **DN**



Small red-eyed Damselfly taken @400mm and 0.98m



A more pleasing subject size is obtained by cropping



Uncropped mating pair of Blue-tailed Damselflies.



Red-eyed Damselflies captured in-flight.

Wanted ! New Trustees

Over the years, and with some gentle persuasion and cajoling, we have been able to recruit sufficient Trustees who have given their time, enthusiasm and expertise to help steer the Society and make us the thriving organisation we are today. However, the requirements of managing this sizeable charity have changed in recent years as the world around us and our growing commitments have changed. As a result, we not only require new trustees with general skills to meet our normal turnover, but we also want to see more specialist skills to match the demands we now face. So I would like to appeal to you to come forward, or to identify others who you think may like to accept this rewarding challenge, as we need people to guide and grow the Society.

Essential – general requirements of a good Trustee:
1) Able to attend a minimum of two Board of Trustees' meetings per year; 2) Able to take an active part in the day-to-day business of the Society, usually via e-mail communication; 3) Be keen to act with the interests of the Society at heart at all times; 4) Take on actions as agreed by the Board

Desirable – additional skills which would assist the Board:
1) Publicity; 2) Members' Day organisation; 3) Website management; 4) Financial / Treasurer; 5) Fundraising abilities / experience; 6) Legal and Human Resources.

If you are keen to volunteer now, or would just like a chat to know more, please contact me.

Thank you !
Henry Curry, Honorary Secretary
Tel: [REDACTED]

BDS BUSINESS

Trustees & Officers

Ordinary Trustees: Nigel Scott has filled the vacant slot as Trustee, we welcome him to the Board and thank him for stepping in to the vacancy. Nigel brings a wealth of Charity Management experience and runs Mastering Charity Management. Val Perrin will join the board replacing David Goddard at the end of the year. Huge thanks to David, who again stepped in to fill an unexpected vacancy. The board is also proposing to bring additional Trustees on board and to this end Ben Price of the NHM and Clem Tacconi are both proposed as candidates for 2016. Please let the Secretary know if you wish to vote for them or have any other candidates.

Volunteers Needed!

The Society runs on people. That bland statement may seem obvious, but we really need the membership to make sure we have people stepping up to take on roles in the Society, otherwise we will neither move on to improve nor, ultimately, even survive as we are now. We especially need :

- i) Volunteers to run the Dragonfly Centre at Wicken Fen – our asset, we must use it
- ii) Vice County Recorders – to carry on the fantastic work achieved so far
- iii) Walk leaders – to maintain a rich programme of Field Trips
- iv) Officers - to take on all the tasks involved in running the Society
- v) Trustees – to govern the Society

Can you help ? Please contact the Secretary.

Meet the Trustees

Our Society is run by enthusiastic volunteers with a passion for dragonflies, but who are the people behind the BDS?

Mick Parfitt - Ordinary Trustee

My interest in dragonflies began in the early 1990s at the (now closed) National Dragonfly Museum at Oundle and it has continued ever since. While at the Dragonfly Museum I worked in the gift shop, guided people around the site, became involved in habitat management and helped to build platforms and paths in the main dragonfly areas. I continue to raise public awareness of dragonflies today by leading guided walks, giving talks and helping with events at Wicken Fen nature reserve in Cambridgeshire where our Dragonfly Centre is now based.



Safeguarding Our Dragonflies & Damselflies - A Lasting Legacy

A legacy to the British Dragonfly Society will provide a lasting gift. Dragonflies and damselflies are beautiful insects. They are spectacular creatures that have inhabited Earth for over 300 million years. With your support, by remembering the British Dragonfly Society in your will, we can safeguard our dragonflies and damselflies to provide a lasting legacy that will ensure future generations enjoy these fascinating insects.

Gifts, in wills, make a positive difference. Legacy gifts enable The British Dragonfly Society to:

Conserve dragonflies and their wetland habitats.

Conserve Nationally-Important species.

Record and monitor the distribution and populations of dragonflies.

Encourage the scientific study and research of dragonflies.

Undertake education projects.

Please consider leaving something to the BDS when you write or update your will.

If you are able to do this then please accept our thanks.

You may like to use the following wording to include this legacy:

"I give the sum of £..... to the British Dragonfly Society (Registered Charity No. 800196), 23 Bowker Way, Whittlesey, Peterborough, PE7 1PY, for its general purposes."

Henry Curry



BDS Annual Meeting 2015

Saturday 14th November

**Ipswich Campus, University Campus Suffolk, Waterfront
Building, Neptune Quay, Ipswich, Suffolk, IP4 1QJ**

T:



E:



09:45	Coffee (served from 9:30 onwards)	
10:00	General Introduction and Announcements	Secretary
10:05	Welcome to University Campus, Suffolk	Jonathan Coy
10:10	Our new Conservation Officer	Genevieve Dalley
10:30	The Dragonfly Centre	Clem Tacconi
11:00	Dragonfly DN	Nadia Goddard
11:45	How to Photograph Odonata	Robin Procter
12:30	AGM	Trustees
13:00	Lunch	
14:00	Introduction to Afternoon session	Secretary
14:05	Andalucian Dragonfly Recording	Florent Prunier
15:00	300 years in the making: the dragonfly collections	Ben Price
15:30	Suffolk Dragons	Adrian Parr
16:00	Raffle, Final Announcements	Secretary
16:15	Close	

All are welcome. A donation is requested to cover costs, we suggest a minimum of £5 from BDS Members and £10 from non-Members.

Parking – ample free private parking available opposite the building.

Accommodation – some suggestions :

Salthouse Harbour Hotel, 1 Neptune Quay, Ipswich IP4 1AS 0.1 miles
Travelodge Ipswich Hotel, 15 Duke Street, Ipswich IP3 0AE 0.1 miles
Premier Inn Ipswich Town Centre, 33 Key Street, Ipswich IP4 1BZ 0.2 miles
Grove Guest House, 14 Grove Lane, Ipswich IP4 1NR 0.3 miles
The Dove Bed & Breakfast, 76 St Helens Street, Ipswich IP4 2LA 0.3 miles
Novotel Ipswich, Grey Friars Road, Ipswich IP1 1UP 0.5 miles

Lunch / Refreshments

On the Waterfront you can enjoy a cosmopolitan mix of arts facilities, cafés, restaurants, public houses and open space. Or please bring a packed lunch. Tea / Coffee will be available before the meeting .

For any other queries please contact the Secretary, Henry Curry, at the address on the inside front cover.

Checklist of the Damselflies & Dragonflies of Britain & Ireland

Last Revision: 24/10/2014. in the light of taxonomic revisions. The sequence and nomenclature follow Schorr and Paulson, July 2013:

<http://www.pugetsound.edu/academics/academic-resources/slater-museum/biodiversity-resources/dragonflies/world-odonata-list>

Table 1. Category A: resident and/or migrant species recorded since 1970

Species with well-established breeding populations and migrant species that have been recorded regularly since 1970, the latter often attempting to establish temporary breeding populations.

ZYGOPTERA	Damselflies	ANISOPTERA (cont'd)	Dragonflies (cont'd)
Lestidae	Emerald Damselflies	<i>Anax imperator</i>	Emperor Dragonfly
<i>Lestes barbarus</i>	Southern Emerald Damselfly	<i>Anax parthenope</i>	Lesser Emperor
<i>Lestes dryas</i>	Scarce Emerald Damselfly	<i>Brachytron pratense</i>	Hairy Dragonfly
<i>Lestes sponsa</i>	Emerald Damselfly	Gomphidae	
<i>Lestes viridis</i>	Willow Emerald Damselfly	<i>Gomphus vulgatissimus</i>	Common Club-tail
Calopterygidae		Cordulegastridae	
<i>Calopteryx splendens</i>	Banded Demoiselle	<i>Cordulegaster boltonii</i>	Golden-ringed Dragonfly
<i>Calopteryx virgo</i>	Beautiful Demoiselle	Corduliidae	Emeralds
Platynemididae		<i>Cordulia aenea</i>	Downy Emerald
<i>Platynemis pennipes</i>	White-legged Damselfly	<i>Somatochlora arctica</i>	Northern Emerald
Coenagrionidae		<i>Somatochlora metallica</i>	Brilliant Emerald
<i>Ceragrion tenellum</i>	Small Red Damselfly	Libellulidae	Darters, Chasers, Skimmers
<i>Coenagrion hastulatum</i>	Northern Damselfly	<i>Leucorrhinia dubia</i>	White-faced Darter
<i>Coenagrion lunulatum</i>	Irish Damselfly	<i>Libellula depressa</i>	Broad-bodied Chaser
<i>Coenagrion mercuriale</i>	Southern Damselfly	<i>Libellula fulva</i>	Scarce Chaser
<i>Coenagrion puella</i>	Azure Damselfly	<i>Libellula quadrimaculata</i>	Four-spotted Chaser
<i>Coenagrion pulchellum</i>	Variable Damselfly	<i>Orthetrum cancellatum</i>	Black-tailed Skimmer
<i>Coenagrion scitulum</i>	Dainty Damselfly	<i>Orthetrum coerulescens</i>	Kelled Skimmer
<i>Enallagma cyathigerum</i>	Common Blue Damselfly	<i>Sympetrum danae</i>	Black Darter
<i>Erythromma najas</i>	Red-eyed Damselfly	<i>Sympetrum flaveolum</i>	Yellow-winged Darter
<i>Erythromma viridulum</i>	Small Red-eyed Damselfly	<i>Sympetrum fonscolombii</i>	Red-veined Darter
<i>Ischnura elegans</i>	Blue-tailed Damselfly	<i>Sympetrum sanguineum</i>	Ruddy Darter
<i>Ischnura pumilio</i>	Scarce Blue-tailed Damselfly	<i>Sympetrum striolatum</i> *	Common Darter
<i>Pyrrhosoma nymphula</i>	Large Red Damselfly		
ANISOPTERA	Dragonflies		
Aeshnidae	Hawkers		
<i>Aeshna affinis</i>	Southern Migrant Hawker		
<i>Aeshna caerulea</i>	Azure Hawker		
<i>Aeshna cyanea</i>	Southern Hawker		
<i>Aeshna grandis</i>	Brown Hawker		
<i>Aeshna juncea</i>	Common Hawker		
<i>Aeshna mixta</i>	Migrant Hawker		
<i>Anaciaeschna isoceles</i>	Norfolk Hawker		

* - includes dark specimens in the north-west, formerly treated as a separate species *Sympetrum nigrescens* **Highland Darter**

Table 2. Category B: vagrant species

Since 1998 records of these species have been assessed by the Odonata Records Committee.

ZYGOPTERA	Damselflies	ANISOPTERA (cont'd)	Dragonflies (cont'd)
Lestidae	Emerald Damselflies	Libellulidae	Darters, Chasers, Skimmers
<i>Sympecma fusca</i>	Winter Damselfly	<i>Crocothemis erythraea</i> †	Scarlet Darter
ANISOPTERA	Dragonflies	<i>Leucorrhinia pectoralis</i>	Large White-faced Darter
Aeshnidae	Hawkers	<i>Pantala flavescens</i>	Wandering Glider
<i>Anax ephippiger</i>	Vagrant Emperor	<i>Sympetrum pedemontanum</i>	Banded Darter
<i>Anax junius</i>	Green Darner	<i>Sympetrum vulgatum</i>	Vagrant Darter
Gomphidae			
<i>Gomphus flavipes</i>	Yellow-legged Club-tail		

** - has bred.

† - has bred in the Channel Islands.

Table 3. Category C: former breeding species not recorded since 1970

Any further records of these species will be assessed by the Odonata Records Committee.

ZYGOPTERA	Damselflies	ANISOPTERA	Dragonflies
Coenagrionidae		Corduliidae	Emeralds
<i>Coenagrion armatum</i>	Norfolk Damselfly	<i>Oxygastra curtisii</i>	Orange-spotted Emerald

Guidelines for Contributors

All material should be sent to the Editor at the address on the inside front cover. If in doubt, please contact the Editor to discuss potential contributions and to advise on presentation and format. By contributing to **Dragonfly News** you give permission for the work to be used in other ways with the same attribution including reproduction on the BDS web site. All contributions on any aspect of the British and Irish dragonfly fauna are welcome for consideration at any time. Contributions on continental European and other species are also considered for inclusion. Contributions by naturalists based in Britain or Ireland travelling overseas are also welcome.

Articles requesting information or providing news of forthcoming events are welcome. The editor is happy to receive material by email or CD, preferably in MS WORD (DOC file extension, not DOCX) or txt format. Typed material requiring rekeying is less welcome (unless very short!) but will still be considered. The Editor reserves the right to make changes without prior reference to the author. Please provide contact details with anything you send and note the copy deadlines printed on inside front cover if you want something to appear in a particular issue. Photographs should be high quality jpg format with the quality setting at its highest, please do not embed in a document as this compromises quality. If e-mailing via AOL, please compress (zip) the image first.



When ordering please include your name, address and telephone number. Postage prices are indicated, but if you are ordering more than one item the highest postage price only (within reason) should be paid. Please allow at least 28 days for delivery. Cheques should be made payable to: British Dragonfly Society.

Clothing	Colour	size	price	p&p
BDS logo T-shirt	grey, royal blue, emerald green	S	£7.00	£2.00
T-shirt with 3 coloured logo	Natural	S	£7.00	£2.00
Ruddy Darter T-shirt	White	M,XL,XXL	£7.00	£2.00
Golden Ringed Dragonfly T-shirt	Natural	S, XXL	£7.00	£2.00
Polo shirt	Bottle Green	S,M,L,XL,XXL	£12.50	£2.00
Rugby Shirt	Blue	S,M,L,XL,XXL	£18.00	£2.00
Hooded Sweatshirt	Navy Blue	S,M,L,XXL	£15.00	£2.50
BDS logoed Sweatshirt	Grey with black logo	Large	£13.75	£2.50
BDS logoed Sweatshirt	Grey with embroidered logo	S,M,L,XL,XXL	£13.75	£2.50
Ruddy Darter Sweatshirt	Green	S,XL,XXL	£12.00	£2.50
Golden Ringed Dragonfly Sweatshirt	Beige	XL,XXL	£12.00	£2.50
Base ball Cap	Natural		£6.50	£1.50
Bush Hat	Sand or Olive Green		£9.50	£2.00



Books & DVDs	Price	p&p
Field Guide to the larva and exuviae of British Dragonflies	£10.00	£2.00
Spinning Jenny and Devils Darning Needles by Jill Lucus	£5.00	£1.50
Field Guide to the Dragonflies of Britain and Europe	£21.95	£2.50
Dragonflies of Hampshire	£10.00	£0.00
The Dragonflies of Lancashire and North Merseyside.	£10.00	£1.50
Dragonflies by Philip Corbet and Stephen Brooks	£20.00	£3.00
Dragonflies and Damselflies of Hertfordshire	£10.00	£2.00
The Dragonflies of Essex	£15.00	£2.50
Dragonflight by Marianne Taylor	£14.00	£2.00
Dragonfly by David Chandler and Steve Cham	£12.00	£2.50
Dragonflies of Northamptonshire by Mark Tyrrell	£14.95	£2.00
The Dragonfly Diaries by Ruary Mackenzie-Dodds	£12.95	£2.00
Britain's Dragonflies by Dave Smallshire and Andy Swash (3rd Edition)	£17.95	£2.00
A Biology of Dragonflies (1983 re-print) by Philip S Corbet	£10.00	FREE
Field guide to Dragonflies and Damselflies of Great Britain and Ireland	£18.95	£2.00
Photo Guide to the larvae of Dragonflies in North-West Europe by Christophe Brochard & Ewoud van der Ploeg	£38.00	£2.00
Photo Guide to Zygoptera and Anisoptera the exuvia of Dragonflies in North-West Europe by Christophe Brochard, Dick Groenendijk, Ewoud van der Ploeg, Tim Termaat	£40.00	£2.00
Guide to the Dragonflies and Damselflies of Ireland by: Robert Thompson and Brian Nelson illustrations by Richard Lewington	£20.00	£3.00
Dragonflies and Damselflies of the Serra dos Orgaos by Tom Kompier Price	£27.00	£3.00
Atlas of Dragonflies in Britain and Ireland	£32.00	£3.00
DVD Sexual Conflict in Dragonflies by Georg Ruppell	£5.00	£1.50
DVD British Dragonflies	£15.00	£1.50
DVD British Damselflies	£15.00	£1.50
Both DVDs	£28.00	£2.00

Misc	Price	p&p
BDS Mugs, Black Darter, Migrant Hawker, Scarce Chaser, Golden Ringed Dragonfly	£4.00 (each)	£2.00
Set of all 4 BDS Mugs	£12.00	£5.00
Damselfly Mug	£4.00	£2.00
Set of 6 Damselfly Mugs	£20.0	£5.00
Dunoon Folklore Mug	£10.00	£2.00
BDS Key Ring	£1.50	£0.75
BDS Car Sticker	£1.00	£0.50
BDS Logo Pin Badge	£2.00	£0.75

