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Dragonfly News 79

The Magazine of the British Dragonfly Society
SPRING 2021
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Dragonfly News I 79

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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*Denotes a new feature for our Spring magazine, previously in Darter

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Broad-bodied Chaser by Victoria Hillman. Victoria is a wildlife researcher, photographer, writer and speaker, specialising in smaller species and macro photography in the wild.

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Editor's Notes

Fiona McKenna

Welcome to our spring magazine, we decided to combine both magazines, Dragonfly News and Darter, into one in order to streamline things and to ensure cost effectiveness. You can still catch up on updates from our County Dragonfly Recorder (CDR) network each spring, by reading the summaries in this magazine. Individual CDR updates are now housed on our website under 'Get Involved' then drop down to 'Resources'.

Another change that you will notice is the 'Field Meetings' section. At the time of writing we are still in a national lockdown and unable to confidently plan physical events for this year, so please keep an eye on our website for any changes as we approach the summer months: www.british-dragonflies.org.uk. We will continue our online events in the meantime.

Dragonfly News is a much more collaborative affair now and I am pleased to welcome; Eleanor Colver (Conservation Officer), Sarah Miller (Fundraising Officer), Andrea Hudspeth and Daniele Muir (Scotland Officers) to the editing team. I am still the main point of contact for the magazine but my team will now help to gather content from across the country and to shape the future of the magazine too.

Highlights from this issue include: exclusive interviews with **BBC Springwatch's Megan McCubbin**, inspiring young naturalist **Indy Kiemel Greene**, Championing Dragonflies with Outreach Volunteer Kevin Edge, details of our Scotland Conference, #Pondwatch 2021, Dragonflies in the Seychelles and much more.

I hope that by the time you are reading this that the dragonfly season has begun for you and that you are enjoying some spring sunshine too. I look forward to catching up with you again in the Autumn.

Stay safe and keep enjoying dragonflies!



Chairman's Report

Brian Walker



Last year was a very strange year and it took us all a while to adapt to the changed circumstances. We all hope that this year will see a recovery but, as I write, I do not see this happening quickly and "normal" may be rather different to what we have been used to in the past. Last year many people had time to take a much greater interest in nature in their gardens and in their local areas and found this a great benefit in learning to cope with the restrictions. We had numerous reports of people noticing new dragonfly species at their garden ponds and in some cases seeing a dragonfly visiting or emerging at their pond for the very first time. I suspect that garden ponds will again provide a high level of interest this year and I encourage everyone to find the enjoyment that can be gained from a closer study of your local area. Also, keeping systematic records of what you see may provide a source of added interest as well as providing useful data to help us conserve these fascinating insects. Please submit your observations so that they contribute to our understanding of our dragonflies.

We were delighted to receive many observations via the Latest Sightings page on our website last year. The reports provided timely information on what species were

emerging and hence what to look out for. It was also clear that many people submitting records were looking for help with identification or would have liked feedback on their observations. Unfortunately, we rely on volunteers to operate this feature, as we do with many of our activities, and with the increased level of submissions, we did not have the resource to respond to these posts, nor does the current system make this easy to do. We have therefore decided to direct users to established forums where they can submit their records and where if they have a query, the user community can respond with help on identification and discussion on points of interest. We would still encourage people to submit their records to our formal system as well, so that they are preserved and available for scientific study.

We are making some other changes to our operations. You have in the past received a copy of *Darter*, our publication which is focused on recording, with this Spring copy of *Dragonfly News*. We have decided to move the county reports, which were the main part of *Darter* online, and include a summary of the highlights in *Dragonfly News*, together with articles that might have previously gone into *Darter*. This change will allow County Recorders more scope to report on their area and should allow members with an interest in a particular place to readily access the report for that area. Importantly, it also saves us the cost of printing *Darter* and the extra cost of including it in the mailing. This is important because printing and distribution costs have risen steadily, and these costs are now a significant proportion of the income from members'

subscriptions. We are in a position where we either need to reduce these costs or raise the subscription level.

We would like to delay the need for an increase in subscription rates, particularly in the current circumstances. Increasing subscriptions involves a lot of effort and hence an increase, when it comes, will need to be significant so that it can then be held for several years. Moving *Darter* on-line will provide some savings, but we also believe it will make the information it would normally contain more accessible and useful for most people. It was a change that was proposed as a logical step anyway. However, we also need to consider the future of our *BDS Journal*. We regard this as an important contribution to the scientific study of dragonflies, with its high quality, peer reviewed articles, it is a key part of what we do. However, it is expensive to produce and possibly less widely read by our membership than *Dragonfly News*. We therefore want members' views on how we should move forward with the *Journal*. Do we continue as we are and probably increase our subscription in 2022, or is there another approach that will retain the *Journal* but at a lower cost? Please read more about the options we have considered in the article on the next page and give us your views via the online survey.

At this time of year, I would normally be planning my activities for the dragonfly flight season and looking forward to new experiences. This year my aims and expectations are rather more limited but there are still hopes and things to aim for. I live in Oxfordshire and there were several records of Willow Emerald in the county last year. The county is now clearly at the advancing front

for the spread of this species and so it is a distinct possibility that I will be able to find the species close to where I live this year. I am already checking overhanging branches for the distinctive scars left by the female laying eggs. Should I find any, a recent addition to the BDS recording sheet in iRecord (look in Activities on the iRecord website for this) is a new column for recording those scars. I have also found a couple of ponds during my local walks which I was previously unaware of and I am hoping I may see dragonflies at them later in the year. The situation may not be all that we would wish for but there will still be plenty to enjoy. The key is to stay safe to help everyone through the current crisis so that we can be more adventurous in future years. DN

Survey – Future Plans for the BDS Journal

A key objective of the British Dragonfly Society is to promote and publicise research into dragonflies and their conservation. The BDS Journal plays an important role in achieving this objective by allowing members and others to publish research they have carried out and to pass on their knowledge to fellow enthusiasts. All Journal articles are peer reviewed and this means it is highly regarded as a valuable repository of scientific information on dragonflies. However, the cost of producing the Journal and distributing it to members is rising, as are so many other costs that the BDS faces. We are at the point where we face a choice of reducing our costs or increasing our subscriptions. We have instituted changes which will reduce costs to a degree, but without further cost reductions an increase in subscription is almost inevitable in 2022.

We have anecdotal evidence that only a proportion of our membership read the Journal and therefore we have considered whether this is an area where savings are possible and where we can reduce waste without reducing value to members. We have therefore set up an online survey via the website to better understand how members value the Journal and what options you would prefer going forward. This is not a vote, but it aims to assist the Trustees in making decisions. Subscriptions will have to increase at some point, even if we can make reasonable savings in the short term, but we would like to delay this if we can do so and still meet members' expectations. The more people that respond to this survey, the more help it will be. The options we have considered are as follows:

1. Continue to distribute the BDS Journal to all members twice per year, but increase the subscription from 2022 (probably by £5).
2. Distribute the Journal only to members paying a higher subscription rate (probably £30 for a single member).
3. Distribute the Journal only to members who specifically request to receive it with Dragonfly News (the savings would depend on how many members opted in).
4. Publish the Journal electronically as a PDF with access to current editions restricted to members, becoming open access later (There could be an option for print on demand to provide a printed copy at around £10/issue).
5. A combination of options 3 and 4 above.

The survey asks you whether you read the BDS Journal and then to rank these options in your order of preference. It also allows you to add any further comments or suggestions. Please go to: www.british-dragonflies.org.uk/bds-journal-poll-2021 on our website to complete the survey and help us make this important decision.



News From You

We love hearing from you! Here are a selection of some of our favourite communications from you:

Judith Frenchman wrote to us to let us know how much she was enjoying her BDS membership. We invited her to write a short article:

“ I’ve always been interested in wildlife but although I loved them, my dragonfly knowledge was scanty to say the least. I could tell the difference between a dragonfly and a damselfly and that was about it. When I retired from teaching I decided I should find out more about these engaging little helicopters, so last Christmas (2019) my husband bought me a subscription to the British Dragonfly Society and the BDS field guide.

I live in a market town in Leicestershire and have a small garden with a formal pond built about 3 years ago. Full of non-native weed and goldfish but healthy enough, so I was hopeful. We have also begun to create a smaller wildlife pond with limited success so far.

I spent the winter months reading up on the terminology etc. And waited. Then along came ‘you-know-what’ so I found myself able to study the pond and the wildlife in the garden as never before. My husband and I like to travel a good deal but with this no longer possible, like a lot of people, we were around to keep a much closer eye on the ever changing flora and fauna of our little garden. One of our most exciting visitors was a grass snake. Then on May 17th I was very excited to spot Large Red Damselflies around the pond and then egg laying. This was swiftly followed by a Broad Bodied Chaser at the end of the month and I was hooked!



I decided to log all my first sightings and by the middle of October had clocked up 12 different dragonflies and damselflies, 5 of which were in my own back garden including this fine Four-spotted Chaser (pictured above).

Summer began to fade but I was pleased to read in my invaluable field guide that I could still expect to see dragonflies well into autumn. Although no-one showed up at our own pond, I did manage to see a Common Darter and Migrant Hawker on walks not far from where I live.

Hopefully next year (2021) I can get out and about a bit more and add to my list but I’m still happy to see any Odonata (getting to grips with the correct terminology you see!), at home or out and about.

I have found out that some are very tricky to identify. Like birdwatching, you need to consider their habitat and habits as much as their markings, because most aren’t keen on keeping still!

But as I’m sure you’ll agree, that’s part of their charm.”

Head to the Get Involved tab on our website then drop down to Pond Ponderings to find Judith’s full article with more photos too.



Keep In Touch



British Dragonfly Society



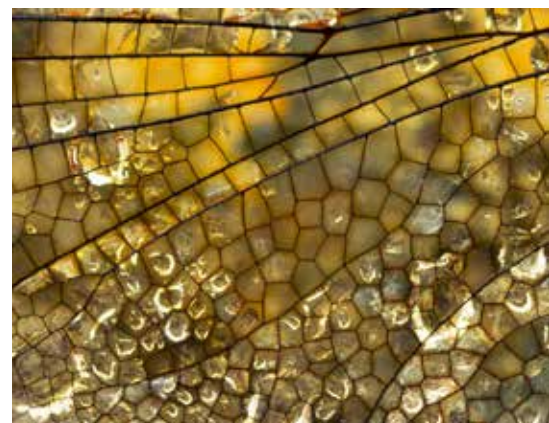
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On Instagram Sandi Monger shared the image above of a Common Darter using litter as a perch at a local lake. A sad sight indeed.



Damian Waters Tweeted this stunning image (above) of a dragonfly wing and we just love it!

Sightings Updates **Adrian Parr**

Migrant News

The early part of the 2020 flight season had been something of a mixed one for migrant species, and this pattern continued as the year progressed. No great rarities were found during the second half of the season and, amongst our more common migrants, **Red-veined Darter** produced an uneventful showing, with only three or four sites (such as Sandwich Bay in Kent) reporting a small emergence of locally-bred second generation individuals, and with only a handful of migrants being noted elsewhere. By contrast, **Lesser Emperor** continued its good run of sightings, and by the end of the year it had been reported from over 70 sites in 28 counties as far north as Dumfries and Galloway; these are the second highest annual totals ever. The trend noted earlier in the season for a significant proportion of records to come from sites that also held the species in 2018 or 2019 continued, and it seems that in addition to ongoing immigration, Lesser Emperor is now also consolidating its position as a British breeding species. Sites producing 'repeat' sightings included Windmill Farm and Drift Reservoir in Cornwall, Longham Lakes in Dorset, Dungeness in Kent, West Rise Marsh in East Sussex, Carlton Marshes in Suffolk, both Felbrigg Hall and the Trinity Broad complex in Norfolk, and also Cosmeston and Kenfig in Glamorganshire.

Another species to do well during 2020 was the **Southern Migrant Hawker**, with a wide spread of records away from its Thames Estuary strongholds for the third year in a row. In all, reports came from 12 counties in England as far north as Lincolnshire, plus one (Glamorganshire) in Wales; Cambridgeshire, East Sussex

and Suffolk in particular produced a good number of records. While substantial fresh immigration and/or internal dispersal clearly occurred, several records came from sites where the species had also been reported during both 2018 and 2019, and where local breeding colonies would thus now seem to be present. Such sites included Lytchett Bay in Dorset, Winchelsea in East Sussex, the Walberswick area of Suffolk, Quay Fen in Cambridgeshire and Hempsted in Gloucestershire. With immatures also having been noted at Otmoor in Oxfordshire during 2020, Southern Migrant Hawker would now seem to be breeding quite widely, albeit very patchily, in southern England.

Another of the migrant highlights of late summer/autumn was a significant influx of **Vagrant Emperor**, with some twenty sightings in England and south Wales between 14 September and 13 November (and with one also reported from Northumberland on 6 August). Interestingly, two of the dragonflies had been attracted overnight to moth traps, a not uncommon occurrence with this species it would seem. After having

been a considerable rarity in Britain for many years, the last decade in particular has seen a big upturn in records of Vagrant Emperor, with at least one significant influx now being noted in most years.

Finally, most of our new colonist damselflies had a positive end to the season. Both **Small Red-eyed Damselfly** and **Willow Emerald Damselfly** showed well during the year, though new range expansion was relatively limited. Small Red-eyed Damselfly however appeared in Pembrokeshire for the first time ever, with records from West Williamston, while the Willow Emerald reached Nottinghamshire and consolidated its position in Leicestershire, Oxfordshire and north Hampshire. The gap in the species' distribution previously seen in the Weald area of Kent/Sussex is now also starting to close. Perhaps the biggest event of the year related to late news, when the discovery during summer 2019 of a new site for **Dainty Damselfly** at a private locality in the Sandwich Bay area of Kent was finally made public. This new colony appears to be thriving, with no fewer than 180 individuals being seen there during 2020.



Left: Dainty Damselflies ovipositing at Sandwich Bay, by Marc Heath.



Last Dates for 2020 *Adrian Parr*

While many species finished flying on relatively average dates during 2020, a number produced some unusually late sightings, and several new records were set during the year. A Brilliant Emerald seen at Thursley in Surrey on 8 September was, for example, noteworthy, and several typically 'spring' species produced some unexpectedly late records, probably as a consequence of unseasonal autumn emergences. Large Red Damselfly was noted in Cumbria on 11 October and a Broad-bodied Chaser was seen in Cornwall on 29 September, both these being record, or near-record, late dates. A report of Four-spotted Chaser in Hampshire on 3 October was also of note. Finally, a benign autumn, with November in particular being unusually mild, also seemed to extend the lifespan of several late-flying species, and some good late dates were reported. Willow Emerald Damselfly set a new UK latest ever record of 23 November, and no less than three species even lasted into early December. The final report for Common Darter, on 17 December, is the equal latest ever for that species. Full details of all late sightings currently to hand are given below:

SPECIES	LAST DATE	PLACE	OBSERVER
Banded Demoiselle	07-Oct-20	Norfolk	N. Elsey
Beautiful Demoiselle	30-Sep-20	Cornwall/Devon	F. McCarthy/A. McGeeney
Scarce Emerald Damselfly	09-Aug-20	Norfolk/Essex	J. Emerson/D. Walsh <i>et al.</i>
Emerald Damselfly	21-Oct-20	Lancashire	J. Wright
Willow Emerald Damselfly	23-Nov-20	Hertfordshire	J. Wiltshire
Azure Damselfly	24-Sep-20	Surrey	S. Harley
Variable Damselfly	22-Aug-20	Cambridgeshire	K. Gittens
Red-eyed Damselfly	21-Sep-20	Berkshire	D. Hastings
Small Red-eyed Damselfly	22-Sep-20	Nottinghamshire/Norfolk	R. Woodward/J. Stroud
Large Red Damselfly	11-Oct-20	Cumbria	H. Stables
Common Blue Damselfly	19-Oct-20	Worcestershire	A. Warr
Blue-tailed Damselfly	29-Sep-20	Glamorganshire	(unknown)
Small Red Damselfly	16-Sep-20	Hampshire	N. Ansell
White-legged Damselfly	12-Sep-20	Gloucestershire	M. Schilling
Southern Migrant Hawker	31-Aug-20	Dorset	C. Wheeler
Southern Hawker	01-Dec-20	East Sussex	N. Lear/J. Hayhurst
Brown Hawker	16-Oct-20	Lancashire	P. Turner
Norfolk Hawker	12-Aug-20	Hertfordshire	B. Reed
Common Hawker	30-Oct-20	Glamorganshire	P. Parsons
Migrant Hawker	03-Dec-20	Norfolk	P. Matthews
Emperor Dragonfly	20-Sep-20	Nottinghamshire	I. Allen
Hairy Dragonfly	30-Jun-20	Nottinghamshire	R. Woodward
Golden-ringed Dragonfly	21-Sep-20	Devon/Hants/Carmarthen	M. Jarvis/P. Winter/C. Williams



Last Dates for 2020 continued

Downy Emerald	20-Jul-20	Surrey	M. Thurner
Brilliant Emerald	08-Sep-20	Surrey	G. Burch
White-faced Darter	24-Aug-20	Cumbria	R. Hedley
Broad-bodied Chaser	29-Sep-20	Cornwall	C. Moore
Scarce Chaser	10-Aug-20	Cambridgeshire	S. May
Four-spotted Chaser	03-Oct-20	Hampshire	P. Winter
Black-tailed Skimmer	27-Sep-20	Gloucestershire	S. Curtis
Keeled Skimmer	21-Sep-20	Cornwall/Devon/Hants	C. Poland/D. Allan/P. Winter
Black Darter	13-Nov-20	Cheshire	A. Goodwin
Ruddy Darter	07-Oct-20	Northamptonshire	D. Sutcliffe
Common Darter	17-Dec-20	East Sussex	(unknown)

Membership Matters

Hi all, I hope you are well and are looking forward to the new dragonfly season. It is the time of year for you to renew your membership of the BDS (the membership year runs from the 1st April to the 30th March).

For those of you who do not pay your membership by standing order you should have already received a membership renewal form, either by post or via e-mail.

If you have not already paid your membership for this coming year, there are 2 ways that you can proceed:

1. On our web site using credit / debit card or PayPal. Just follow the link for membership renewal. Please remember to quote your membership number if you know it (that helps with the paperwork!)

2. By cheque. If you pay your membership annually by cheque please could you return the membership renewal form to me together with your membership fee (if you have not got a renewal form or cannot print one a covering letter will do).

If you have not received a renewal form and you are unsure if you have set up a standing order please contact me:

Phone: 01733 204286

Email: membership@british-dragonflies.org.uk

I will then check your details on the database.

If you normally pay by cheque or via the web site you may find it more convenient to set up a standing order for this and any subsequent payment. If you

wish to do this please could you complete all the sections on a membership renewal form and return it to me; alternatively if you use internet banking you can set up a Standing Order, with your bank, very easily online.

Please also remember to keep me informed of any change of postal or e-mail address.

If you have any membership queries please do not hesitate to contact me.

In the unlikely event of your wishing to leave the society, please let me know. This will prevent the extra expense of sending you an unnecessary reminder letter.

Thank you

Lynn



Dragonfly Observations from a Year in Seychelles 2019 - 2020

Craig Nisbet

I have had a keen interest in dragonflies since working at Center Parcs in Whinfell Forest where, in order to lead dragonfly walks and carry out monitoring of the vibrant pools in the forest, I was sent to Preston Montford in Shropshire for Damsels and Dragons training. A year later in 2007 I began working for Scottish Natural Heritage at Loch Leven NNR, where I established what has become a long-standing volunteer insect monitoring programme of dragonflies, damselflies, butterflies and bumblebees. Needless to say that after several years subsequently of working on seabird islands in Shetland and the Western Isles, Seychelles came as something of a shock to the system!

Last year I embarked on a one year contract working for Island Conservation Society (ICS) on Desroches, a remote outer island of Seychelles in the Amirantes group. As Conservation Officer I managed a team of three, with our focus being the monitoring of breeding populations of marine turtles, introduced Aldabra Giant Tortoises and a colony of Wedge-tailed Shearwaters. Dragonflies are recorded by ICS staff in the outer islands of Seychelles on an ad-hoc basis, which made my observations this season from Desroches, as well as observations from ICS colleagues on Farquhar and Alphonse, all the more remarkable.

Dragonflies are thought to travel extensive distances across the Indian Ocean as they follow the Inter-tropical Convergence Zone (ITCZ). The observations of ICS staff on the outer islands of Seychelles support this theory. All observations were documented on an ad-hoc basis, but on the outer islands with ICS staff in post, peak arrivals of the most abundant species, Wandering Glider *Pantala flavescens*, coincide with the change in season from the south-east trade winds to the north-west monsoon. On Desroches, Farquhar and Alphonse, staff noted minimum numbers of 150, 50 and 100 respectively, through December and January, with the species being frequent in smaller numbers between October and March. There were also several records of this species ovipositing on the small number of brackish waterbodies available to them on both Desroches and Farquhar.

As well as the well-documented occurrence of Wandering Glider in the outer islands of Seychelles, other observations were recorded that add weight to the suggestion that this mass migration of dragonflies involves multiple species. Several of the species recorded are not known to have been recorded in the outer islands before, while two species: Black Emperor *Anax tristis* and Barbet Percher *Diplacodes luminans*, recorded by ICS staff on Farquhar had not been recorded in Seychelles for at least 100 years.

The following species were observed on Desroches between September 2019 and February 2020. These observations draw attention to the diversity of species involved in dragonfly movements within the outer islands of Seychelles.

Vagrant Emperor *Anax ephippiger*

By far the second most abundant species recorded this year was Vagrant Emperor. They were first recorded in December, with numbers of over 100 being noted on 21st December, which included at least 50 pairs in tandem flying around the airstrip. Numbers peaked again in January and February, with a maximum count of 98 being recorded on 5th February. Perhaps surprisingly, given the numbers that have been mentioned here, this species is not thought to have been recorded on the outer islands prior to December 2019.

Pale-spotted Emperor *Anax guttatus*

An individual Pale-spotted Emperor male was photographed on 15th January 2020 during a routine beach patrol of the island, while resting on a *Scaevola* branch. This is thought to be the first record of this species for the outer islands of Seychelles, with no records for this species being known any further west.



Keyhole Glider *Tramea basilaris*

At least two individual Keyhole Gliders were seen on Desroches, flying with a swarm of Wandering Gliders on 21st and 25th December 2019. The distinctive keyhole shape on the hind wings caught the eye, so individuals were caught using a hand net and photographed to confirm identification. It is not known if this species has previously been recorded in the outer islands.

Ferruginous Glider *Tramea limbata*

At least 6 Ferruginous Gliders were noted at the tortoise wallowing pool on Desroches in February, with identification being confirmed on 26th February 2020 when one of two pairs flying in tandem and ovipositing in the pool was caught and photographed to confirm identification. The narrow patch at the base of the hind wing was enough to separate this from the very similar Keyhole Glider. It is not known if this species has previously been recorded in the outer islands, but is interesting to note that breeding behaviour was observed here.

Ghost Duskdarter *Zyxomma petiolatum*

Desroches appears to have a small breeding population of the Ghost Duskdarter. 12 exuviae were first discovered in September among grass stems on the edge of the tortoise wallowing pool toward Le Passe Therese. Adults were seen in rapid flight, low over the water, but remained unidentified until one was eventually caught on 27th December 2019. At least 6 individuals have been recorded flying over the pond continuously between September and March 2020. All observations of this species have occurred at the same wallowing pool, except a single record of an individual Ghost Duskdarter being photographed at the staff canteen of the Four Seasons resort at the other end of the island on 15th November 2019. This species had never previously been recorded in the outer islands, so it is particularly interesting that there appears to be a small breeding colony on the only body of water available on Desroches.

Marsh (a.k.a. Tropical) Bluetail Damselfly (*Ischnura senegalensis*)

The Marsh Bluetail Damselfly, has been recorded on both Desroches and Alphonse in recent years. An individual was noted on Alphonse in March 2016. Two were also recorded on Desroches at the same tortoise wallowing pool on 27th December, while an individual was also noted amongst Scaevola bushes at the south-west end of the island on 23rd December. Despite being widespread globally, it is not known whether there are any previous records of this species from the outer islands.

From these observations it seems safe to assume that the annual dragonfly migration involving multiple species is passing through the outer islands of Seychelles. It also seems clear that there could be at least three species either residing in, or at least ovipositing on migration through the outer islands that have previously been undetected. Further investigation will be required in order to establish scientific evidence, but it was satisfying to have contributed with this baseline data from Desroches, confirming that dragonfly diversity is more extensive than previously reported.

“Island Conservation Society promotes the conservation and restoration of island ecosystems, sustainable development of islands, and awareness of their vulnerability and vital importance to the planet’s biodiversity.”

For more information please visit: www.islandconservationseychelles.com.



Keyhole Glider *Tramea basilaris*



Ferruginous Glider *Tramea limbata*



Ghost Duskdarter *Zyxomma petiolatum*



Marsh Bluetail Damselfly
Ischnura senegalensis



Urgent Appeal for our Hotspots Project

Our Hotspots Project is growing across the country, with new Hotspots in Wales, Lincolnshire and Hampshire launching this year, and plans to launch our first urban Hotspot in London.

The main purpose of our Hotspots are to educate and inspire a new audience about the importance of and benefits of dragonflies, and one of the ways we have achieved this is through installing Interpretation Boards by ponds at our Hotspots.

Previous successful fundraising has allowed us to design and install Interpretation Boards at Shropshire Hills Discovery Centre, Rodley Nature Reserve, Thursley Common (pictured below) and Stover Country Park.

Each Interpretation Board costs around £1500, and we need them in all 10 of our Scottish Hotspots, at Paxton Pits, which we launched last summer, as well as the Hotspots due to launch this year.

The pandemic has put huge pressure on the charity funding sector, and as a result, none of our fundraising approaches in 2020 were successful, and we have no funding secured for 2021 yet.

Could you help us educate more people by donating towards this project?

To donate please head to our website, select the 'Membership and Shop' option on the top menu and drop down to the 'Donate' option. Alternatively we welcome cheques, please make them payable to: **British Dragonfly Society**

Please post cheques to Carolyn Cooksey, Secretary:

British Dragonfly Society

Ashcroft,

Brington Road,

Old Weston,

Huntingdon,

PE28 5LP



Image credit: James Giles.

#PONDWATCH

The second weekend in June each year is all about ponds!

Join us and a host of special guests
on Saturday 12th & Sunday 13th June
2021 on Facebook, Twitter,
Instagram and YouTube.
Tag us into your photos and videos
of your favourite ponds too.

Val Perrin

Recording Update *previously in* Darter magazine

Spring 2020 saw the big push to get the 2019 records verified earlier than usual so that the dataset for the State of Dragonflies 2020 analyses could be as complete and accurate as possible. I'm indebted to all CDRs for working so hard on this and to Steve Cham for helping out at short notice with verification of several counties where we had no active County Dragonfly Recorder (CDR). I'm pleased to report that all vice counties now have a CDR, though we're sad to have lost Bill Budd (Surrey) to cancer last autumn.

Our statisticians at the Centre for Ecology and Hydrology (CEH) duly crunched the numbers and came up with charts and tables indicating trends in where each species is found (occupancy) over various timescales. We hope to publish our somewhat delayed State of Dragonflies 2020 report as soon as we can in 2021.

iRecord, the system we use for verifying observations, is good for entering, collating and verifying but not great for retrieval. We also have a back catalogue of records from an earlier system, mostly dates up to 2012. In June I sent the combined dataset to NBN Atlas and it is now available to all for research, planning and general interest, replacing the previous update that only included records to 2012. The retrieval features of the Atlas, including mapping and exporting (download) are much better than from iRecord, and our 'Open Data' policy removes the need watch for and approve data access requests. The online help for the Atlas is good but if you need to export records I have a document (on request) that advises on extracting subsets of records by VC, time period or species, for example.

It is no surprise that, with field meetings cancelled and lockdowns in place, the number of species-at-location-on-date records entered in 2020 was almost exactly 50% down on the 140,000 of the previous year. It is harder to show but also likely that a higher proportion are from gardens than from 'wild' sites. Future stats may be somewhat skewed and we should bear this in mind.

Just occasionally lockdown has produced some unexpected and interesting sightings from the general public with time on their hands at home. An example is the Common Clubtail near Staines-on-Thames (as we're supposed to call it now) - a first for Surrey.

I sincerely hope we'll be allowed to run field meetings this year and have carried over the 2020 schedule for my local Hants & Surrey Borders Group to this year, more in hope than expectation. If we can't meet as groups we should still be able to divide up the meetings and visit sites individually, reporting back to the group.

It is good to report that the Verification page in iRecord is running significantly faster now than in 2019 but some parts of it are bafflingly complex, even to the developers. I try to feed back to them whenever it misbehaves. Do let me know if something isn't working, whether it is in data-entry, verification or retrieval, and I'll either help you directly or make others aware of the fault.

Our dataset on NBN Atlas: <https://registry.nbnatlas.org/public/show/dr731>

David Hepper

Records Officer

Email: records@british-dragonflies.org.uk



Our Work in England

Recording Summary by Eleanor Colver

It is safe to say that the recording activity of dragonfly enthusiasts was significantly altered by the enforcement of lockdown restrictions last year. Those lucky enough to have garden ponds could obsessively monitor the emergence of each new species, while those without had to make do with trekking to nearby ponds and rivers. As a result, in many counties the number of records reported were down; while many of the more remote countryside sites were abandoned in 2020, urban sites received fresh attention.

As many will remember, the woes of the first lockdown were eased by the blessing of glorious weather. The result was a triggering of early emergence for spring species. In Westmorland with Furness and Cumberland early sighting dates were noted for Large Red Damselfly (7 April), Downy Emerald (9 May), Common Darter (26 May) and Keeled Skimmer (9 June).



Large Red Damselflies by Rory Morrissey



Hairy Dragonfly by James Gloyn

Greater activity and abundance was also noted in some spring species. The Hairy Dragonfly was noted, in particular, for showing in significant abundance from southern counties like Dorset and the Isle of Wight. Range expansion was reported in Suffolk, as well as Leicestershire with Rutland where the species exhibited a 31% population increase in terms of 1km grid squares occupied between 2019-2020. The species was also recorded 17 times in Worcestershire having last been recorded in 2011 (a single individual).

Scarce Chaser, another early summer species was also noted by many CDRs in England as having a bumper year in 2020. Good counts were reported from the Isle of Wight, Devon, Bedfordshire and Worcestershire. Range expansion was also noted in Somerset, Gloucestershire and in Suffolk.

In previous years the BDS's key springtime activity was the Common Clubtail Count citizen science survey. While the project finished in 2019, a number of recorders have continued to keep an eye out. The species had a good year along the Thames in Berkshire and was recorded for the first time in Surrey: a female was seen and photographed by the River Thames near Laleham.

Surrey was not the only VC able to brag about adding news species to their county list in 2020.

While the migrant species action was not spectacular in 2020, the Willow Emerald Damselfly continued its conquering of English VC's, arriving in South-east Yorkshire and Oxfordshire. In addition, Southern Migrant Hawker made an appearance for the first time in Oxfordshire and the Isle of Wight. Oxfordshire is probably the VC that wins the prize for having the most exciting year records wise. In addition to its two new species, Keeled Skimmer and Scarce Blue-tailed Damselfly were also recorded there for the first time in around 20 years.

The Scarce Blue-tailed Damselfly was also recorded for the first time in Worcestershire and Staffordshire - recorders patiently waited for it to cross into Staffordshire at a pond on the Cheshire-Staffordshire border.



Southern Migrant Hawker by Jim Baldwin

Of course, not all species had such a victorious year; concerns continue for our Common Emerald, which is struggling, particularly in the south of the UK. The species was notably absent at many sites in Norfolk in 2020 and may now have disappeared from Middlesex. However, it was nice to hear the species is getting a good foothold on the Isle of Man, a relatively species poor VC.

One of the big blows for the BDS with regards to lockdown was that annual monitoring of priority species and their sites, specifically Southern Damselfly sites in Devon and Dorset, as well as White-faced Darter sites in Cumbria, was interrupted. Fingers crossed surveyors and volunteers will be able to access the sites and provide updates in 2021.



Broad-bodied Chaser by Val Perrin

County Dragonfly Recorders continue to do a sterling job providing advice to professionals and the public regarding dragonflies and recording. With the explosion of interest in beaver reintroduction projects that we have seen in recent years BDS CDRs have become involved in a number of projects including the Cornish Beaver Project and Forestry England's Beaver re-introduction project in the North Yorkshire Moors National Park.

Please take a look at the full CDR reports; you can read them by visiting the 'Resources' section under the 'Get Involved' tab on the BDS website.



News from Scotland

Recording Summary by Pat Batty, Scotland Recorder

In Scotland exceptionally good weather coincided with the extended lockdown resulting in interesting records from peoples local areas and gardens, including a **Northern Emerald** seen in a garden near Grantown.

The **Hairy Dragonfly** was seen from the beginning of May with new sites in Argyll including one at 234m asl. The **Keeled Skimmer** and **Beautiful Demoiselle** were recorded from new sites in the west and on Mull and Islay. The Knapdale beavers have created a large wetland on one of the burns. Beautiful Demoiselle congregates where water runs faster over their dam and interestingly the Hairy Dragonfly has moved into this area.

The **Banded Demoiselle** (pictured right) is spreading in SE Scotland with records as far north as Fife. The **White-faced Darter** was recorded from a number of areas with new sites in Glen Carron and on Rannoch Moor. In the Affric area pools were drying out however larvae were surviving amongst the gunge. The **Northern Emerald** was at Flanders Moss on 12 June, with scattered sightings were throughout Scotland from Mull and mainland Argyll north-east wards. Despite poor weather the **Brilliant Emerald** was found at 3 new sites. Larvae were found at a number of sites. In Scotland it usually breeds in hill lochs but larvae were discovered in a loch only at 38m asl in Argyll. A new site was found near

Inverness for **Azure Hawker** and larvae found at new sites on Rannoch Moor. A survey for **Northern Damselfly** was carried out in October/November by Stephen Corcoran to assess the viability of known sites. His report is in preparation.

The **Southern Hawker** is consolidating and expanding its range in Scotland northwards to Brora in Sutherland. Known from only 22 hectads pre-2000 it is now recorded in 173. Emergence was observed from 14-30 June, very early in the year for this species. Emergence of the **Common Hawker** was even earlier on 6 June thus merging with the flight time for the **Azure Hawker**.

There are now annual records for the **Migrant Hawker**. In 2020 it was seen on 8 August near Dumfries, in Ayrshire. It was seen near Edinburgh until 8 October with a big influx of over 8 males on 19 September. There was a first record for the Isle of Arran.

The **Emperor Dragonfly** having made a comeback in 2018, is now well established at sites in the Borders, Dumfriesshire and near Edinburgh. Ovipositing was observed between 14 June and 12 August. Teneral were seen for the first time and a larva found at a pond in the Trossachs.

The **Lesser Emperor** was recorded at Kirkconnell Flows near Dumfries on 9 & 10 August and 6 September. The **Brown Hawker**, a first for Scotland, was discovered

at Strathclyde Country park near Hamilton on the 24 & 30 July.

The **Red-veined Darter** was also seen at Seton near Edinburgh on 9 July. The **Black-tailed Skimmer** was seen at two sites in the Borders on 12 & 13 July and 7-16 August. These are the first records since 2015.

The **Broad-bodied Chaser** is moving north and was seen at two sites near the border. It was also found at a Garden Centre in Caithness

I give a huge thanks to the large number of recorders who have submitted records. DN



Male Banded Demoiselle by Iain Leech.

Impacts of Land Use Changes on the Abundance and Distribution of Northern Emerald Dragonflies (*Somatochlora arctica*)

By Ashleigh Campbell, MSc Environmental Conservation

Introduction

The way in which land is used and the mix of vegetation on it, affects the hydrology of areas. Changes can affect the pattern and rate of flow of water through the habitat and the extent and timing of loss of water. Previous studies have looked at how changes in land use or land cover affect freshwater hydrology. However, few previous studies have explored how the combined effects of these changes impact communities of large insects.

Methodology

This study looked at how different land cover types related to the existence of populations of Northern Emerald Damselfly in Scotland between 1990 and 2015, using a statistical approach.



Northern Emerald Dragonfly is strongly associated with scrubland and peatland within its range in Scotland and this is independent of difference between sites of this type. Very few Northern Emerald Dragonflies are found in sites with other forms of land cover.

Results

The findings of the study are consistent with the literature regarding the distribution and life cycle pattern of dragonflies. Previous studies generally show a reduction in dragonfly numbers and diversity when land usage changes extensively. The exception is where land is restored to a condition that improves the habitat for a species or a group of species. The present study suggested that the abundance and distribution of Northern Emerald Dragonfly did increase where restoration of the habitat had taken place. Overall, there has been a 10.94% increase in the occurrence of Northern Emerald between 1990 and 2015.

To read Ashleigh's report in full please head to the news pages on our website. Photo above: Male Northern Emerald by Iain Leech.

Recording and Site Condition

Daniele Muir, Scotland Officer

One of the projects I have been working on throughout lockdown is finding out who the landowner is in areas where rare species are present. We can then approach them about working together to manage the site for the rare dragonflies on their land. Finding out who the landowner is involves a bit of digging around after using the 'Who Owns Scotland' website, frequently using contacts with the local Ranger service or NatureScot staff.

It's always useful having lots of data to hand before approaching the landowner, especially if we can suggest an easy way to improve the habitat at little or no cost.

As well as the usual Information of species, date, grid reference, site name and recorder name, other info that is very useful to have includes the following: Habitat eg peatland; Site condition/ work required eg are there overhanging trees that would be better removed; Potential threats eg if it's a shallow bog pool it may be at risk from drying up in a hot summers; other species present and access eg is there vehicular access to the site/ where would be the closest access point. Any further notes for rare species are always welcome.

Sometimes we don't hear back from landowners but we have had some great successes – for example Corrour Estate is one of our new Key Sites for Azure Hawker and Pat and I have carried out successful surveys for Azure Hawker and trained staff in 2019.

Conservation is at the heart of management of the estate and they are currently carrying out extensive peatland restoration work which should benefit rare dragonfly species.

Azure Hawker larva pictured below.



Welsh Dragons *Recording Summary by Ellie Colver*

The story of the Welsh dragonfly season shared similarities with the reports shared by English CDRs. Of course, the whole of the UK experienced the spring heatwave, which brought forward the dragonfly season - at least we had something to do during lockdown! For instance, in Radnorshire: an adult Broad-bodied Chaser was recorded on 25 April, on 30 May larval cases of Common Darter were found, a maturing Keeled Skimmer was photographed on 2 June, and a newly emerged Southern Hawker was found on 6 June.

Records of both Scarce Chaser and Southern Migrant Hawker were particularly noteworthy. In Glamorgan a single Scarce Chaser was spotted north of Cardiff, only the 2nd county record. The species was also seen for the first time in Breconshire: a dark mature female and a male with marks on the abdomen from mating were photographed at Llangorse Lake. With regards to the Southern Migrant Hawker, a bright blue male was photographed near Barry, Glamorgan, only the 2nd county record and hot on the heels of the 1st in 2019.

In other migrant news Monmouthshire received its third ever record of a Vagrant Emperor from near Abertillery. If you live in the Monmouthshire area, please visit the new webpages for the VC on our website where you can sign up to the local newsletter. www.british-dragonflies.org.uk/monmouthshire-dragonflies



Female Scarce Chaser by Keith Noble

Southern Damselfly in Pembrokeshire

Jon Hudson

The Southern Damselfly *Coenagrion mercuriale* has suffered a severe decline in the UK of 30% between 1960 and 2000. This has been disastrous for the species and, in some areas, it has gone extinct or has become very close to extinction. In Wales the Preseli mountains in Pembrokeshire are one of the few remaining strongholds for the Southern Damselfly.

The Southern Damselfly in North Pembrokeshire breeds in small, shallow, slow-flowing, base-rich streams, flushes and runnels with a peaty substrate. The streams need to be partially vegetated, with the soft-stemmed plants such as Marsh St. John's-wort *Hypericum elodes*, Bog Pondweed *Potamogeton polygonifolius* and Jointed Rush *Juncus articulatus*. It also requires grazed and poached edges to the stream with sparse marginal and emergent vegetation.

During the last 50 or so years, grazing with heavy livestock has progressively declined on the commons of North Pembrokeshire. Few if any cattle or large horses are seen today with only sheep and low numbers of ponies present. In the absence of heavy animals, many of the flushes and streams utilised by the Southern Damselfly have become unsuitable, their channels now choked with coarse vegetation and deeply incised or even 'piped' (where streams have narrowed and run more or less underground).

To counter this the Pembrokeshire Coast National Park Authority (PCNPA) has, since 2012, undertaken a number of small-scale works using mechanical diggers to restore more suitable, open and shallow water conditions, with approximately 250m to 500m of flushes and streams being restored most years. Mechanical interventions are not seen as an ideal, sustainable

method of providing optimal habitat for Southern Damselfly: securing more favourable grazing regimes is the long-term aim. However, such interventions are necessary in the short- and medium-term when the habitat is in very poor condition to ensure that populations are not lost until more favourable grazing regimes that can create and maintain suitable habitat can be established. Indeed, without such works, there is every chance of local extinctions occurring.

In late 2019, the Pembrokeshire Coast National Park Authority engaged Jon Hudson Ecological Consultancy to undertake a project that assessed the populations of Southern Damselfly and the current habitat suitability at a number of sites in and around the Preseli and Gweunydd Blaencleddau SAC's and at the Pembrokeshire National Park Authority (PCNPA) property at Penlan (adjacent to Carn Ingli

SSSI) where habitat creation and/or restoration works for the species have been undertaken by PCNPA over a period of eight years since 2012. Jon has worked for the last 15 years for Natural Resources Wales as the site manager for these sites and therefore has a wealth of experience working with the species and habitats involved.

The aim of the project was to provide up-to-date advice to PCNPA and others on the restoration and creation of suitable habitat for the Southern Damselfly in North Pembrokeshire. The project identified short-term habitat restoration projects that could be initiated immediately as well as a number of medium- and longer-term projects that could link up existing populations and help to ensure better connectivity between them, increasing the resilience, size and distribution of the southern Damselfly populations in North Pembrokeshire and enable the species to recolonise some of its former sites.

The first stage of the project involved making an assessment of the condition of all existing Southern Damselfly habitat restoration/creation sites to identify the date of completion of each restoration project, its current condition and to provide recommendations for future management. Eleven sites were surveyed and assigned one of five categories – “A”- restoration has been successful, no further work required, “B”- more time should be allowed for the habitat to mature, “C”- restoration has not been successful but further work could improve it, “D”- the site has become unsuitable since the works took place and restoration is again required or “E”- the site is inherently unsuitable as a habitat creation/restoration site.

Six out of the eleven sites were graded as a category A or B, with most of them having extensive areas of suitable habitat for Southern Damselflies. Three sites were graded at C with a lower percentage of suitable habitat. Two sites are graded as category E. A total of seven of the sites were also identified as being

“priority sites”, meaning that they were located in key areas with high numbers of Southern Damselfly records and that there was plenty of scope to create more suitable habitat.

This showed that in most cases restoration had been successful in creating significant areas of suitable habitat. The most successful sites were those that were once suitable habitat but which had become overgrown prior to restoration. The current suitability of a restored site of a known age showed that newly created habitat areas may take up to 2-3 years to develop any suitable habitat and that, as the site “matures” and improves, there is a gradual increase in the extent of suitable habitat until eventually, it begins to become less suitable as the stream closes over. It appears that restored (or newly created) sites may continue to provide suitable habitat for ten or more years, before successional processes lead to their becoming increasingly less suitable. However, this will vary from site to site and will depend upon many factors such as initial site-suitability, site management and grazing regimes, water quality and quantity. It is also worth remembering that the early stages of recovery post-restoration often create valuable habitat areas for other species such as the Scarce Blue-tailed Damselfly *Ischnura pumilio*. Even the unsuccessful habitat creation sites provided open water habitat, which provides breeding sites for many other Odonata species, as well as for a wider range of aquatic invertebrates and amphibians.

The project also identified many new potential sites in North Pembrokeshire where habitat creation/restoration projects could be undertaken over the short, medium and longer-term, with the aim to increase the amount of suitable habitat available for Southern Damselflies and to increase resilience by providing landscape-scale connectivity between sites. A series of GIS maps were produced to capture this information and to allow a

visualisation of how the restoration of an individual site might fit into the bigger picture. Meetings were also held with the Common land Officer (PCC) and the ROW Officer (PCNPA) to ensure that public access and livestock movement improvements were also built into habitat creation schemes where possible.

In July 2020, following on from this work, a survey of the species was undertaken with counts of the number of adult male Southern Damselflies seen at each restoration site being made. Generally, only low numbers of Southern Damselflies were recorded (apart from at Pensarn where good numbers were seen). This was probably largely due to sub-optimal weather conditions during much of the survey period. The numbers of southern damselflies seen at “successful” restoration sites were similar to numbers seen in areas of good quality habitat nearby. This indicates that restoration can provide very good habitat in which Southern Damselflies are able to breed and complete their lifecycle.

To ensure the Southern Damselflies’ long-term future in Pembrokeshire, habitat creation and restoration works will initially focus in the short term on helping to safeguard the core Southern Damselfly populations at a number of “priority sites” where works are required to maintain the populations until such time as the medium- and long-term projects can help to reconnect these sites to the other Preseli populations. In the medium term, works will aim to create and restore suitable habitat to expand the populations out from their existing core areas and to increase connectivity between sites. This will focus on areas of habitat around the peripheries of the designated sites as well as in the wider countryside. In the longer term, works will attempt to build resilience into the Southern Damselfly populations by restoring some of its recent historic sites and by further increasing the connectivity between sites in the wider countryside and the core SAC populations.



The Glen Creran Dragon's Feast

by Jessie Wormell



In early spring, hidden in a remote Argyll valley, dragons gather for a feast. The River Creran cuts through some rugged terrain, tumbling down Glen Creran towards the sea. Steep river gorges, rapids and waterfalls are edged by lichen clad mature deciduous woodland, cutting a diverse corridor through larger conifer plantations. Red deer, pine marten and red squirrels abound. The woodland has been cleared where the course of the powerline runs alongside the river, leaving open, wet Purple Moor-grass dominated hollows and drier heather clad knolls. At first glance this habitat appears low in diversity, but for a few weeks between mid-May and mid-June the damp, tussocky grass hollows abound with life.

Any brave souls who venture that way in late May, must negotiate the ankle twisting lush grass tussocks and boggy holes, while fending off the midges, clegs and green-eyed Twin-lobed deerflies. Large Red Damselflies drift, flit, tussle or perch on vegetation with a good vantage point to defend their territories, providing a welcome splash of colour. If you are lucky the iridescent metallic hues of

a Beautiful Demoiselle might catch your eye, glinting in the sunlight. Dramatic Golden-ringed Dragonflies thrum past, males patrolling up and down the ride. Hovering ahead is a Four-spotted Chaser (pictured above), a second perches on some low scrub, a third glides by, swooping suddenly after prey. What prey is attracting this attention?

A tiny blur of orange-brown catches the eye zig-zagging a few centimetres above the ground in a rapid, dashing flight. On a young sapling is perched a male Chequered Skipper butterfly (pictured below), fiercely guarding his territory against all passers-

by, even the dragonflies. Basking in the warm May sun, females flit among the Purple Moor-grass tussocks, searching for the perfect spot to lay their eggs. Craving nectar, they congregate on the very few flowers available, of marsh thistle or heath spotted orchid.

This area of the West coast of Scotland was, until recently, the only UK stronghold left for the Chequered Skipper, a UK BAP Priority Species. Populations are strong here and have been spreading in recent years, possibly due to the milder, wetter conditions brought with climate change. The Chequered Skipper



was last seen in England in 1976, before re-introduction from Belgium in 2018 as part of the 'Back from the Brink' Project.

The Glen Creran Powerline population was monitored, by transect counts, between 2016 and 2019. Gradually it was noted that the larger dragonflies, particularly the Four-spotted Chaser, was strongly associated with the Chequered Skipper colonies. In 2018, at peak flight during the last two weeks of May, 150 Chequered Skipper butterflies were counted, and 87 Four-spotted Chasers. Very few dragonflies were seen between butterfly sub-colonies. Soon they were seen as indicative of Chequered Skipper presence, making consistent, unbiased monitoring very difficult. In some places the dragonflies seemed to

outnumber the butterflies. Aerial battles ensued with dragonflies being observed deliberately targeting Chequered Skippers and, in turn, some territorial male Chequered Skippers valiantly chased passing dragonflies! In 2019 Four-spotted Chaser numbers were lower, despite an increase in Chequered Skipper abundance, at peak flight during the last two weeks of May, 254 Chequered Skippers were counted and 25 Four-spotted Chasers. Despite the lower dragonfly numbers, they remained associated with the butterfly sub-colonies.

There was some indication that sites with some low scrub or bog myrtle provided the butterflies with some protection from this heavy predation. However, the increase in Chequered Skipper numbers in

2019 despite the extremely high Four-spotted Chaser numbers in 2018, suggests the colony is strong enough to withstand these levels of predation.

When once again we are able to roam our hills and glens, do watch out for hidden, secret places where dragons gather for an unexpected feast!

All photos by Jessie Wormell.

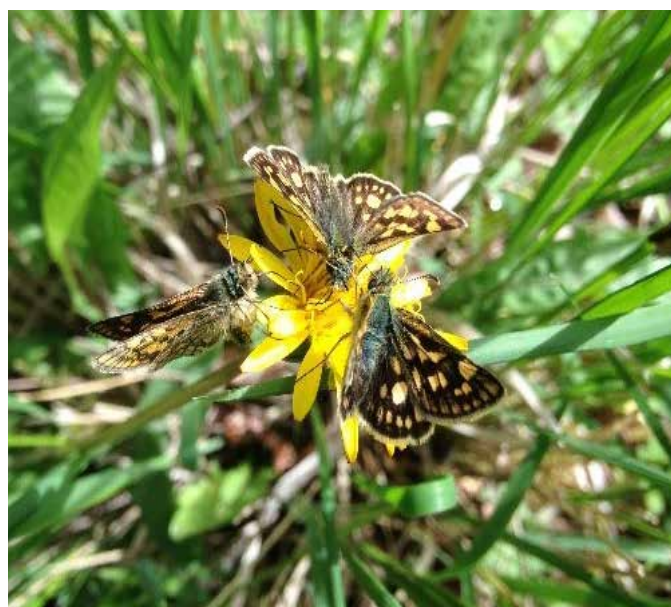
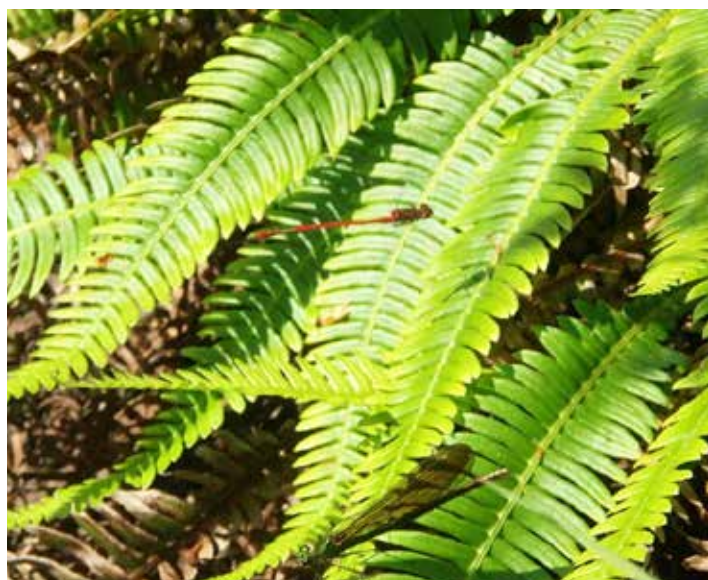
Photos below:

Top left: Large Red Damselfly

Top right: Beautiful Demoiselle

Bottom left: Golden-ringed Dragonfly

Bottom right: Chequered Skipper butterflies



SPOTLIGHT ON

Castle Fraser

Daniele Muir

Castle Fraser in Aberdeenshire was one of our first Key Sites for the **Northern Damselfly**, due to it being an excellent location to see this species, along with nine other species of Odonata. It is situated 16 miles west of Aberdeen.

Owned by the National Trust for Scotland and managed by their Countryside Rangers, there has been a long interest in dragonflies here, with surveys having been carried out over many years.

Follow the Alton Brae waymarked trail from the car park down to the Flight Pond where Northern Damselfly can be easily observed on the wing in early summer. As part of their work to help dragonflies a new pond was dug a few years ago, which the Northern Damselfly readily colonised. And as forestry works take place over the next few years, there are plans to put in another pond.

Other wildlife to see here include Palmate newts, Red squirrels, a wide variety of woodland birds and Daubenton's bats in the evening.

It is well worth a visit just for the dragonflies but you can also visit the castle, a walled garden, the designed landscape, their shop and tearoom. **Please check on the website for details of facility opening times and for the latest COVID-19 guidance before visiting:**

www.nts.org.uk/visit/places/castle-fraser

Getting Here:

Castle Fraser is 4 miles north of Dunecht and 16 miles west of Aberdeen.

Full details can be found for all modes of transport on the website here:

www.nts.org.uk/visit/places/castle-fraser/getting-here



Northern Damselfly by Iain Leach



A Tribute to County Dragonfly Recorder Bill Budd by Ben Price

I first met Bill at the 2015 BDS meeting in Ipswich and he volunteered his time in the Natural History Museum dragonfly collection from 2016. Bill preferred volunteering in the winter months, freeing up his summers to observe dragonflies in the wild. His first volunteer project involved rehousing and imaging the large dragonfly collection donated by Mike Parr. Following this Bill helped rearrange the British collection of pinned dragonflies, ensuring they were in modern housing and arranged in a way that makes them much easier to find in future.



Bill then went through the entire global dragonfly collection looking for type specimens and providing each with a barcode label encoding a unique number for our database. This was a huge job, sifting through 1500 drawers containing an estimated 100,000 specimens, looking for tiny labels designating the specimen as a type. I think Bill thoroughly enjoyed this search as by the end he had seen the whole collection which includes 2/3 of the currently known species on the planet!

Bill's last project was a search for all the specimens in the genus Anax across the various "sub-collections" within the dragonfly collection. He ended up finding 1200 specimens across the collection and this information is now being incorporated into our database as I work from home during the COVID lockdown.

I'm very grateful for Bill's friendship and his help in the dragonfly collection; all four projects have significantly improved the information we have on the collection and will have a lasting impact, making it easier for current and future generations of researchers around the world to access the collection. I was very glad Bill got to see the formal publication of the species we named in his honour: *Megalogomphus buddi* (pictured above), a small tribute to his help in the collection and his love of dragonflies.

Photo credit: Caroline Ewans

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Daniele Muir



SCOTLAND
CONFERENCE

Saturday 17th April 2021

Join us on Zoom for the day, to catch up with our team and to hear from an exciting variety of speakers!

Booking details can be found on the 'Events' page of our website. Free to attend but donations are always appreciated.





Dragonflies and me....

Megan McCubbin

We chatted to young naturalist and BBC Springwatch presenter Megan McCubbin about her favourite dragonfly experiences:

Why did you first become interested in dragonflies?

I can remember sitting by the stream at the bottom of my garden as a child and watching as the events of the day unfolded. I would gaze as various Darter dragonflies and **Large Red Damselflies** would seemingly dance across the banks in a perfectly choreographed routine. The sunlight would catch their wings and the whole stream would sparkle. I was told by my parents that the tooth fairy lived at the bottom of this stream, so I can remember watching on thinking that these beautiful insects were manifestations of the fairies. I was fascinated from my first experience.

What is your favourite species of dragonfly/damselfly and why?

That would have to be the **Emperor Dragonfly**! It is unmistakable due to its size and striking blue/green colour!

What is your best memory of a dragonfly encounter?

We were in rehearsals for Springwatch 2020 and just as we were due to go live with a piece about bird dominance on the bird feeder, two **Emperor Dragonfly** males started having a territorial dispute just behind the camera. It was incredible to watch as both

persisted with the most amazing aerial display as the sun was setting behind them. Tricky to concentrate on rehearsals with such an amazing scene going on in the corner of my eye!

What is your favourite dragonfly fact?

Dragonflies have 30,000 lens in their eyes and can see in ultra-colour. This helps them to see in almost every direction and allows them to precisely track and catch their fast-moving prey in the air. Pretty impressive!

What one thing do you think people should do for dragonflies?

Ponds, ponds, ponds! It doesn't have to be fancy - a small sunken washing up bowl will be great, or you could go a step further with a multi-level pond. Having native vegetation in the pond and a ramp for wildlife to climb in and out is really important when building. We have lost 90% of our freshwater wetland habitats in last 100 years in the UK. This is a serious issue when it comes to conserving species which rely on freshwater environments. A pond will go a really long way in promoting biodiversity of dragonflies and damselflies, as well as many other species, into your gardens and the wider communities.

Any advice for aspiring young naturalists?

If you are able to volunteer locally

at reserves, charities or wildlife hospitals then that is always a great way to start. Practical experience is perhaps the most important thing! Try to get out and explore as much as possible. Personally, I always learn best when I am able to visit the same spot over a long period of time because I can see it change through the season and get to know the wildlife that is there. I would also say to use your voice and connect with other like-minded people on social media! There is a great community of young passionate naturalists and engaging helps get your name out there.

All the best,

Meg



Male Emperor Dragonfly

by Gareth William Tonks

Working With Wildlife

Genevieve Tompkins



My name is Genevieve and I work as project officer for the Rare Invertebrates in the Cairngorms project. The project is a partnership between RSPB Scotland, Buglife Scotland, Butterfly Conservation Scotland, Nature Scot and the Cairngorms National Park Authority.

What is the best thing about your work?

Chasing after invertebrates! Spending the afternoon with an enthusiastic troupe of volunteers searching a flowery meadow for Small Scabious Mining Bees or seeking Northern Silver Stiletto Flies on river shingle. Even on chilly winter days, dipping for Northern Damselfly larvae on the edge of a frosty loch is time well spent.

What does a typical day/week involve?

As with most invertebrate jobs, this one is very seasonal and no two weeks are the same. From spring to autumn, a typical week will involve carrying out surveys, writing up data, running a volunteer training day or survey event and liaising with landowners, volunteers

and partners. There is also some practical work to arrange, either with volunteers or carried out by contractors.

In winter there are a few surveys for early life stages, weather dependent, but mainly lots of data management and report writing, making sure the valuable data collected during the warmer months is put to good use. Plus, of course, organising for next year's mad dash through the summer!

Describe the most challenging aspect of your work?

The extreme rarity of some of the species we work with presents a huge challenge. For example, there hasn't been a sighting of an adult Pine Hoverfly for seven years! We only have a tiny number of known sites for the species, through larval surveys, so there is a lot of pressure to get this right. But in my experience, invertebrate conservation is a collaborative world and there is a lot of hope to be found in the diversity of people working to secure a future for these species.

Do you have any advice for anyone wanting to start a career in Wildlife Conservation?

Get out there and get as much varied experience as you can! I was a bit of a late starter compared to many young people, not knowing that the world of biological recording existed or even that there was a lively UK conservation scene for a long time. But it is never too late and what counts is genuine enthusiasm, effort and, of course, enjoying it.

You don't have to be doing anything mind-blowing; that can sometimes put pressure on you and stop the fun. But just regularly note new species you encounter, and if you can identify them and send in the records then so much the better. As someone with shockingly poor memory, I find this regular contact is a great learning tool. You also begin to develop a greater sense of place, surrounded by all these species you come to know and recognise.

Finally, what, or who inspired you to want to save species for a career?

The species and habitats did that themselves. I spent hours out exploring the fields, woods and coast near home growing up. I wasn't yet aware of how to identify most of it, but I loved being immersed in it. We are just one species in a beautiful world filled with life. The more time you spend surrounded by that, watching other creatures simply trying to live out their lives, the more you want to save it.

How can we keep in touch with you?

Twitter - @RareInverts6

Facebook - @RareInvertebrates

Instagram - @genevieve_tompkins

Website - www.rspb.org.uk/our-work/conservation/projects/rare-invertebrates-in-the-cairngorms/



Indy Kiemel Greene

My name is Indy, I am a 15-year-old naturalist from Nottinghamshire and I am lucky enough to live in the heart of the magical Sherwood Forest. I have lived in this area all my life; it is where I first fell in love with nature.

Having such an extraordinary place like Sherwood on my doorstep has only fuelled my passion for nature. Every time I go out for a simple walk in the forest, I never know what I might see or what I might learn. That is why I love this place, there is always something new to discover.

Whether it's closely observing the Crossbills carefully plucking the seeds from a pinecone, having the excitement of finding the first Redstart of the year in the spring in the forest after their long migration from Africa, it never gets boring. Being immersed by so much wildlife all year round has brought out the urge in me to do my best to save it and help to prevent the catastrophic declines that we are seeing across the globe. Doing my bit to help wildlife makes me feel better. As part of my volunteering with the RSPB in Sherwood Forest I lead walks and do talks both highlighting the abundance of life in the forest and some of the ecology too. The other side of my volunteering is the practical side, getting out on the reserve every single Tuesday making it a better place for wildlife.

Left photo: Indy and Kevin volunteering in Sherwood Forest, photo by Chloe Ryder.



One of the benefits of volunteering is working alongside likeminded people. People of varying ages, from different backgrounds, with lots of different skills and experiences. It is ultimately about teamwork and it is amazing what a small group of people can achieve over a period of time.

We recently had the task of digging a 10-metre long Solitary bee bank. In the UK, we have about 170 species of bee and a whopping 150 of those are Solitary bees (pictured right). These are bees that do not nest in colonies but make separate nests. Be that in holes in walls, bamboo sticks or in the case of Sherwood Forest, they excavate small pencil length holes into sandy loose soil in which they will make little chambers to lay their eggs. What we are doing on the reserve is exposing the sandy soil to allow these bees to dig a nesting tunnel. There is no better feeling than giving nature a home. I cannot wait to see who inhabits these banks in the spring.

My first ever memories of dragonflies are still very fresh in my mind despite being only about 4 years old at the time. There



is a small pool in the woodland next to my house that only my Dad and I knew about. Every day we used to sit on some logs next to the pool and watch the dragonflies dancing in the air. However, there was one visit to this pool that I will never forget. I sat down on my log by the pool as usual and within moments a single dragonfly came just centimetres away from my face, we both looked cross eyed at each other while it chose to momentarily land on my nose. After a few short seconds it was gone. An encounter I will never forget.

Keep in touch with Indy and follow his wildlife adventures here:

Twitter: @GreeneIndy

Instagram: @greeneindy



Dragonflies Are Inspiring Children to Get Creative



We love hearing from dragonfly fans especially when dragonflies have inspired their creative work. Marcela Alatorre Shirazi reached out to us on social media to let us know about her dragonfly inspired children's book "Allegro Adagio". Marcela explains:

"Allegro Adagio is a joyful dragonfly who is fascinated by colours. In his journeys, Allegro discovers the variety of tones in nature and explores human creativity finding inner peace along the way. The books made with 17 collage illustrations, offer a fresh look at the world through Allegro's amazing eyes. It will inspire the reader to find a potential space to explore creativity, imagination and find peace."

Dragonflies really do have amazing eyes, did you know that they have around 30,000 lenses in each eye and can see in colour, ultraviolet and polarised light? Three additional 'simple eyes' detect light and altitude and are connected directly to the flight muscles. Let's hope that Marcela's book helps to inspire many more generations of dragonfly fans for years to come.

Pictured left: Allegro Adagio resting on a colourful collage.



Blue Sky Ponderings

Dave Smallshire

I've worn a pair of binoculars around my neck for 55 years, more or less. For the first 20 years they would be directed mainly at birds, but as time went by and new models were able to focus closer, I directed them increasingly at other wildlife, first butterflies and then dragonflies. Nowadays I use them a lot for watching dragonflies, but not just when they're perched. Over time, just as a birdwatcher's brain learns to identify birds in flight and at some distance, the same can happen with dragonflies. It helps greatly if the binoculars have a wide field of view (8 x 32 or 8 x 42 are ideal).

If you watch dragonflies for any length of time, you will eventually see them rise up high and maybe lose them as a tiny speck as you struggle to keep your binoculars steady. These can be dragonflies and especially damselflies taking their maiden flight, usually when it's hot and with no more than a light breeze. One aspect of Common Darter behaviour on fine autumn days has intrigued me. I have noticed males hovering for long periods high up (maybe more than 10m) over water. Periodically, they dive down to intercept another darter, sometimes finding a female, forming a tandem and mating with them. I guess that over a large expanse of water, far from the margin where they would normally take up a territorial perch, a position in the sky is a good alternative, albeit expensive in energy terms.



Tiny flying insects like aphids are said to be in aerial circulation once they reach about 2m above the ground. That means they are at the mercy of the wind, which gets stronger as they rise into the air. Some insects may then rise into the jet stream and travel between continents. The Common Green Darners that have reached south-west England from North America appeared in the wake of Atlantic storms. Monarch butterflies also appear here after such events. Both of these large, conspicuous species are migrants in North America and, like the birds that move south at the end of summer, are prone to getting blown across the Atlantic. But surely these are exceptional ... aren't they?

The truth is that we have barely scratched the surface when it comes to studying insect migration. While migration in birds and mammals is cyclic, travelling seasonally to one place and often returning to the original location, insects can only do this over several generations. So that means that each individual journey is more akin to dispersal, driven by some inherent mechanism. The trade winds that accompany monsoon rains are a reliable mean of dispersing, and these are believed to enable the annual movements of Wandering Gliders (*Pantala flavescens*) from Asia to Africa and presumably back again. Incidentally, this species has been found at 6,300m in the Hindu Kush, where the temperature would be over 60°C below what it would be at sea level! The Pampero wind in South America heralds the austral summer and brings rain storms: on one occasion, it was preceded by a 'storm' of more than six billion *Aeshna bonariensis* hawks.

The Monarchs that navigate to overwinter in remote forests in central Mexico are well-known: these are definitely migrants, because the same individuals return north to breed in spring. But there must be many more examples of



less conspicuous insects moving long distances. At the BDS Autumn Meeting, Will Hawkes gave us some idea of the scale of insect movements: 3.5 trillion insects migrating over southern England in autumn; 11 million moving through one Pyrenean pass in autumn; 50 million arriving at Cyprus from the Middle East in spring (including hoverflies carrying orchid pollen); and an unimaginable 2.5 quadrillion (that's 2.5 with 14 noughts!) insects migrating over an area of the African Sahel zone, south of the Sahara – after laying eggs in the Sahel, they die and their bodies convert to plant nutrients. So, insects can transfer pollen and nutrients between continents!

One of the most exciting experiences of my life was in Borneo on 16 September 2013 at the famous cave at Gomantong. Here the locals risk their lives collecting the nests of Edible Bird's-nest Swiftlets and David Attenborough famously once stood in a deep pile of bat droppings, overcome by the stench of ammonia. Waiting outside the cave in late afternoon, I noticed what seemed to be early-departing bats flying high over the rainforest canopy. Checking them through binoculars, I saw that they appeared to have four wings apiece! Photographs soon showed them to be a species of flutterer dragonfly with distinctive wing markings: *Rhyothemis obsolescens*. But what was really remarkable was that they were in a series of tight 'flocks', all moving steadily in the same direction. There were about ten groups of 50-200, totalling 500-1000 individuals, behaving like birds attempting to confuse a predator or reduce the individual chances of predation. We were 40 km from the Sulu Sea coast, so they weren't following the coastline, as Green Darner has been found to do in a radio-tracking study in the north-east USA. In fact, they were on a track that might have taken them from North Sulawesi or Papua New Guinea across the north-east edge of Borneo, thence over the South China Sea to Vietnam. Flutterers in general sometimes aggregate, perhaps as a precursor to migrating?

So what more remains to be discovered about dragonfly movements? I think the answer is a resounding huge amount. Please spend some time looking up into the sky – you may be amazed at what you see!

Some of the information mentioned above comes from Will Hawkes' thought-provoking talk in the British Dragonfly Society Autumn Meeting. If you missed it, catch up with it on the BDS YouTube channel.

MOST WANTED DAMSELFLY

WHITE-LEGGED DAMSELFLY INVESTIGATION

HAVE YOU SEEN THIS DAMSELFLY?

Pale blue (male)

Cream (female)

Fine black markings

Brown wing spots

Pale legs



**British
Dragonfly
Society**



WWW.BRITISH-DRAGONFLIES.ORG.UK

Please send us your records if you see any White-legged Damselflies this summer, full details on our website under the 'Recording' tab.



Recording Activities for this Summer

Ellie Colver

Needless to say last year's summer was a bit of a flop with lockdown restrictions limiting activities such as training days and recording projects. As a result, we hope you are all eager to get back out there exploring the wonderful wetlands of the UK!

Here is a quick rundown of the activities you can get involved with this summer:

Recording rookies required!

Identifying dragonflies might seem daunting starting out but take it one species at a time and before you know it you'll be a pro at your local pond! The trick is to enjoy yourself and take your time.

It helps having a good guide so head to the BDS online shop to see what's on offer.

There's also a free 'beginner's tips' leaflet you can download from the 'DragonflyWatch' page in the Recording section of the website.

Confident you've identified a species? Then have a go entering your sighting into our iRecord database. Every record helps us build a better picture of distribution of Britain's dragonflies.



Southern Hawker by Roger Pendell

Adopt a site near you

If you are confident at identifying species in your local area why not adopt your local pond, lake or a stretch of river to survey?

Visit the 'DragonflyWatch' page of the BDS to select and adopt the 1km OS grid square you want to survey (for example, if you have a pond in mind select the grid square that covers it). You'll then need to visit it three times during the summer; once near the beginning of the dragonfly season, once near the middle of the dragonfly season and once near the end. The survey consists of making a simple list all species present during your visit- easy!

You can find further instructions and survey forms on the DragonflyWatch page.

Reporting your records

Remember to enter all your records into the BDS iRecord database. For the link visit the 'Submit your records' page in the Recording section of the website for a direct link.

Alternatively, if you have a large quantity of records, enter them into the excel spreadsheet on the 'Submit your records' page and send them directly to your County Dragonfly Recorder (see contact details in the back of this magazine).

Review

Peter J Mill

Field Guide to the Dragonflies of Britain and Europe (2nd ed.) 2020

Dijkstra, K.-D., Schröter, A. & Lewington, R.

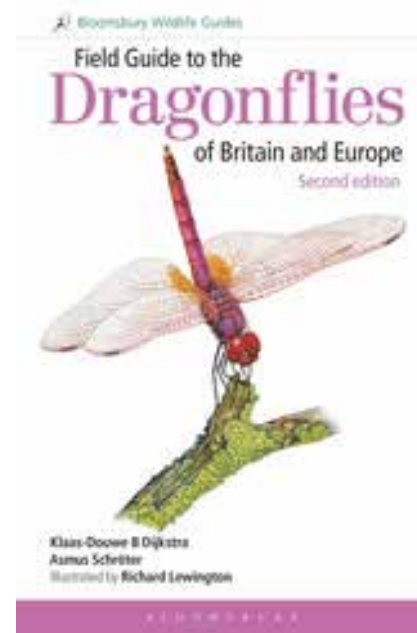
This is a very welcome revision of the first edition (Dijkstra & Lewington), which was published 14 years ago. It follows the same format as the previous edition but has been brought up-to-date throughout. It covers all of the 163 species known to occur in Europe, north-west Africa and west Turkey and is one of only two recent guides (in English) to the European dragonfly fauna.

The introduction includes sections on studying dragonflies, dragonfly behaviour and the status and range of dragonflies in Europe; also basic information on habitat, flight season and identification. Also included is a list of the conservation status of those species which face threats to their existence. There is an excellent section on identifying the main groups of odonates with numerous illustrations and tables; also a very useful glossary of terms, abbreviations used and synonyms. A short, illustrated introduction to larvae and exuviae is included. Here is my only criticism – the perpetuation of the notion (found in most texts) that the larvae cast their skin, whereas it is their (exo) skeleton that is cast. The following section provides a guide, country by country, to some of the best habitats to be visited. The information for most countries has been updated and extended to varying extents. It contains many photographs of habitats and is written by leading dragonfly experts who know their country's dragonfly fauna well.

The main part of the book, 255 of the 336 pages, is devoted to

species descriptions. It is extremely well illustrated by photographs, illustrations, line diagrams and tables. Richard Lewington's beautiful illustrations are the same as in the first edition but with additions for the new species that are described. The photographs are all new, of high quality and well chosen, while the diagrams and tables are of considerable help when trying to identify species in some of the more difficult groups.

There is a detailed introduction to each family and for each genus when there is more than one species in that genus; many contain tables of comparisons. For each species there are illustrations of the adults together with, where appropriate, further illustrations or line diagrams of features important for identification; also distribution maps. The accompanying text is well-written and includes general information, followed by details of field characters, hand characters, any variations and occurrence (range and status, habitat and flight season). The maps have been simplified, showing the main area of distribution, together with isolated populations or single records; also, where appropriate, the range of any non-overlapping close relative. The order in which the families are described has been changed somewhat and starts with the Lestidae. Species names have been updated in line with recent taxonomic research (see Appendix 1) – *Lestes viridis* and *L. parvidens* are now both placed in the genus *Chalcolestes*, while *Gomphus flavipes* and *G. ubadschii* are now in the genus *Stylurus*. *Oxygastra* and *Macromia*, formerly described in the Cordullidae, have been separated out, the former under 'Family affiliation uncertain', the latter into the Macromiidae. The European populations of *Brachythemis leucostica* (Banded Groundling) are now separated into *B. impartita* (Northern Banded Groundling), which overlaps in Africa with *B. leucostica*



(Southern Banded Groundling).

Six species are new to this edition: *Ischnura senegalensis* (Tropical aka Marsh Bluetail), *Ischnura intermedia* (Persian Bluetail), *Onychogomphus boudoti* (Boudot's Pincertail), *Onychogomphus cazuma* (Cazuma Pincertail), *Orthetrum ransonnetii* (Desert Skimmer) and *Tramea basilaris* (Keyhole Glider). Of these, only *O. cazuma* has been recorded in continental Europe (eastern Spain), although *I. intermedia* and *T. basilaris* have been recorded in the islands of Cyprus and Linosa respectively. The book concludes with three appendices – taxonomic affiliations, vernacular names and a checklist of species.

I highly recommend this comprehensive, detailed and well-illustrated field guide. Its production is of extremely high quality and it makes an excellent addition to every bookshelf, whether the reader is a specialist in odonates or has a general interest in insects. It is an essential guide for anyone visiting Europe.

Publisher: Bloomsbury, London

ISBN: HB 978-1-4729-4399-6; PB 978-1-4729-4395-8. 336 pages.
RRP £35.00 (hardback), £22.50 (softback).



THE DRAGONFLY CENTRE AT WICKEN FEN 2009-2019

The Start of an Era: by Ruary Mackenzie Dodds

What a lovely article about the Wicken Dragonfly Centre by Fiona in Dragonfly News, No 77! It was indeed the end of an era! As I put the article down, I sat back and remembered all the work of a group of volunteers that went in at the beginning, so I just thought it might be nice to add a little addendum about the start of the era, really to pay tribute to the amazing efforts put in by an extraordinarily loyal and hard-working group of people, determined to raise public awareness of the significance and importance of dragonflies.

I see that in the April 2003 edition of the Migrant Skimmer, we mention that:

"For the Summer of 2003, Wicken Fen National Nature Reserve is to be our base."

Migrant Skimmer, I hear you ask. It was the newsletter of the National Dragonfly Biomuseum. Some readers, I guess, may never have heard of that, either!

So ... the Museum was based at Ashton Mill in Northamptonshire, it operated successfully for seven years (22,000 visitors!) 1995-2001, it was run by a team of devoted volunteers. Once it had proved itself it was supported, morally and occasionally financially, by the British Dragonfly Society.

When, entirely due to external circumstances, the Museum had to close at the end of 2001, the team, undeterred, looked for alternatives. In 2002 we operated at Woodwalton Fen, giving talks and running dragonfly safaris, just as we had at the Museum. In 2003, Adrian Colston, the then manager of the Wicken Fen National Nature Reserve invited us to work over there. Adrian, as former Head of the Northamptonshire Wildlife Trust knew of our work and was determined we should continue.

In the same 2003 edition of the Skimmer, there is the following:

"Our objective at Wicken is to publicise dragonflies, and to provide a hands-on educational service to the general public. We also want to win our spurs with the National Trust by demonstrating that our volunteer team can provide added value to the wonderful work that is already going on there. If all goes well, we would like to consider the possibility of setting up something a little more permanent at Wicken. The various fenland restoration projects can only be good news for dragonflies and we would very much like to be part of this. We are really looking forward to working with Adrian and his team at Wicken. They have already gone out of their way to show they care. Come and see if

you POSSIBLY can."

WE'LL GET THAT DRAGONFLY CENTRE YET!

Our first year of operating out of the Wren Building at Wicken was a terrific success and in the subsequent May 2004 edition of the Skimmer, there's a note:

"We remain in discussion with the British Dragonfly Society's board with a view to some type of joint venture. There is just a chance that a small building might become available at Wicken at some point in the future, which we might be able to use as a base."

Each summer, between 2003 and 2009, the group that had worked so hard at the Museum continued to travel long distances to Wicken, setting up laboriously each time, in order to run safaris, talks and courses. We were joined by new, more local volunteers, too, to the point that it became quite clear to the staff at Wicken that dragonflies were a real visitor draw, and they felt they could make good on their hints about the Cottage, the 'small building' referred to in 2004.

By 2009, after seven years, I don't think any of us involved just then could quite believe that we were not only to get an entirely refurbished and repurposed Dragonfly Centre that year, but



also we were to receive the full support and active participation of the British Dragonfly Society, who by now had completely accepted that 'raising public awareness' was as vital as its previously stated aims of 'the study and conservation' of dragonflies. And the rest is history, as they say!

The photographs in Dragonfly News no77 of that wonderful Opening Day, the 26th of July 2009, brought back such happy

memories! So now I attach three photographs of our earlier days at Wicken, 2003/2006/2008 in tribute to the work put in by so many volunteers and others (below). I apologise to all who don't appear in these images, but isn't it wonderful that eight of the twelve people featured in the final 2019 Dragonfly News no77 photograph (Sue and Mick Parfitt, Lynn and Henry Curry, Thomas and Tim Gosling, Heather and Mick Twinn) are

original members of the team that began work at Wicken in 2003! And it's tremendous that, with nearby site Paxton Pits being designated as a Dragonfly Hotspot, this dedicated team will continue their dragonfly work in the region!

Photos on this page by Ruary Mackenzie Dodds

Top left: the team in 2003 includes Adrian Colston (National Trust), in shorts, curly blond hair. The Education Building is behind.

Middle left: the team in 2006.

Bottom left: some of the team in 2009.

Bottom right: Ralph and Ruary contemplating a massive hole in the top of the wall of the Dragonfly Centre building in 2009

Header photo on previous page by Fiona McKenna.



Field Notes



Jonah Jones sent us the photo above of a male Golden-ringed dragonfly with a strange pink blob hanging from the end of it's abdomen.

Our team had a quick chat and we realised that Jonah had captured a rare moment - a dragonfly having a poo. Dragonfly poo come in all shapes, colours and sizes as they eat such a varied diet of insects.



Where's your head at?

Tom Aspinall tagged us into a spooky video last autumn. He found a headless Golden-ringed Dragonfly, still moving its legs and wings. BBC Autumnwatch also showed the clip and dubbed it a 'Zombie Dragonfly'.

The explanation isn't quite as exciting though, the nerves in this unfortunate dragonfly's body would continue firing for some time after the head went missing. It could possibly have carried on moving for a good few hours but the body would not 'live' without the head.

This isn't the first story of its kind as a past BDS President loved to tell of a dragonfly head that he kept chilled. It apparently continued to consume food presented to it for a few days, the mandibles were working automatically, but obviously it had nowhere for the food to go once swallowed.

If you photograph anything unusual or of interest please let our editor know:
fiona.mckenna@british-dragonflies.org.uk



Field Meetings

We are very sorry for not presenting a programme of field meetings this year, but we hope to have some events should the circumstances for outdoor meetings improve. Could our regular and new meetings leaders please have in mind any potential meetings that we could hold at reasonably short notice and contact either Mike Averill (mike.averill@blueyonder.co.uk) or Ellie Colver (eleanor.colver@british-dragonflies.org.uk) with the details. Please check our 'Event' pages on our website regularly for any changes ahead of the summer months.

Local Patch Recording *Pam Taylor*

As I write this piece all countries within the UK are under Lockdown once again and the new variant of Covid-19 is spreading rapidly. We don't yet know the final outcome of this or what the summer might hold for us as far as field meetings and other gatherings are concerned. Even if restrictions continue for a second dragonfly season, we can still make a difference though, and do our bit for dragonfly recording and conservation.

Last summer, unable to venture far from home, I concentrated on recording the dragonflies both in my garden and on my local patch. Now I do have certain advantages here. My garden is bounded on two sides by a National Nature Reserve with SSSI status and my local patch is a nearby public footpath running along the southern edge of this wetland nature reserve. Given the proximity of so much excellent dragonfly habitat, I was able to record no less than 17 different species actually in my garden between the first Large Red Damselfly in April and the last Common Darter in November. This total represents almost half the species ever recorded in Norfolk, with 9 of the missing dragonflies being either uncommon migrants or recent colonists, with just a toe-hold in the county. My 2020 garden list shows what can be achieved with patience and frequent observations.

In fact, with other outdoor activities, except walking the dog, on hold, I was able to check the garden and my two small ponds on almost every sunny day from mid-April onwards. It was good to get outside for a short time, and with camera in-hand on most occasions, I managed to get reasonable shots of all but two of the 17 species. The single Hairy

Dragonfly took me by surprise while I was gardening one morning, and the Broad-bodied Chaser rested only briefly on my hedge. Although I got my eyes focused both times, I sadly couldn't manage the same with the camera!

From early in the season my ponds and the wild area left around them proved popular with Large Red, Azure, Variable and Blue-tailed Damselflies. I also saw several Red-eyed and Common Blue Damselflies too. These latter species prefer larger waterbodies, so probably drifted across from the nearby broad on the nature reserve.

Of the larger dragonflies I had visits from Southern, Brown, Migrant and Norfolk Hawkers, as well as Black-tailed Skimmer, Broad-bodied and Four-spotted Chasers. The list was rounded off later in the summer by first Ruddy (pictured), and then Common Darters. The seventeenth species eluded my garden list for some time, despite there being several along the nearby footpath, next to a dyke from which they were emerging. I'd almost given up hope, but then one afternoon in August both male and female Willow Emeralds graced me with their presence on my trees. Finally I had equaled the number of species seen on my local patch footpath.

Whether or not I can venture further from home in 2021, I will still be recording in my garden and along the nearby edge of the nature reserve. I walk the latter each day with my dog and always take binoculars with me. In the winter months these are bird-watching binoculars, but during the summer I switched to close-focusing ones for the dragonflies.

It was interesting to note how dragonfly distribution within my local patch was affected by the prevailing weather. In windy conditions, a small area of trees and scrub proved a good place to find Southern Hawkers hunting, while the smaller darters and damselflies seemed to prefer the sheltered side of a strip of gorse. Bare patches of clay surface along the path were excellent basking spots for Black-tailed Skimmers on sunny afternoons, and a line of trees adjacent to a dyke provided resting sites for Willow Emerald Damselflies after their maiden flights. Learning the intricacies of your local patch can be very satisfying.

Bolstered by my summer observations, I persuaded my son to wade into my ponds during the autumn to carry out some much needed reed and rush removal, before the ponds became totally choked. There's never a good time for pond maintenance, but with hardly any clear water left in either pond, some renovation work was sorely overdue. Maybe even more species will find my ponds, and maybe even breed in them, next season. I live in hope.

Wherever you complete your dragonfly watching next season, please remember to add your sightings to iRecord or contact your County Dragonfly Recorder to request the standard BDS spreadsheet.



BDS Business Update

**Minutes from the 4th CIO Annual General Meeting of the British Dragonfly Society held online on:
Saturday 14th November 2020**

1. Notice for this AGM had been published in Dragonfly News (DN) No 77.
2. Carolyn Cooksey agreed to take the minutes.
3. Minutes of the 3rd CIO BDS AGM as published in Dragonfly News 77 were accepted as a true and accurate record via a Zoom poll – 104 eligible votes were received, 97 voting yes with 7 abstentions.
4. No apologies for absence were received.
5. One minute's silence was observed for deceased members.
6. Greetings were sent to our patron Sir David Attenborough and Honorary members.
7. Reports from Trustees:

Chair's report:

- a. Brian reported that it had been a year of challenges with many events cancelled, but a focus on social media had helped people to make the most of restrictions.
- b. Our Spring 2021 meeting will again be virtual and we will monitor the situation with regard to other events in 2021.
- c. Our financial reserves are strong but the climate for grant funding is difficult. Legacies are an increasingly important source of funding.
- d. Darter will be split between on-line and Dragonfly News from 2021.
- e. We need to consider how we continue to publish the BDS Journal.

Secretary's report:

- a. Membership continues to grow, with a 7% increase compared to November 2019, and stands at 1863 members (1957 people accounting for joint memberships)
- b. The option of a payment holiday was offered this year in light of Covid-19, but only a handful of members took this option up.

Treasurer's report:

- a. Total income of £132,350 and expenditure of £142,405 was seen in 2019-20. Three legacies were notified but no legacies received this year to date
- b. This is the final year of our current major funding grants and the current climate for seeking new funding is not easy.
- c. Strategy is to maintain programme using reserves as needed, but look hard at expenditure to minimise where possible.

8. Election of Trustees:

- a. Four new Trustees were proposed – Candis Collins, John Winterbottom, Tom Cunningham and Tim Coleshaw.
- b. The new Trustees were elected en masse via a Zoom poll, 95 eligible votes were received, all voting yes, and the Trustees were unanimously elected.

9. The notice of the next AGM will be published in Dragonfly News No 79 and the venue (virtual, physical or blended) will be decided during 2021.

There being no other business the meeting was adjourned.

The Autumn Meeting and the 5th CIO Annual General Meeting of the British Dragonfly Society will be held online on:

Saturday 27th November 2021

Please check our 'Events' page on the website for more details nearer to the time.





Championing Dragonflies

Kevin Edge is one of our top Outreach volunteers who began coordinating events on our behalf in 2016. Last year, due to the pandemic causing all public events to be cancelled, he focused instead on local damselfly transects and helping behind the scenes with our website. We asked him a few questions about what dragonflies and volunteering means to him:

1. What does the British Dragonfly Society mean to you?

For me the BDS is a kind of 'mission control' for all things Dragonfly — a friendly authority guiding us volunteers. The society's positive national profile does open doors. This makes it easy for me — a BDS engagement volunteer — to build relations with wildlife sector professionals and then work with them to stage public events on their turf. In recent years, outfits like WWT's London Wetland Centre and Hengistbury Head Local Nature Reserve in Dorset have given BDS volunteer teams high-profile engagement platforms to mark Dragonfly Week.

2. Tell us about your favourite Dragonfly encounter



In August 2020 I came across my first Lesser Emperor. For 30 minutes it scouted the margin of a local farm pond. Would this lone male rest or could I just get closer for a photo? Sadly no. I had to leave without a record shot, but my rare encounter is safely stashed away in the memory.

I revel in ordinary encounters too, like whenever a common species settles close by, or poses on the tip of an artfully placed stick. These brief 'here and now' experiences can be some of the most rewarding.

3. Where is your favourite spot to watch dragonflies?

I do not have a favourite. The recorder in me enjoys walking heathland transects when the air and vegetation are alive with scores of damsels and dragons. This is their manor and we have gate-crashed their party — it is thrilling.

One special 'down-time' spot for me is alongside an uncle's wildlife pond dug a while back in his old



New Feature
vegetable patch. Here, after a spell of pond dipping or sneaking up on the basking Darters, he and I will retreat to the pond-side summerhouse and enjoy good conversation, coffee and beer.

4. What is your top tip for helping Dragonflies?

As I write, a third national Coronavirus lockdown is in place. Plans for any immediate, out-in-the-field work with the public remain on hold. So, my tip is to suggest that those of us who champion Dragonflies might use our downtime to reflect on what we do and how well we do it.

Which engagement tactics always work well and what aspects would benefit from a re-think? Are there new strategies to adopt? Could our personal Dragonfly knowledge be deepened with reading or our creative and digital skills be extended? We might just daydream too and enjoy trading blue-skies projects with like-minded friends!

So, let's look at what we do. Let's also hold on to our enthusiasms, keep in touch with our contacts and be ready for safe, outdoor public engagement in 2022!

Photos: top left - Kevin dragonfly spotting at Creech Heath, bottom left - Kevin appreciating ponds in 1963, middle - Kevin and uncle, right - Kevin providing a perch for an Emperor dragonfly.





Leave a Lasting Legacy

A legacy to the British Dragonfly Society will provide a lasting gift. Dragonflies and damselflies are beautiful insects which 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 British Dragonfly Society when you write or update your will. We are so grateful for your continued support.

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

“I give the sum of £..... to British Dragonfly Society (Registered Charity No. 1168300), Ashcroft, Brington Road, Old Weston, Huntingdon, PE28 5LP for its general purposes.”

A Gift in Memory

Celebrating and commemorating the life of your loved one with a gift in their memory is a fitting tribute that helps to support our work for dragonflies and damselflies. We're always incredibly touched and grateful to receive donations large or small, which will have a lasting impact for generations to come.



BDS RECORDING SCHEME Please submit records through iRecord or send them in bulk to the local County Dragonfly Recorder.

Vice-County	County Recorder	Contact details
ENGLAND AND WALES		
1. West Cornwall (with Scilly)	Adrian Eggett	1 Carne View Cottage, Crowntown, Helston, Cornwall, TR13 0AA 01326 712181. ajeggett@gmail.com Website: www.timeandlightphotography.co.uk
2. East Cornwall	David Cooper	12 Ashfield Villas, Falmouth, Cornwall, TR11 2EU 01326 311337. cestmaplace@outlook.com
3. South Devon	Dave Smallshire	8 Twindle Beer, Chudleigh, Newton Abbot, TQ13 0JP 01626 853393. davesmall@btinternet.com
4. North Devon		
5. South Somerset	Chris Iles	Arborfield, Holcombe Hill, Holcombe, Radstock, Somerset BA3 5DN 01761 239092. kifill22@hotmail.com
6. North Somerset		
7. North Wiltshire	Rosie Ray	07970 875155. rosiehams@yahoo.co.uk
8. South Wiltshire		
9. Dorset	Andrew Brown	Ground floor flat, 15 Lytton Road, Bournemouth, BH1 4SH 07891 573267. brown_a_r@yahoo.co.uk Website: www.dorsetdragonflies.org.uk / Facebook: 'Dorset Dragonflies'
10. Isle of Wight	Jim Baldwin	21 Hillcrest Road, Rookley, Ventnor, Isle of Wight, PO38 3PB 01983 721137. wightdragonflies@gmail.com
11. South Hampshire	Phil Young *	Medstead, nr. Alton, Hampshire. ygphil21@gmail.com
12. North Hampshire	David Murdoch	01962 808853. damurdoch@hotmail.com
13. West Sussex	Ben Rainbow & Bob Foreman & Simon Linington	Recorder: Ben Rainbow - ben.rainbow@ntlworld.com Send records to: Bob Foreman - 01273 497570. bobforeman@sussexwt.org.uk Assistant verifier: Simon Linington - 01273 400419. liningtons@gmail.com
14. East Sussex		
15. East Kent	Marc Heath	07834 280205. heathym007@aol.com
16. West Kent		
17. Surrey ¹	Linda Pryke	07931 873745. linda@pryke.net
18. South Essex ¹	Neil Phillips	neil_fal@yahoo.com / @uk_wildlife
19. North Essex		
20. Hertfordshire ¹	Roy Woodward	62c High Street, Cheshunt, Hertfordshire EN8 0AH 07855 567332. roy.rkwoodward@ntlworld.com
21. Middlesex ¹	Linda Pryke	See 17. Surrey
22. Berkshire ¹	Des Sussex	14, School Hill, Sandhurst, Berkshire GU47 8LD 01344 772000 / 07958 080057. dsussex14@outlook.com
23. Oxfordshire ¹	Stephen Burch	stephen@stephenburch.com Website: www.stephenburch.com
24. Buckinghamshire	Alan Nelson	74 Holland Way, Newport Pagnell, Milton Keynes, Bucks, MK16 0LW bucksdragonflies@googlemail.com
25. East Suffolk	Adrian Parr	10 Orchard Way, Barrow, Bury St Edmunds, Suffolk, IP29 5BX 01284 810 465. adrian.parr@btinternet.com
26. West Suffolk		
27. East Norfolk	Pam Taylor	Decoy Farm, Decoy Rd, Potter Heigham, Norfolk, NR29 5LX 01692 670 311. pam.taylor@british-dragonflies.org.uk
28. West Norfolk		
29. Cambridgeshire	Val Perrin	13 Pettitts Lane, Dry Drayton, Cambs, CB23 8BT Tel/Fax: 01954 780467. valperrin@aol.com
30. Bedfordshire	Rory Morrissey	25 Alwins Field, Leighton Buzzard, LU7 2UF 01525 372477. dragonflies@bnhs.org.uk
31. Huntingdonshire	Val Perrin	See VC 29, above
32. Northamptonshire	Mark Tyrrell	8 Warwick Close, Raunds, Wellingborough, Northants, NN9 6JH 01933 389 748. mark.p.tyrrell@ntlworld.com Website: www.northantsdragonflies.blogspot.co.uk
33. E. Gloucestershire	Richard Mundy	glos.dragonflies@gmail.com
34. W. Gloucestershire		
35. Monmouthshire ¹	Steve Preddy	07989 870508. steve.preddy@me.com
36. Herefordshire	Chris Harris	07779 339887. chris@cjhgraphics.co.uk
37. Worcestershire	Mike Averill	49 James Road, Kidderminster, Worcs, DY10 2TR 01562 638571. mike.averill@blueyonder.co.uk
38. Warwickshire	Peter Reeve	The Outspan, Leamington Hastings, nr. Rugby, Warwickshire, CV23 8DZ 01926 632 400. peter@reeve60.org.uk / www.warwickshire-dragonflies.org.uk
39. Staffordshire	Dave Jackson	07940 826671. jacksongrus@talktalk.net
40. Shropshire	Sue Rees Evans *	Tel: 01743 354507. suereesevans75@gmail.com Website: shropshiredragonflies.co.uk



41. Glamorgan ¹	Mike Powell	87 Coed Glas Road, Llanishen, Cardiff, CF14 5EL 029 2076 2182. Mike.powell2011@btinternet.com
42. Breconshire ¹	Keith Noble	25 Belle Vue Gardens, Brecon, LD3 7NY 01874 620133. knoble.kn@btinternet.com
43. Radnorshire ¹	Bob Dennison	Maes y Geidfa, Crossgates, Llandrindod Wells, Powys, LD1 6RP 01597 851 702. rd19366@googlemail.com
44. Carmarthenshire ¹	Stephen Coker	Mountain Grove, Clarbeston Road, Haverfordwest, Pembrokeshire, SA63 4SG 01437 563 566. stephen.coker@live.co.uk
45. Pembrokeshire ¹		
46. Cardiganshire ¹	Lin Gander	Penwalk Llechryd, Cardigan Ceredigion, SA43 2PS 01239 682405. Lingander@strandings.com
47. Montgomeryshire ¹	Anne Coker	Mountain Grove, Clarbeston Road, Haverfordwest, Pembrokeshire, SA63 4SG 01437 563 566. stephen.coker@live.co.uk
48. Merionethshire ¹ to 52. Anglesey ¹	Allan Brandon	Bryn Heilyn, Rowen, Conwy LL32 8YT 01492 651 066. allanrowenconwy@sky.com Website: www.cofnod.org.uk/news (and search 'dragonfly newsletter' – issue 100 is year 2019)
53. South Lincolnshire	Nick Tribe/Richard Chadd	Nick Tribe, 12 Little Bargate Street, Lincoln, LN5 8JR 01522 822069. nick.tribe@ntlworld.com
54. North Lincolnshire		
55. Leicestershire (with Rutland)	Ian Merrill	125 Church Lane, Whitwick, Coalville, Leicestershire, LE67 5DP 01530 815886. i.merrill@btopenworld.com
56. Nottinghamshire	Chris Bradbury	5 St Modwens Court, Union St, Sutton-in-Ashfield, Notts, NG17 5EL 01623 391297. mail@chrisbradbury.com
57. Derbyshire		
58. Cheshire & Wirral	John Roberts	01829 733140 / 07775 706838. cheshiredragonflies@outlook.com
	Chris Meredith	07731 513356. cheshiredragonflies@outlook.com
59. South Lancashire	Steve White	0151 707 2744 (daytime). stevewhite102@btinternet.com
60. West Lancashire		
61. S.E. Yorkshire	Martin Roberts	48 Stratford Way, Huntington, York YO32 9YW 01904 761918. vc61@yorkshiredragonflies.org.uk Fb: 'yorkshiredragonflies'
62. N.E. Yorkshire	Keith Gittens	Sunnybank, Low Street, Husthwaite. York. YO61 4QA. 01347 868606. brilliantemerald@btinternet.com
63. S.W. Yorkshire	Alistair McLean	Museums Sheffield, Weston Park, Western Bank, Sheffield, S10 2TP 0114 278 2648. alistair.mclean@museums-sheffield.org.uk
64. Mid-west Yorkshire	Simon Joseph	11 Sandholme Villas, Earby, Yorkshire, BB18 6NF 07972 054098. simonjoseph1967@sky.com
65. N.W. Yorkshire	Keith Gittens	As VC62
66. County Durham	Michael Coates	07715 160644. michaelbds@zohomail.com
67. S. Northumberland	Michael Gardner	11 East Law, Consett, County Durham, DH8 0QJ * 07827 842516. vc67dragonflies@gmail.com
68. N. Northumberland		
69. Westmorland	David Clarke	Burnfoot, Cumwhitton, Brampton, Cumbria, CA8 9EX 01228 560117. davidclarke6970@gmail.com
70. Cumberland		
71. Isle of Man	Pete Hadfield	07624 471794. iomodone1@gmail.com
SCOTLAND		
72. Dumfriesshire to 112. Shetland, except:	Pat Batty	Kirnan Farm, Kilmichael Glen, Lochgilphead, Argyll, PA31 8QL 01546 605 316. dragonfly.batty@gmail.com
95. Moray	Stephen Corcoran	07957 696971. stephenjcorcoran@hotmail.com
96. E. Inverness-shire	Colin Hall	01309 271386. cbhall@hotmail.co.uk
111. Orkney	Graeme Walker	azurehawker@aol.com
113. Channel Isles	Jersey Biodiversity C.	01534 633393. jbc@societe-jersiaise.org / jerseybiodiversitycentre.org.je
	Guernsey BRC	01481 715799. gsybiorec@cwgsy.net / www.biologicalrecordscentre.gov.gg
	Alderney WT	admin@alderneywildlife.org / www.alderneywildlife.org
NORTHERN IRELAND and EIRE	Damian McFerran	National Museums Northern Ireland, Cultra, Holywood, Co. Down, BT18 0EU Fb: 'Dragonfly Ireland' / Web: www.nmni.com/CEDaR/CEDaR-submitting-records.aspx
Migrant Dragonfly Project	Adrian Parr	10 Orchard Way, Barrow, Bury St Edmunds, Suffolk, IP29 5BX 01284 810 465. adrian.parr@btinternet.com
RECORDS OFFICER	David Hepper	12 Three Stiles Road, Farnham, Surrey, GU9 7DE 01252 721053. records@british-dragonflies.org.uk

¹ Don't worry about county border changes! Once records have a grid reference they will be seen by the correct CDR for verification.

*Indicates that the CDR or the asterisked details have been updated recently.



Checklist of the Damselflies & Dragonflies of Britain & Ireland

Last Revision: 11/8/20. 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 regular migrant species recorded since 2000

This category comprises species with well-established breeding populations and migrant species that have been recorded regularly since 2000, the latter often attempting to establish temporary breeding populations.

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

* - 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 Rarities Committee.

ZYGOPTERA	Damselflies	ANISOPTERA (cont'd)	Dragonflies (cont'd)
Lestidae <i>Sympecma fusca</i>	Emerald Damselflies Winter Damselfly	Libellulidae <i>Leucorrhinia pectoralis</i> <i>Crocothemis erythraea</i> † <i>Pantala flavescens</i> <i>Sympetrum flaveolum</i> <i>Sympetrum pedemontanum</i> <i>Sympetrum vulgatum</i>	Darters, Chasers, Skimmers Large White-faced Darter Scarlet Darter Wandering Glider Yellow-winged Darter Banded Darter Vagrant Darter
ANISOPTERA Aeshnidae <i>Anax junius</i> Gomphidae <i>Stylurus flavipes</i>	Dragonflies Hawkers Green Darner River (Yellow-legged) Clubtail		
Corduliidae <i>Somatochlora flavomaculata</i>	Yellow-spotted Emerald		

** - has bred. † - has bred in the Channel Islands.



Table 3. Category C: former breeding species now locally extinct in the UK

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

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

Table 4. Category D: species recorded only in the Channel Islands

ANISOPTERA	Dragonflies
<i>Orthetrum brunneum</i>	Southern Skimmer
<i>Sympetrum meridionale</i>	Southern Darter

Table 5. Category E: exotic species introduced accidentally

These records have come principally from aquatic nurseries (Parr, 2000).

ZYGOPTERA	Damselflies	ANISOPTERA	Dragonflies
<i>Argia fumipennis</i>	Variable Dancer	<i>Anax gibbosulus</i>	Green Emperor
<i>Ceragrion</i>	Painted Waxtail	<i>Anax guttatus</i>	Lesser Green Emperor
<i>cerinorubellum</i>		<i>Crocothemis servilia</i>	Oriental Scarlet
<i>Enallagma signatum</i>	Orange Bluet	<i>Erythemis simplicicollis</i>	Eastern Pondhawk
<i>Ischnura posita</i>	Fragile Forktail	<i>Rhodothermis rufa</i>	Spine-legged Redbolt
<i>Ischnura senegalensis</i>	Marsh Bluetail	<i>Tramea transmarina</i>	Ocean Glider
		<i>euryale</i>	
		<i>Urothemis bisignata</i>	

End.

Guidelines for Contributors

All material should be sent to the Editor at the email 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 website. 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, preferably in MS WORD (DOC file extension) 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, but will endeavor to contact the author if a lot of editing is required. 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. Please use a file sharing service such as drop box or 'Wetransfer' to send large files. Thank you.



BDS Shop

**Les Larves de Libellules de Die
Libellenlarven von
Paul-André Robert**

**Paul-André Robert and his life's work
on dragonfly larvae**

Compiled by Christophe Brochard

Language: Bilingual in French and German

Paul-André Robert (1901-1977) was a Swiss artist and naturalist. In Europe Robert is best known for his book *Les Libellules* ('Dragonflies'), which appeared in 1958. Less well-known is the fact that Robert began to work on a monumental monograph on European dragonfly larvae at the age of sixteen. Producing the manuscript, containing text as well as

illustrations, consumed most of his life and was only just completed at the time of his death. This magnificent work remained unpublished until now. This book finally presents Robert's 107 watercolour illustrations of dragonfly larvae, all in their original size and of unparalleled beauty and scientific precision. In addition, the book features his numerous line drawings and pencil sketches of morphological details, descriptions of species and an identification key.

This book, which is bilingual (French and German), is a unique combination of art and science.

It is an invaluable resource for entomology professionals and a significant collector's item for admirers of high-quality entomological books. It is also a stunning piece of artwork that will please anyone with an interest in natural history, realistic art and illustration.

As an honorary tribute to Robert, an international team of dragonfly experts added an extensive introduction to the book.

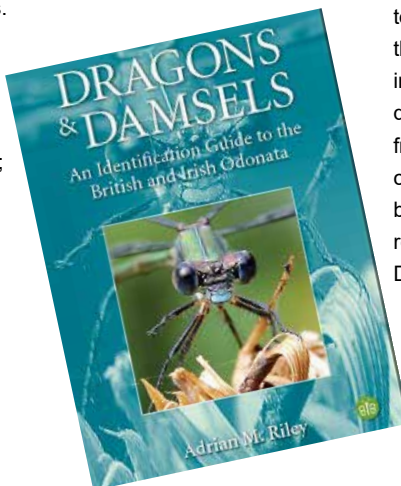
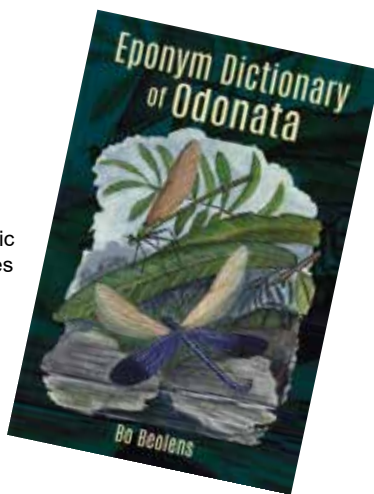
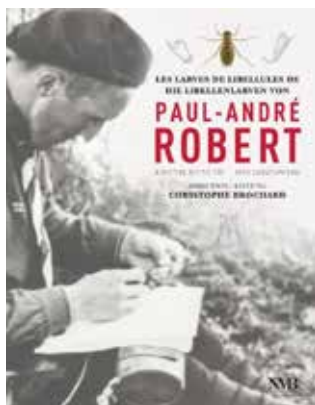
Price £75.00 postage £6.50 or via the shop page

The Eponym Dictionary of Odonata

by Bo Beolens

The Eponym Dictionary of Odonata is a comprehensive listing of all people after whom damselflies and dragonflies have been named in scientific or common names. Each entry provides details of the species and a brief biography of the person. It is also cross-referenced so that the relationships between scientific authors, entomologists and others can be followed. Many entries have been contributed by the people so honoured who are not necessarily odonatologists, entomologists, zoologists or even great men of science. Many damselflies and dragonflies are named for the author's family members, friends and those who collected the species holotypes, while others are figures from myth or history. In fact, it could be anything from the author's mother to a favourite musician! Because entries may include details of dates, places, educational and work institutions, it is possible to discover information about each person and for a picture to be built of how the science sometimes follows groupings of colleagues or those significantly influenced by charismatic teachers. The Dictionary includes other names which might, at a glance, be thought to be eponyms yet are not in the truest sense. These may be species named after characteristics embodied in characters from literature, whole peoples, acronyms or toponyms, etc. To some extent it can read like a canon of the great women and men of science over the last several centuries. Interestingly there are species named after as many as three generations of the same family, veiled references to old lovers, sycophantic homage, financial patronage, etc., as well as all the more 'legitimate' reasons for naming species. Not surprisingly, odonatologists exhibit a range of opinion on the practice, from naming all species after people, to wanting all eponyms banned; they can be totally humourless and pedantic or full of fun and irreverence. Like all of us they have as many reasons for their naming's as ordinary folk have for naming their children or pets! Underlying all this, however, is the value of this volume in cataloguing this fascinating aspect of science for all users, whether scientists or interested lay readers.

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Dragons & Damsels An Identification Guide to the British & Irish Odonata

This is a comprehensive and user-friendly photographic identification guide to all species, sexes and forms of British and Irish dragon- and damselflies, with essential field notes and habitat photographs.

Review:

In the main, most field guides follow the same pattern, with species accounts laid out in taxonomic sequence. The new guide by Adrian Riley does indeed have two chapters of species accounts covering damselflies and then dragonflies separately. Where this new guide differs, however, is in its approach to the identification of individual insects.

Again, damselflies and dragonflies have their own chapters, but within these, species are grouped according to their appearance, with males and females often treated separately due to their differing colours and patterns. This makes sense when you understand that early dragonfly observers actually thought that, for example, male and female Banded Demoiselles were of two different species because they looked so dissimilar.

Adrian Riley's meticulous approach to each species, sex and colour-form throughout the book should leave no-one in doubt of an identification. There is no question at all that this new guide, with its fresh approach, detailed descriptions and clear photographs, will find a place on the bookshelf of many dragonfly watchers and recorders, no matter how experienced. — Dr Pam Taylor, British Dragonfly Society

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