

Dragonfly News 80

British
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Society



The Magazine of the British Dragonfly Society
AUTUMN 2021
british-dragonflies.org.uk

Dragonfly News I 80

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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Deadlines for inclusion of copy:

Spring 31 January
Autumn 31 July

Advertising Rates:

£15 for small-ad (text only)
£40 for quarter-page
£60 for half-page
£100 for full-page

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BDS Subscriptions (annual)

Ordinary membership	£20
Ordinary – Overseas	£25
Joint Membership	£30
Benefactor (minimum)	£40
Life Member Benefactor	£20
Library	£35
Corporate	£100

Subscriptions are due on 1 April each year.
Please Gift Aid your subscription, if possible.

All subscriptions & membership enquiries to:

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Registered Charity: 1168300 (England and Wales)
SC049416 (Scotland)

british-dragonflies.org.uk

ISSN: 1762-2633

Dragonfly News is printed by Artisan Litho using vegetable oil based inks on paper from well managed, sustainable sources, certified to Forest Stewardship Council (FSC) standards.
www.artisanlitho.co.uk

* An asterisk indicates a change since the last issue

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Cover Image:

Emerald Damselfly by Iain Leach.

Iain has been interested in wildlife since childhood and has been a keen birdwatcher and photographer for the last 40 years. You can view more of his stunning work online:

Website: iainleachphotography.com

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Editor's Notes

Fiona McKenna



What a summer it has been! Since restrictions lifted we have been able to get back out to visit sites, run events and catch up with volunteers. We launched two new **Dragonfly Hotspots** in England, you can read all about this inside (page 14). Our Scotland team have been busy training Hotspot staff and surveying for some of our rarest species too. We bring you a few updates on their projects in this issue.

We also released the **State of Dragonflies in Britain and Ireland 2021** report. Years of work went into this report and it covers an impressive 50 year data set of 1.4 million records submitted by around 17,000 volunteers. We really cannot thank everyone who was involved in the report enough. This valuable data has allowed us to calculate species trends and will help to shape our future research priorities and conservation action. Inside this magazine we've got a full article on the report and what the findings mean (page 10).

Save the date for our **Autumn Meeting and AGM**, which will take place **online** on **Saturday 27th November**. We have a great line-up of speakers. More details inside (page 5).

Our Young Naturalist section is packed full of inspirational interviews again, with **TV presenter Lizzie Daly**, young insect champion and SpringWatch star **Xander Johnston (AntBoy)** and **Emily Summerlin**, from Lincolnshire Wildlife Trust, on her career change into the wildlife conservation sector.

Happy reading!



Chairman's Report

Brian Walker



We continue to operate in unusual times and I am sure that you, like me, are frustrated by some of the restrictions that the pandemic has imposed. The situation has forced changes on us but some of these have brought unexpected benefits, which I am sure will continue after life returns to normal. After our successful online Annual Meeting last November, we held successful Spring and Scottish meetings this year, also online. We will also hold our 2021 Annual Meeting online.

We recognised that members often travel some distance to attend our meetings, and this required an overnight stay. With uncertainty about what the situation will be like in the latter part of the year we decided to make an early decision to have our annual meeting online.

Feedback from the three meetings we have held suggests there is a desire for some future meetings to be online, but we also recognise that many members like the opportunity to get together and we anticipate that we will have a mix of online and physical meetings in the future.

We have seen a significant growth in our membership during the pandemic which was not something we expected, but is very welcome.

It suggests that more people are becoming interested in dragonflies, probably as they see them in gardens and other local areas as they have spent more time there. We hope that having appreciated the interest and satisfaction they have experienced through better contact with dragonflies and nature more generally, people will continue to enjoy watching and recording dragonflies. This growth in membership and the changes that there have been in our mix of activities, has highlighted that it is timely to consider what strategy the Society should adopt going forward. The Trustees have formed a small sub-group to consider this and have sought the views of members in formulating our future strategy – thank you to all those who have responded. Members will also have an opportunity to comment on the draft strategy before it is finalised later this year. We have also had to consider the impact on the smooth administration of the Society that recent events have caused, and you will see details of a proposal to change the wording in our Constitution regarding a quorum at General meetings.

Despite the restrictions we have made progress with our objectives. A good example of this is a survey of historic Northern Damselfly sites we commissioned in late 2020. This was slightly curtailed by restrictions being introduced but several additional sites were then surveyed by our Scottish Recorder, Pat Batty, to allow us to assemble a fairly comprehensive view of the condition of the majority of sites for this species. A fair proportion need some management work and work is being planned for some of the sites later this year with funding available

to finance the work. The focus on this species has inspired volunteers to survey possible areas for this species and a handful of new sites have been found this year. These have included a site well to the north of previously known sites. This is an exciting development and I hope it will inspire others to sign up for our Northern Damselfly survey next year and find yet more sites for this species and record the condition of the habitat.

Work on State of Dragonflies 2021 was delayed by the difficulties of communicating and discussing the analyses during the first year of the pandemic and its lock-downs. However, the report has now been published and it provides a valuable new baseline from which to monitor our dragonfly populations at a time when there seem to be rapid changes (see article on page 10).

Dragonfly Hotspot launches have been delayed, but some will have gone ahead by the time you read this, and we are very grateful for the donations we have received from members that have allowed us to fund or assist in funding dragonfly information boards at these sites. We are working towards identifying further Dragonfly Hotspots and in discussions about what is needed to improve the sites for dragonflies and for the public to see and enjoy watching them.

I suspect that the increased interest in nature that has resulted from the restrictions has also driven the increase in people wanting to identify what they are seeing. We were unable to respond to such questions through the Latest Sightings page on our website and rather than try to reinvent the wheel we have directed people to established Facebook Groups where they can receive help. It prompted

me to sign up to Facebook and to join these Groups. Firstly, the approach has worked as a lot of people are getting their questions answered and we are already seeing interesting records that we might otherwise have been unaware of. Secondly, contributors are encouraged to record what they see, and this seems to be having the desired effect. I have also joined other Facebook Groups and managed to get other insects identified and I have then recorded them in iRecord. I had been reluctant to do this in the past because I lacked confidence in my identification skills, and I suspect that others feel the same way. I did occasionally record something unusual, but we want all dragonfly records, including those of common species, and preferably full visit lists and I see this message being repeated for other insect groups.

We were very grateful to be awarded further funding by the John Ellerman Foundation. The money will contribute to our core costs over the next three years and helps to provide us with a firm foundation for us to continue to develop and seek further funding and donations for specific projects such as improving habitat for Northern Damselfly and supporting our Dragonfly Hotspots.

The flight season will be almost over by the time you are reading this, but it means that you are likely to have more time to review the photographs you have taken and get some help with identifying the tricky ones. Having done this there should also be time to catch up with logging all your records into iRecord. It will also provide time to plan your dragonfly activities in 2022 when, hopefully, we will be able to be a little more adventurous.

Autumn Meeting 2021 Online



Join us online for a day of talks about our rarest species of dragonfly and damselfly and efforts to conserve them. Agenda (subject to change on the day):

9.30am: Welcome
9.45am: Saving White-faced Darters - David Clarke
10.15am: Chartley Moss film - Steve White
10.45am: White-faced Darter Genetic work - Dr Anna Muir University of Chester
11.15 am Break

11.30am: The Status of the Southern Damselfly in Dorset – Andrew Brown and Kevin Edge
12.00am: Q & A with available morning speakers
12.30pm Northern Damselfly and Staff Update
1.00pm AGM – everyone welcome to stay but only members can vote
1.30pm – 2.15pm Lunch – breakout rooms will be open to use to chat
2.15pm Dr Jessica Ware - American Museum of Natural History

2.45pm State of Dragonflies in Britain and Ireland 2021 Overview

3.15pm Break

3.30pm Dainty Damselflies are Back – Steffan, Sandwich Bay Bird Observatory Trust.
4.00pm Q & A with available afternoon speakers
4.30pm Close meeting

Full booking details on the 'Events' page on our website: british-dragonflies.org.uk



News From You

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

@verityhill5 Verity Pixie Hill on Twitter:

"6 days later Derek the Dragonfly still won't fly. Here he is enjoying a honey jelly pot (for insects) from @PetsatHome
I'm doing all I can to try & help him - all creatures great or small deserve a chance."

Verity took a Migrant Hawker dragonfly in to her heart when she found him looking a bit worse for wear in her garden. She went above and beyond to care for him for 11 days before he died. Sadly adult dragonflies don't live very long as they will have lived for a few years as aquatic larvae before this point, but we think that Derek (pictured below) was one lucky dragonfly indeed!



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www.wildlifegardenproject.com

Whilst working with us on some garden dragonfly videos Laura from the Wildlife Garden Project well and truly caught the Odonata bug! Here's some lovely feedback after working together:

"You should know that I am now completely obsessed with dragonflies to the point that Facebook have caught on and every other post in my feed is now from the Dragonfly group. I've been testing myself whenever I see a photo and you know what I'm doing pretty well with the identifications! 🐞"

You can watch the video guides on the Wildlife Garden Project YouTube channel or on our 'Gardening' page on the website:

british-dragonflies.org.uk



@naturetasticwh

On Instagram, a keen young naturalist called Henry (pictured above) has been tagging us into his posts about dragonflies and damselflies. During Dragonfly Week this year, he found quite a few species around his home in the Nene Valley, including this beautiful Large Red Damselfly pictured below.



Sightings Updates **Adrian Parr**

Migrant News

The 2021 migrant dragonfly season got off to an early start, with a Vagrant Emperor being photographed at Torpoint in Cornwall on 24 February, and with two unidentified dragonflies probably also this species being seen on the south coast over the next few days.

A small influx of Red-veined Darter into the Low Countries during mid May seemed to just miss Britain, but by the start of June individuals had begun to arrive, and by the end of the month records had been received from nearly 20 counties. These were primarily in southern England and coastal south Wales, though there was also a sighting as far north as the Scottish Borders. In contrast to spring 2020, when immigration was supplemented by the emergence of significant numbers of locally-bred individuals, few such records were seen in 2021. An immature male Red-veined Darter was however noted at Stallingborough in Lincolnshire on 11 June.

June also saw the appearance of Lesser Emperors, with sightings building up as the month progressed and then accelerating into July; reports had a strong southerly bias, with one at Belvide Reservoir in Staffordshire on 23 July being the most northerly record received. In addition to fresh immigration, numerous records from 'traditional' sites such as the Trinity Broads complex in Norfolk and Longham Lakes in Dorset suggest that local breeding continues to become increasingly important. As summer progressed, Southern Migrant Hawkers also started to appear at traditional sites including many, such as Hempsted in Gloucestershire, Otmoor in Oxfordshire and Quy in

Cambridgeshire, that are now well removed from the species' early Thames Estuary breeding strongholds. The species also fared well in all south-eastern coastal counties from East Sussex round to Norfolk, perhaps reflecting a mix of continuing internal range expansion and fresh immigration. A series of records during the first days of August from along the south coast, including single males seen at Beer Head in Devon and at Worbarrow in Dorset, are of more obvious migrant origin, but whatever the underlying details the species is clearly flourishing in Britain at the moment.

Following sightings during 2020, Norfolk Hawkers reappeared in some numbers at Radipole in Dorset during mid June, rather implying that successful breeding is now taking place at the site. Amazingly, good numbers of Norfolk Hawker were also discovered along the Chichester Canal in West Sussex around the same time, again strongly suggestive of a breeding population (this region is just 10 km away from where a singleton was spotted in 2019). With multiple individuals also having been seen at Baston Fen in Lincolnshire throughout much of July, and with one reported during mid June from near Eastbourne in East Sussex, the

range expansion currently being shown by Norfolk Hawker seems to be gathering pace. The exact role of immigration in the process remains uncertain, but may well be significant, especially for coastal sites.

The other migrant/new colonist species to produce interesting highlights during the first part of the season was the Southern Emerald Damselfly. Although the inland colony near Beaconsfield in Buckinghamshire now seems to have become extinct, records were received from almost all other known recent breeding sites. Around the greater Thames Estuary, sightings were particularly numerous and, in addition to previously known localities, there were sightings from new sites such as Shoeburyness in Essex and Allhallows in Kent. During mid July, isolated migrant/wandering individuals were also seen at Denbies Hill in Surrey and in a garden at St Albans, Hertfordshire.

It will be interesting to see what events take place during the second half of the 2021 flight season. Vagrant Emperors reported from Suffolk and Lincolnshire over 30 July–1 August hint that there may still be much more to come.



Southern Migrant Hawker by Neil Phillips



First Dates for 2021 *Adrian Parr*

The 2021 flight season got off to an unexpectedly early start when a period of unseasonably warm weather saw the appearance of a single Blue-tailed Damselfly in Nottinghamshire on 27 February. Another spell of warm weather during late March then saw Common Blue Damselflies and yet another Blue-tailed Damselfly emerge at Anderton in Cheshire, this site clearly having a very favourable micro-climate. Slightly more expectedly, sightings of Large Red Damselfly were also received from a number of localities, and by the end of March the species had been recorded from no less than 5 sites. A subsequent downturn in the weather delayed further emergences, but by the end of April some 14 species had been recorded (though some of these at only a few locations); this is somewhat above average. In addition to the sightings mentioned above, other notable early records included what may be Britain's first-ever Golden-ringed Dragonfly seen during April. Continuing poor weather during May then put the season behind, but a recovery during June saw the final species of the year start to appear. An unusually early record of Migrant Hawker on 15 June, perhaps relating to an immigrant, meant that all Britain's dragonfly species were to have been seen on the wing by the end of June, the last species to appear being Willow Emerald Damselfly. Full details of all first dates currently to hand are given below:

SPECIES	FIRST DATE	PLACE	OBSERVER
Banded Demoiselle	18-Apr-21	Warwickshire	W. Taylor
Beautiful Demoiselle	25-Apr-21	Carmarthenshire	B. Halstead
Southern Emerald Damselfly	23-Jun-21	Kent/Essex	F. Cackett/I. Dew
Scarce Emerald Damselfly	09-Jun-21	Norfolk	S. Rowland
Emerald Damselfly	11-Jun-21	Buckinghamshire	J. Hutchinson
Willow Emerald Damselfly	26-Jun-21	Essex	I. Dew
Northern Damselfly	31-May-21	Perthshire	R. Thomas
Azure Damselfly	25-Apr-21	Hampshire	T. Crow
Variable Damselfly	22-Apr-21	Somerset	P. Bruss
Red-eyed Damselfly	26-Apr-21	Nottinghamshire	P. Cadman
Small Red-eyed Damselfly	15-Jun-21	Surrey	S. Chastell
Large Red Damselfly	29-Mar-21	Cornwall/Norfolk	many observers
Common Blue Damselfly	29-Mar-21	Cheshire	J. Stone
Blue-tailed Damselfly	27-Feb-21	Nottinghamshire	J. Perks
Scarce Blue-tailed Damselfly	27-May-21	Monmouthshire	T. Wright
Small Red Damselfly	13-Jun-21	Surrey	L. Currie
White-legged Damselfly	27-May-21	Kent/Shropshire	K. Harper/S. Barlow
Southern Migrant Hawker	13-Jun-21	Essex	B. Jackson
Azure Hawker	01-Jun-21	Wester Ross	T. Doe
Southern Hawker	09-Jun-21	Suffolk	R. Vonk
Brown Hawker	19-Jun-21	Lincolnshire/Staffordshire	J. Mellowship/D. Terry
Norfolk Hawker	28-May-21	Cambridgeshire	S. Cham
Common Hawker	03-Jun-21	Wester Ross	I. Francesca/G. Rennie
Migrant Hawker	15-Jun-21	Dorset	P. Winter
Emperor Dragonfly	26-May-21	East Sussex	B. Clough
Hairy Dragonfly	13-Apr-21	Wiltshire	P. Philp
Common Clubtail	14-May-21	Cheshire	D. Costello
Golden-ringed Dragonfly	22-Apr-21	Cornwall	C. Beazley
Downy Emerald	18-Apr-21	Surrey	S. Ali
Brilliant Emerald	03-Jun-21	Surrey	S. Ali
White-faced Darter	25-Apr-21	Shropshire	S. Mercer
Broad-bodied Chaser	17-Apr-21	Kent	M. Heath
Scarce Chaser	22-May-21	Kent	M. Heath
Four-spotted Chaser	22-Apr-21	Shropshire	S. Barlow
Black-tailed Skimmer	17-May-21	Worcestershire	A. Warr
Keeled Skimmer	28-May-21	Norfolk	S. Rowland
Black Darter	22-Jun-21	Shropshire	G. Lambe
Ruddy Darter	09-Jun-21	Norfolk	S. Rowland
Common Darter	29-May-21	Cheshire	D. Bowman

Correction to the 2020 First Dates article - the earliest ever date for White-faced Darter was actually set by Stephen Barlow on the 21st of April 2020 in Shropshire.





Assessment of Northern Damselfly Ponds

Stephen Corcoran

Northern damselfly is a boreo-alpine species which in the UK is restricted to three main areas in Northern Scotland: Strathspey, Deeside and Highland Perthshire. It is recorded from around 52 sites, with two-thirds of the sites in Strathspey between Aviemore and Grantown-on-Spey. It can be found on a wide range of standing waters with a key requirement of a pond edge fringed with emergent vegetation standing in water, usually sedges (*Carex* spp.) but also rush (*Juncus* spp.), reed (*Phragmites* spp.) or horsetail (*Equisetum* spp.). Due to its restricted range, it is classified as Endangered on the British Red List.

Many of the sites have not been visited since the 1990s, or only visited once, and some sites are known to have disappeared. Numbers of Northern Damselfly recorded at the majority of sites tend to be low, usually below 10 adults or larvae.

Survey work was undertaken in the late autumn of 2020, supported by funding from the Cairngorms National Park Authority, RSPB, British Dragonfly Society and Forest & Land Scotland to determine the status of Northern Damselfly sites and identify future management work.

A total of 34 sites were visited in Strathspey and 6 sites in Deeside between late October and mid-December before Covid-19 restrictions and snowy weather prevented access. Each site was visited once, and information collected on various factors including habitat quality, open water, shade, pH, bank and emergent vegetation. Where it was possible, larval sampling was undertaken using a 1mm mesh, 0.3m bag, long wooden handled net. Management actions were listed, and an estimate made of the importance of the site for Northern Damselfly. A full report is in preparation.

Northern Damselfly larvae (pictured below) were found at 16 of the 33 sites searched. An interesting observation is that Northern Damselfly larvae appear to be quite active near the surface in emergent vegetation during late autumn: few larvae of other species were caught. Between 1 and a maximum of 27 larvae (average of 11 larvae across all locations) were caught following sampling of suitable habitat on each site.

A population assessment of the 40 sites was made based on historic records and this survey. Only seven are considered very good or good and three classified as moderate. The other thirty sites are all considered poor or marginal for Northern Damselfly.

Twenty three of the 40 sites require management. Five of the sites looked very marginal, primarily because they were infilling with vegetation. Two sites could not be found and a further 2 sites had filled in. Management is a mix of digging out vegetation to create open water, repairing dams or damming old forest drains, and felling conifers as well as creating some new ponds.

The next step is to secure funding for the management work to enhance the sites. Many sites, especially sites with few records, would benefit from one or two summer visits to provide more information on adult numbers. If anyone is interested in undertaking survey work, please contact me.

stephenjcorcoran@hotmail.com

Autumn 2021



State of Dragonflies

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2021

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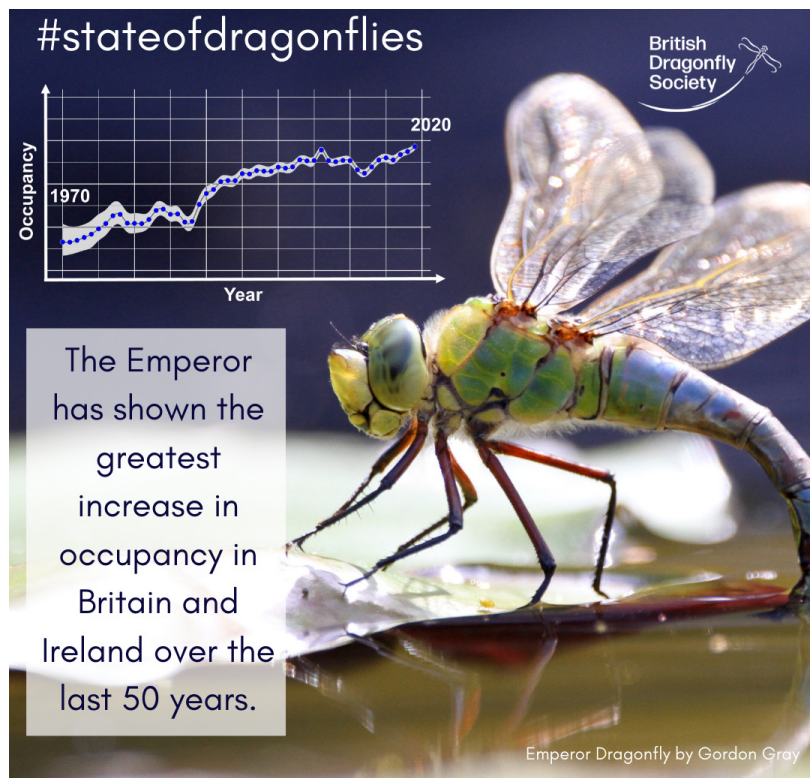


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The State of Dragonflies in Britain and Ireland 2021 *Pam Taylor*



In case you missed the news, which I certainly hope you didn't, the ***State of Dragonflies in Britain and Ireland 2021*** report was finally published on 7th September.

The report is based on fifty years' worth of verified dragonfly data covering 1970 to 2019, with records coming from both our own BDS Recording Scheme and the Centre for Environmental Data and Recording (CEDaR) in Ireland. The trend analyses underpinning this report were prepared for us by the Biological Records Centre, which is part of the UK Centre for Ecology & Hydrology, and based on 1.4 million unique monad, date and species records, from 17,000 separate recorders spanning those fifty years. Preparing the report took over eighteen months, which is much longer than originally



anticipated. Two main reasons for this prolonged process were the impact of Covid-19 and the fact the final product is much more substantial than envisaged in the beginning. The editors and main authors, Dave Smallshire, Adrian Parr and I, would like to sincerely thank all the observers, County Dragonfly Recorders, BDS staff, and not least, the other contributors and authors, for their efforts and time. Without such assistance, most of it voluntary, this report would never have been possible at all.

One of the main findings of the report is that most dragonfly species are either holding stable or increasing, with only a handful of species actually in decline. This is in stark contrast to many other insect groups, although not all, and other taxa such as farmland, woodland and wetland birds. In many cases it is the more generalist species and new colonists that are increasing, while most habitat specialists are holding steady or decreasing. Overall, 19 resident or regular migrant species (41%) have increased significantly in occupancy, while just five species (11%) have decreased overall in Britain and Ireland. Additionally, five species have increased and three decreased in one or more of the separate countries within Britain and Ireland. One former, fairly regular migrant, Yellow-winged Darter, has also declined overall and is now a very rare vagrant indeed.

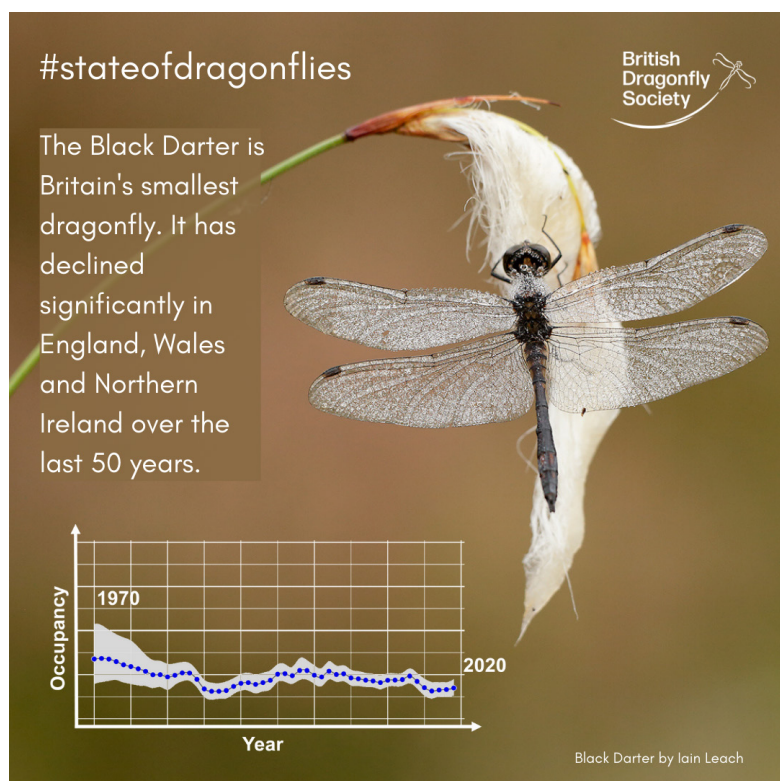
Climate change appears to be one of the main drivers behind population trends, but climate does not act in isolation. Habitat changes such as wetland creation and restoration, lack of management, afforestation and land drainage all have a role to play too. Water quality and changes due to pollution, improved water treatment and the use of pesticides and fertilisers have also affected dragonfly populations in both the short and long term. In the absence of dedicated scientific studies, it is often difficult to unravel these various causes, but this is what we have attempted to do in the report. We have used expert

opinion, based on what is known of dragonfly biology and ecology, to discuss the possible reasons behind the various species' trends.

The report goes further and highlights recent BDS projects to record or assist specific species with either targeted surveys or dedicated conservation work. It also covers future research needs and ways in which we can all help dragonflies to survive long into the future.

You can find the report on the BDS website.

british-dragonflies.org.uk





White-faced Darters in Cumbria: a 2021 Perspective

David Clarke

It seems hard to believe that it is already eleven years since we actually started the reintroduction at Foulshaw Moss, and even longer since we began planning it. (The initial 'spark' had been a millennial Biodiversity Action Plan.) The movement of larvae into the site ceased after 2014 and we are now in the long-term monitoring and management phase. Meanwhile, the current introduction project at Drumburgh Moss on the Solway has still a couple of years to run, and it will be several years before we can really declare it a success.

With such a large site and variety of pools, monitoring at Foulshaw is a real challenge. At many pools it is simply not possible to use the technique of collecting exuviae - which proved key to monitoring the initial phase. We will be forever grateful to BDS members Heather and Tony Marshall, who live near the site and worked hard for several seasons to reveal the crucial evidence. By the time of the Covid episode, this form of monitoring was already coming to an end. As I found on a visit on 2nd June this year, the species has continued, almost literally, to move on. The kilometre or so of boardwalk is the only effective means of getting around the site. In circuits of this, encounters with the species proved frequent. It could be seen at various pools, in one instance ovipositing. But there are many such pools and their margins are mainly not accessible. A fine male was beside my car in the car park! The original reintroduction pools, and others, have extensive Sphagnum rafts, which will always contain larvae. I have recommended creating smaller 'satellite' pools around some of them to receive any excess that has to be removed to keep some open water. As noted in other years, the species has even turned up at the adjacent Meathop Moss Reserve,

having had to cross up to a kilometre of unsuitable habitat.

At Drumburgh Moss, we were pleased to find some mature larvae on 11 May, just before emergence. The fact that these had developed to this stage in the pool was even better news - we did not introduce any mature larvae this year. Emergence had started by 22 May and visits thereafter revealed that at least 40 adults had emerged. Matures of both sexes were seen at the pools. Although mating or oviposition were not recorded, these could have easily occurred during the period of good weather through most of June. Given the current stage of the project, this more than meets expectations.

Interestingly, emergence at the donor site is always later (by at least a week) than at Foulshaw. This year, there was no sign of it on 26 May: it only really got going when the weather finally improved at the very end of the month. Fortunately, the pools there have firm edges. On each visit, Cumbria Wildlife Trust volunteers and I spend two or three hours on hands and knees on wet pool margins - regardless of the weather! We carefully search the heather and other vegetation, also checking the stems of cotton-sedge growing in the water. Often, skins fall into the water amongst the floating Sphagnum and can be hard to spot. Whilst doing this, we have to be careful not to disturb emerging dragonflies - which are very vulnerable at this stage. We know that at least 2500 individuals will have emerged this year. This is good confirmation of the strength of this donor population (which is already effectively 'replicated' at Foulshaw Moss) and a reassurance that the Drumburgh project can still safely proceed.





Southern Hawker Diary *Rory Morrissey*

The first two Southern Hawkers to emerge from our garden pond left their exuviae for me to find on the morning of 27th May. When the next one emerged on the 30th I was looking forward to seeing it make its maiden flight, but it stayed in the pond all day and all night.

The next morning we saw it go – but only as far as the apple tree by the fence – for a Rook saw it, chased it momentarily and caught it.

Two days later another made its maiden flight at around the same time and was chased by a Rook, perhaps the same one, but managed to evade it and hopped over the fence out of harm's way.

On the 3rd of June three emerged overnight, two went early, another emerged in the evening, so there were two hanging in the pond irises overnight. It was cold and they didn't move for a long time. Then, mid-morning, one flew to the apple tree and stayed there. It was not a good plan as the House Sparrows regularly investigate the foliage. Sure enough, it was found and parts of what was left were taken away to the Sparrow's nest.

The following week was cold and few dragonflies emerged. The House Sparrows were visiting the pond every fifteen minutes and I guess that they were feeding nestlings.

On the 15th it started to warm up and at 5.40 am there were seven emergent Southern Hawkers, but it was still too cold for them to fly and some still had their wings back. I don't begrudge the sparrows their breakfast, but I thought the sparrows were going to get them all, so desperate measures were

called for. One hawkler was taken while my back was turned. I made a sparrow scarer in the vague shape of a human using my camera tripod and a red jacket, borrowed from my wife, although she was still asleep in bed. It seemed to work. We saw two Southern Hawkers fly off around 9am.

On the 16th it was quite warm at 4.15 am and there were another five emergent dragonflies. I set up my scarer again and one actually made its maiden flight, quite a strong one too. The air temperature was only 14 degrees, but maybe a little warmer around the sheltered pond. The other dragonflies had left by 7 am.

On the 17th there were two emergent and one exuvia at first. The emergents left or were predated by lunchtime. Then the heavens opened and we were treated to a spectacular downpour complete with special effects. It stopped raining for a while but returned in the evening. In 24 hours we had about three inches of rainfall. What a treat for the frogs! So I didn't expect there to be five emergent and rather damp Southern Hawkers in the irises in the afternoon of the 18th. There were three other exuviae but the fate of those creatures is unknown.

The rest of June brought further emergents, but never so many, and the visits by the House Sparrows became less frequent and eventually stopped. I assume that the chicks had fledged and were learning to forage with their parents. July brought some warm days and nights and there were occasionally five or six emergent or exuviae. A female started to visit and oviposit on the mossy rocks around the pond from the end of July. There were also a few Common Darters emerging around this time.

Monitoring of the pond in July brought further records and some of the Southern Hawkers started to emerge during the day. The last Southern Hawker I saw make its maiden flight was at 8.40am on 9th August and it went straight up into the Field Maple tree. I found the exuvia later.

I didn't manage to collect every exuvia but I got most of them. The final tally was 115 – the highest total I've ever had from our garden pond – and I certainly missed a few. It was also one of the longest seasons we've had for emergent Southern Hawkers – from 27th May to 9th August.





Dragonfly Hotspots Update

Fiona McKenna

During July and early August, our England team headed out across the country to designate two new Dragonfly Hotspots and celebrate the first anniversary of another.

On Saturday the 17th of July **Exbury Gardens and Steam Railway in Hampshire** was officially recognised as a Dragonfly Hotspot. TV presenter and passionate insect champion Nick Baker (pictured above) was guest of honour at the launch event. Our very own Dragonfly Champions Ruary Mackenzie Dodds and Kari de Koenigswarter were on hand to help open the new pond and facilities on site too. Ruary and Kari have worked with the site team to restore a large fishpond and turn it into a dragonfly des res. The process involved rehoming the larger fish and introducing a variety of native plants in order to improve water quality and providing dragonflies with the right habitat for every part of their lifecycle. A video of the launch event is available on the Exbury Gardens YouTube channel.

A couple of weeks later we headed to **Whisby Nature Reserve, a Lincolnshire Wildlife Trust (LWT)** site near to Lincoln city to designate it as a Dragonfly Hotspot. Whisby is home to an impressive 24 species of dragonflies and damselflies. We were accompanied by a cast of volunteers and LWT staff too, to put on a fun filled day of dragonfly themed crafts and knowledge sharing. Huge thanks to the wardening team, Grahame and Emily for putting on a guided walk too. The weather was not ideal for dragonflies but we did see plenty of Common Blue Damselflies, Brown Hawker, Ruddy and Common Darter. Thanks to your generous support, we were able to get an information board designed and produced for this wonderful site. The board will be installed by the end of the year and we will bring you an update as soon as it is on site. We do have a photo of the temporary board (on the opposite page) though, which Jade from LWT has done a brilliant job at designing.

Our first anniversary celebration at **Paxton Pits** was postponed due to thunderstorms, so it took place on Saturday the 7th of August. We really enjoyed making pipe cleaner dragonflies and seed bombs with visitors and the Friends of Paxton Pits volunteers led two guided walks too. Common Darters, Brown Hawkers and clouds of Common Blue Damselflies were showing off to visitors. We are working with site managers Huntingdonshire District Council and the Friends group to get an information board designed in line with their existing style of signage, and will bring you an update on this next year.





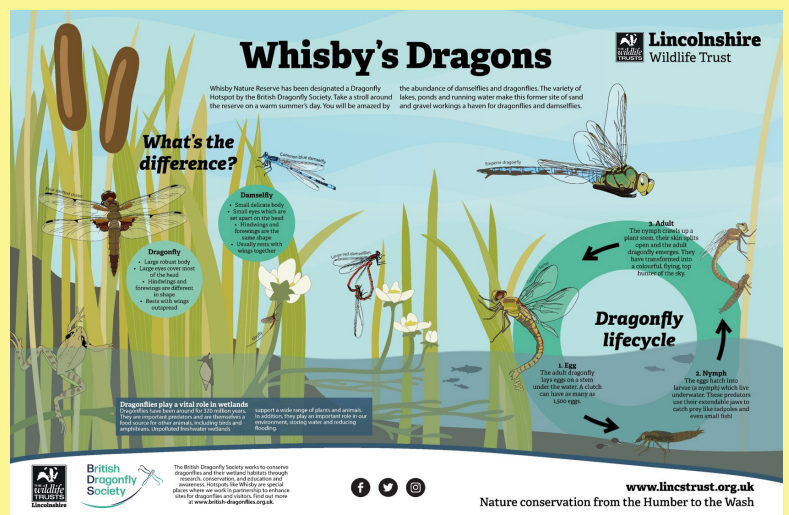
Funding Appeal:

Thank you for your continued support, which has enabled us to share knowledge and inspire future generations to get to know and love dragonflies at these special sites. We still aspire to install information boards at every single Dragonfly Hotspot site so we still need help to make this a reality, as there are 10 sites across Scotland that still need boards. Our first ever Welsh Dragonfly Hotspot will be designated at Llangorse Lake next summer too, which will also need an information board. With boards costing on average £1,500 we still have a way to go until we reach our target. If you can afford to donate any amount at all it would be gratefully appreciated.

You can donate securely and easily via our website, head to the 'Membership and Shop' tab on the main menu and then select 'Donate', which is the sixth option down. Alternatively, if you would prefer to send a cheque, please make it payable to the British Dragonfly Society and send it to:

Carolyn Cooksey, Secretary,
Ashcroft,
Brington Road,
Old Weston,
Huntingdon,
PE28 5LP

Thank you for your ongoing support.



Finding Willow Emerald in Winter

Ian Merrill



Other than an odd unseasonal larval record, invariably discovered whilst renovating a garden pool, dragonfly record has always been a late-spring to autumn pastime in VC55; with the arrival of the Willow Emerald Damselfly, however, all this has changed! In terms of British Odonata, the Willow Emerald is unique in that it lays its eggs directly into the thin branches of trees overhanging water, mainly in August and September. Characteristic swellings develop around the eggs, from which larvae hatch the following spring, to fall into the water below and develop within three months to adult emergence.

Mark Tyrrell, the Northants Dragonfly Recorder, has told me previously that his preferred method of proving the presence of Willow Emerald at a site is to look for evidence in the form of ovipositing scars during the winter months. In the winter, when the trees in which the adult female has laid her eggs the previous autumn are devoid of leaves, the tell-tale scars can be obvious, once one knows where

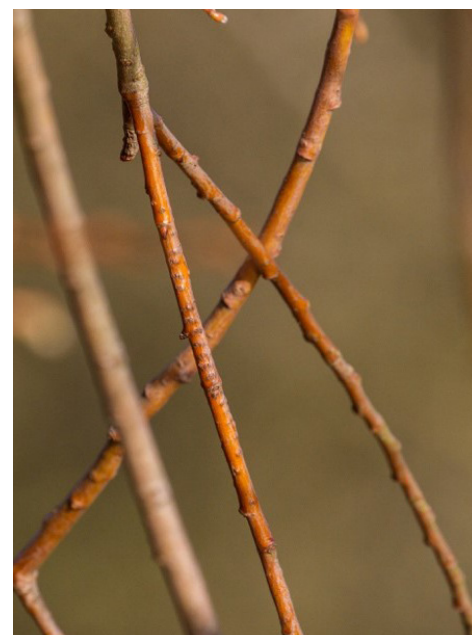
and precisely what they are looking for.

On 12th March 2021 I made my first attempt at finding ovipositing scars during the winter months, at a known site for this species, Melton Mowbray Country Park. Within an hour I had hit the jackpot, though only found two sets of scars during a full two hours searching. Regardless of numbers I was delighted to prove that the technique works and I am keen to pass on my findings to other potential observers.

Although several species of tree or shrub can be utilised for egg-laying, I have only ever seen scars in willow, so would advise searching willows as the first preference if they are present, though other suitable trees should not be ignored. Willow Emeralds need to lay eggs into branches permanently overhanging water, so if searching in winter remember that water levels can change due to flooding and don't waste time on branches which will be above dry ground in the warmer months. A pair of close-focussing binoculars is

essential and the attached images illustrate the habitat in which I found ovipositing scars at Melton.

In terms of the specific type of branches on which to search, my limited experience suggests between 1m and 2m above water level is the prime zone in which to focus efforts, on stems around the thickness of a pencil or a little broader; this growth appears to be two years old, still being fresh and smooth-stemmed. The angle



to the water's surface does not seem to be an issue and I have found scars on near-horizontal and near-vertical stems.

The scars themselves appear as pin-hole puncture marks surrounded by swellings or galls, running in linear or slightly spiralling rows with wounds a couple of millimetres apart and over a length varying from approximately three to ten centimetres (see attached images). I have never found clusters of scars in close proximity, but in isolated patches, so diligent scanning of suitable branches from differing perspectives is the key, though it is worth noting that my experience is still very limited!

Hopefully these notes will encourage other observers to commence their dragonfly recording early in the year, and it would be fantastic to add some new sites for this recently-arrived species before any adults are seen. I am sure that any suitable habitat to the east of Leicester could potentially support Willow Emerald already, and I would encourage observers to grab their binoculars and make an early start to their dragonfly recording season. Needless to say, if you find any evidence please let your County Recorder know.

For those interested, there is a useful article by Steve Cham in a recent volume of the BDS Journal.



SPOTLIGHT ON

Whisby Nature Reserve

Fiona McKenna

Whisby Nature Reserve near to Lincoln city, Lincolnshire has just been designated as a Dragonfly Hotspot due to being home to 24 species of dragonfly and damselfly and having all the visitor facilities you could wish for.

This site has always had a special place in my heart too as it is the nearest nature reserve to the city that I grew up in. As I've grown up I've witnessed Whisby grow too, as it was a former sand and gravel quarry which was then signed over to Lincolnshire Wildlife Trust. They have done an excellent job at breathing new life into a once barren landscape.

In Spring you can go in search of the Nightingale with its famous melodious song, as this is one of the last strong holds for them in the county. The next nearest reliable area for them is some way to the south over the border at Caster Hanglands near Peterborough. Summer is obviously dragonfly season, take a stroll over the railway bridge and check out the aptly named Dragonfly Ponds. On a sunny day you will be tripping over dragonflies wherever you go on site though. Spring and Summer also mean Orchids as there are seven species on site, the most notable one being the nationally scarce Green-flowered Helleborine. Keep an eye out for Southern Marsh Orchids in spring and Bee Orchids in summer too. Autumn is a beautiful time of year to take in the changing colours, array of Fungi and now that Willow Emerald have arrived on site it has extended the damselfly season here too. Winter might be the end of dragonfly season but thanks to the accessible paths and café to warm up in Whisby is a fabulous place for a winter walk. I love looking for animal tracks in the snow and searching for Fieldfare and Redwing in the berry-laden hedgerows. Another star to listen out for is a booming Bittern as they often overwinter here.

You never know what might drop in to Whisby so it is always worth a visit any time of year.

Top photo: Grebe Lake by Neil Roberts

Getting Here:

Whisby Nature Reserve is 4 miles South West of Lincoln.

There is a bus service to Thorpe on the Hill village, a 5 minute walk from the reserve.

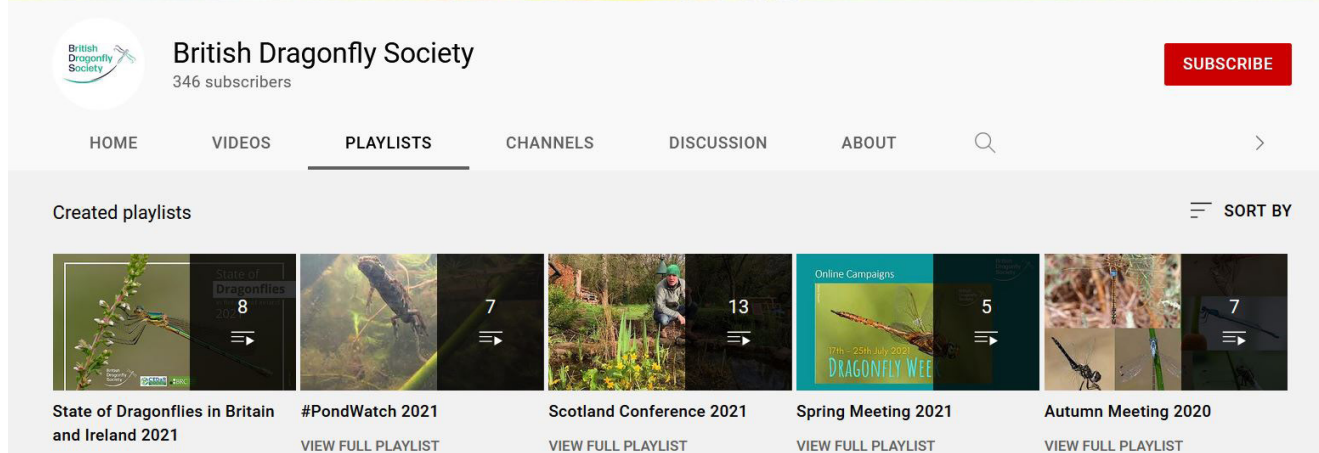
Full details can be found on the website here:

[www.lincstrust.org.uk/
get-involved/top-reserves/
whisby-nature-park](http://www.lincstrust.org.uk/get-involved/top-reserves/whisby-nature-park)



Willow Emerald Damselflies by Emily Summerlin





British Dragonfly Society Videos

Did you know that you can watch all of our videos in easy to find playlists on our YouTube channel? For example, all of our *State of Dragonflies in Britain and Ireland 2021* related videos are on there grouped together. You will also find talks from our most recent online Autumn, Spring and Scotland Meetings, along with videos from campaigns like Dragonfly Week and PondWatch.

We will upload all talks from our upcoming Autumn Meeting 2021 on to our YouTube channel after the meeting has taken place too. You never need to miss anything, and you don't need to sign up to social media or have an account to watch any of it. Head to our website and follow the link from the homepage.





Young Naturalist Section



Dragonflies and me....

Lizzie Daly

We chatted to wildlife biologist, broadcaster, filmmaker and conservationist, Lizzie Daly about her favourite dragonfly experiences:

Why did you first become interested in dragonflies?

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

What is your best memory of a dragonfly encounter?

What is your favourite dragonfly fact?

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

Any advice for aspiring young naturalists?





Hi, I'm Emily and I work for the Lincolnshire Wildlife Trust as a Nature Reserves Trainee at Whisby Nature Park near Lincoln. I've been in this role since March 2021, but have volunteered at this site and many others for the past year and a half since deciding that my previous career as a musician and teacher just wasn't cutting it for me anymore.

What is the best thing about your work?

I love that every day is different and rewarding. A day spent descrubbing a reed bed gives you such a sense of satisfaction and achievement as you look behind you and can see where you've been, but then there are days when I'm let loose in the reserve with a net or a quadrat and asked to count species. The thought that both these tasks are linked together is amazing, there are so many species to find because the practical work was successful, everything you do adds to the bigger picture of the reserve as a whole and that of the whole county.

What does a typical day/week involve?

Our week is typically split between managing the reserve for wildlife and managing for people visiting the reserve, it's about a 60/40 split. Both aspects are influenced

seasonally, so in the winter we'll get stuck into woodland management, thinning and clearing to provide ideal nesting habitat for birds and to maintain our woodland plants and in summer we'll make hay to increase biodiversity in our meadows along with maintaining infrastructure like hides and paths. All of the work we do whether it's wielding a machine or chatting to members of the public improves the reserve and helps people to engage with the natural world, hopefully enthusing them to protect it in turn.

Describe the most challenging aspect of your work?

I find that the most challenging thing is usually trying to find time to fit everything in, especially when you're early in your career and you feel there is still so much to learn! Over the last few weeks I've been so absorbed with botany, learning about keys and doing meadow assessments that now it's time to cut and rake them, hopefully I'll remember the learning for next year. When you work on a busy nature reserve it's difficult not to get side-tracked by members of the public wanting to engage with you and balancing that with getting the work done that they are asking about. I hope that balance is something I'll achieve as I learn more, but there's so much knowledge out there I don't think I'll ever stop learning.

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

The roles in conservation are so varied and there are so many routes in that I haven't met two people with the same experiences, everyone has their own skills and talents that make them an amazing member of a team. The common factor is passion and enthusiasm for the natural world. Immerse yourself in your local wildlife sites, spend a day watching birds or dragonflies then go home and learn more about them, always watch and learn and never stand still.

As a career changer I've found that experience is the way forward. Volunteering locally in a range of roles and with a range of organisations will provide you with valuable experience and demonstrate your commitment to the environmental sector, it also puts you in touch with the enthusiasts in your area and there are no better people to learn from.

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

I wanted to be in a role where I could make a difference in protecting and preserving our environment and our wildlife. So much of what we do as humans impacts on our surroundings and once you become aware of this it influences your actions and decisions in day to day life. I wanted to take this a step further to make a positive impact on our world. Working with wildlife and habitats is a way of life, and I wouldn't have it any other way.

How can we keep in touch with you?

Twitter - @emilyksum



Xander Johnston

Hi, my name is Xander, more commonly known as AntBoy! I am a typical 14 year old boy who lives in the Cairngorms National park in the Highlands of Scotland. Like many people my age I love playing computer games, spending time with my family and will rarely tidy my room. But I also have a huge passion for nature, especially the little guys, the insects. I believe that insects are the foundation of the whole ecosystem and without them, nothing would survive, including us. They pollinate the plants so that we can have the food we like to eat, they clean up the forest floor so we can go on our favourite walks without having anything sticky under our feet, and they give the trees the nutrients that they need so that they can provide us with oxygen! They are truly amazing things.



This is why, along with my dad Ross, I try to do all I can to help the insects thrive, and I would love it if I could inspire you to do the same.

My story begins 6 years ago, when my family moved from the city of Edinburgh to live in Aviemore in the Scottish Highlands. Not long after we moved, my dad and I took part in a Cairngorms Big Nature Weekend wood ant identification course, teaching us all about wood ants and how to tell them apart from one another. Within minutes I was hooked and couldn't wait to learn more about these

amazing insects. Shortly after that my dad and I joined our local nature recording group as volunteers where we met loads of really friendly people who were more than happy to help us learn more about nature and insects. We started to record all of our sightings of ants, butterflies, beetles, bees and anything else we found when out and about. I have also been lucky enough to appear on both Countryfile and BBC Spring and autumn watch sharing my passion for nature, and what I've learned so far about insects, with the nation.

Me and my dad love spending time together outdoors as it's great for your mental and physical health, and there is so much to learn about the natural world.

More recently we have been learning lots about dragon and damselflies. You would be hard to find someone who isn't impressed by the aerobatics and sheer beauty of these amazing insects. The fact that they can hover one minute and then dart across the sky the next, combined with their beautiful and bright colours is why they are one of my favourite flying insects.



In the Scottish Highlands there is a damselfly which is super rare and endangered, it's called the Northern Damselfly (pictured below). Earlier this year we were lucky enough to find the larvae of this precious damselfly in a location where it had never been seen before. 4 months later we returned to look for the adults to see if any of the larvae had survived the cold winter, and we were delighted to see so many of them in this one area, sharing the space with a number of other beautiful species of dragon and damselflies.



You don't need to go hunting for rare and endangered insects to make a difference, just be curious and get out and about to see what you can find. Or why not add some things to your garden like an insect hotel, log or rock pile, or even a small pond and see what comes to you? You could even do nothing at all and just let your garden grow wild! If everyone did just a little to help, imagine how big a difference that would make!

Check out my YouTube channel at www.XanderJo.co.uk for more ideas on how you can give something back to nature.



Above: Xander next to a Wood Ants nest.



Above: Northern Hairy Wood Ant.



A One-year Odonata Survey of a Recently Repaired Pond in a Welsh Public Park

Chloe Griffiths, Penparcau,
David and Meg Kirby, Aberystwyth.

Parc y Llyn is a strip of land of about 4 hectares in area alongside the Rheidol river in Aberystwyth. It is owned by Ceredigion County Council. Around 2010 they decided to convert this strip into a small nature reserve. This included creating a small pond lined with a sodium bentonite membrane at map reference SN 5905 8076 in January 2011. In 2016 it was obvious that the lining had failed, the pond no longer held water. Frogs returning in February 2017 were attempting to mate on dry land [photo below).



In March 2019 the pond was re-profiled and relined to cover an area approximately 5 metres by 9 metres [photo right]. It was subsequently surrounded with a small, temporary fence and planted with a variety of species including bullrushes, marsh marigolds, water mint and water plantain.

It was decided to survey the pond for Odonata during the 2020 season. Because of coronavirus constraints the 2 observers made separate visits whenever it was convenient and the weather was suitable. 29 observation visits of at least 10 minutes duration were made between March and October. On four visits, mainly early or late in the season, no evidence of odonata was seen. Records were kept in a standard format and entered into an Excel spreadsheet for data analysis.

Recolonisation of the pond by other animals

Frog and toad spawn was seen in February 2020 with tadpoles hatching in March. Palmate newts were seen at an evening visit.

Sticklebacks were observed in June.

Aquatic insects (other than Odonata) included water boatmen and whirligig beetles in March and pond skaters and a large diving beetle in June.

Dry weather in May resulted in falling water levels and a proliferation of algae. The Photograph below shows the pond recovering after rain in mid-July.



Damselfly observations:

Table 1 shows the species and stage in the life cycle for the 166 Damselfly observations made during the 2020 season. Azures were the dominant species seen as adults and were responsible for all the damselfly exuvia found. All emergences were in April or May suggesting pond colonisation in 1999 [Figure 1].

Dragonfly observations:

Table 2 shows the species and stage in the life cycle for the 80 Dragonfly observations made during the 2020 season. Common Darters were the dominant species.

The exuviae were identified as :-

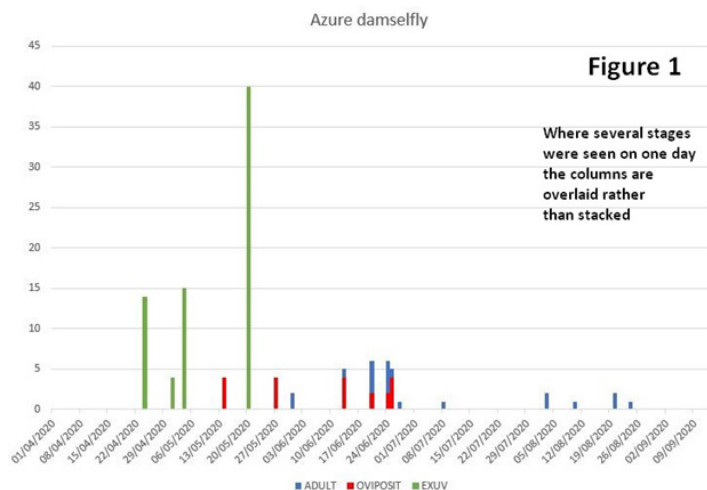
- Four-spotted Chasers in May
- Emperor in June and July
- Common Darter: 14 in June and 2 in August

Typically, Four -spotted Chasers take 2 years to complete their life cycles. As far as we know the pond was refilled with mains water. Perhaps the chaser larvae were introduced in water surrounding the purchased plants. The Emperor exuviae were also interesting, a 2-year cycle being the commonest.

However, the summer emergence suggests these were from eggs laid the previous year and that there was good food supply for a one-year cycle despite this being a new pond.

Damselfly activity was first noted on 24th April 2020 whereas no evidence of dragonflies was noted before 26th June.

The results show how quickly a restored pond can be recolonised. We hope to continue observations this year to see how the species prevalence changes as the pond matures.

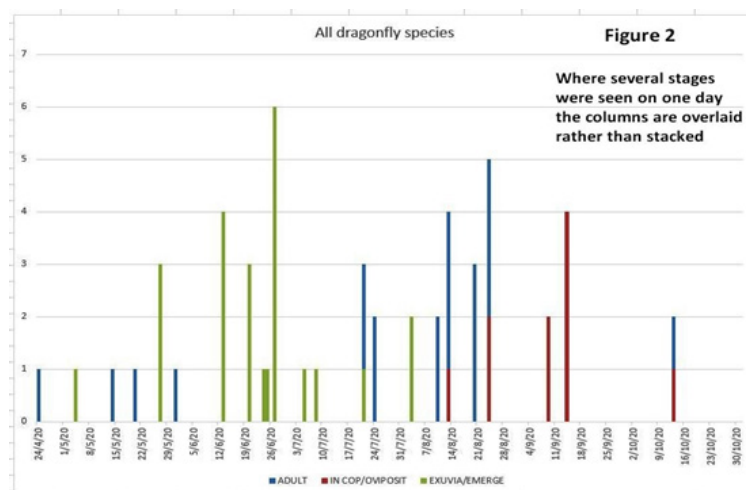


	Single Adult	In Copulation	Ovipositing	Exuvia	Emerged
Azure damselfly	41	5	15	73	
Blue-tail damselfly	21	1	3		
Emerald damselfly	1				
Large Red damselfly	4		1		
Not identified					1
Totals	67	6	19	73	1

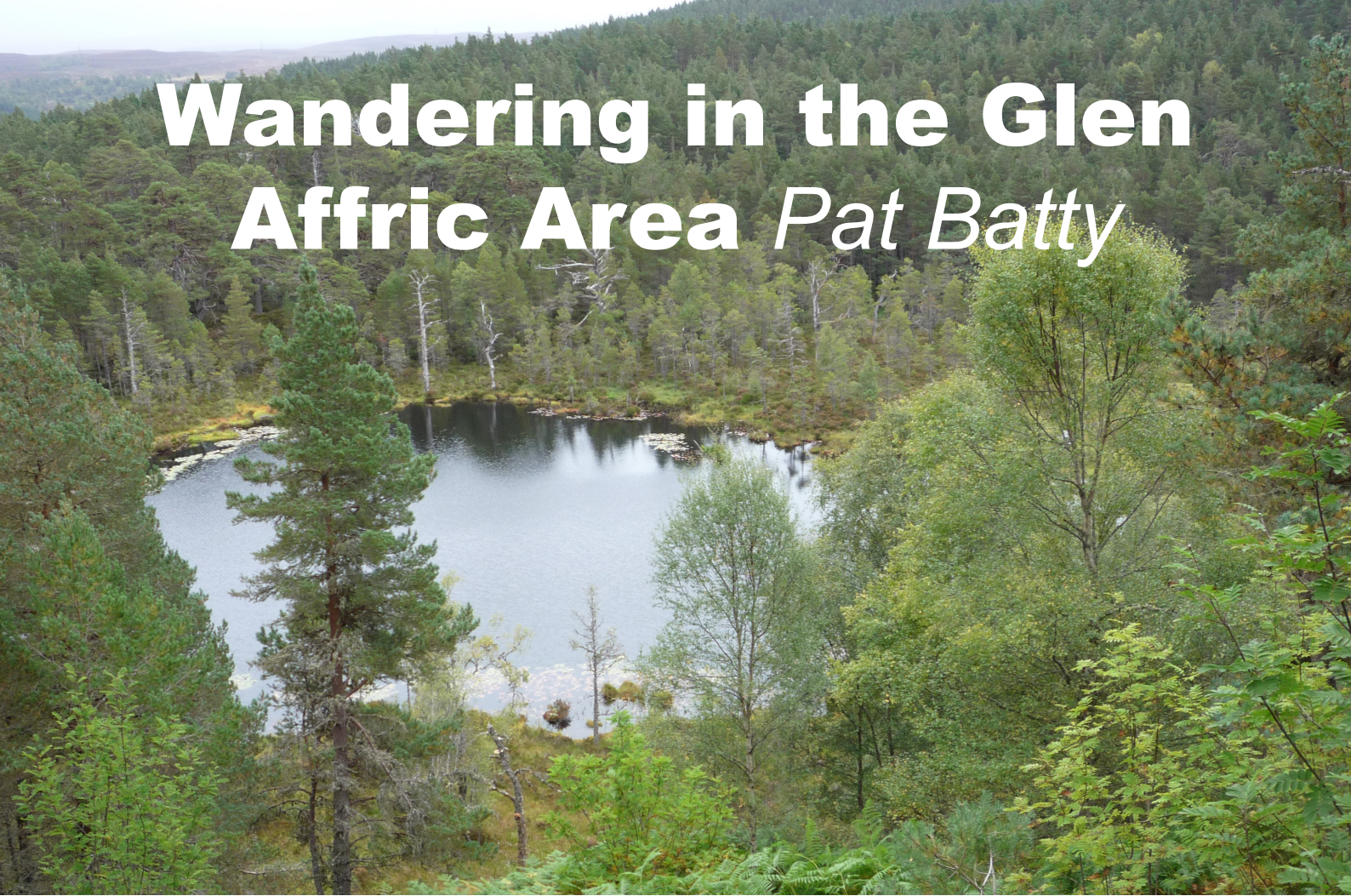
Table 1

	Single Adults	In Copulation	Ovipositing	Exuvia	Emerged
Four-spotted Chaser	1			3	
Broad-bodied Chaser	7		2		
Common Darter	28		9	16	2
Common Hawker	1				
Emperor	1		1	2	
Southern Hawker	4	1			
Not identified				1	1
Totals	42	1	12	22	3

Table 2



Wandering in the Glen Affric Area *Pat Batty*



Glen Affric, west of Loch Ness, is a beautiful area of lochans and mires amongst pine and birch woodland surrounded by mountains. Cannich at the start of the glen is an excellent base to explore the area.

A dragonfly enthusiast should visit Coire Loch, a gem of a lochan with extensive mires. Even on a damp day in September with the help of a colander I managed to find Downy Emerald and Common Hawker larvae at the loch edge and Northern Emerald and Four-spotted Chaser larvae in deep sphagnum filled runnels. The mires next to Loch Innes Gheamhraidh nearby also have Northern Emerald and White-faced Darter.

The pinewoods are dotted with many more lochans, the Pollain Bhuidhe and Loch an Eang areas being particularly rewarding.

This is one of the few areas in Scotland with Brilliant Emerald in a number of lochs; I hoped to learn more about its habitat and hoped to find some larvae. This is extremely difficult as they hide beneath overhanging heather banks. The best approach is to lie on the bank to sample underneath with a colander or net. I was lucky to find 1-2 larvae at Lochan Dubh situated by the A831 near Cannich. This is one of the best sites in Scotland with 14 breeding species including the Downy Emerald. Southern and Common Hawker larvae were also in the loch, and White-faced Darter and Northern Emerald were in the mires. Lochan na Craoibhe in the hills above also had Brilliant Emerald.

Corrimony RSPB reserve lies to the east. Loch Carn Bingally on the ridge is rough going but it is worth a visit. I found Brilliant Emerald larvae in this wind swept



lochans and White-faced Darter and Northern Emerald larvae in the infilling pools. Azure Hawker was also found here in the 1990s. Look out for Black Grouse and Crossbills as well.

I met up with a fellow dragonfly enthusiast to look at the lochs on the ridge above Tomich and amazingly, the sun shone. Common Darters were flying and Black Darters were in copulation and egg laying. A pair of Common Hawkers whizzed past as we started to guddle around the edge of a small lochan where we found fifty plus Common Hawker larvae. The site also had ideal habitat for Northern Emerald and larvae were found.

The highlight of the day was at Loch nan Luch or 'Lucky Luchiano' where, thanks to a keen volunteer's knowledge and persistence, we found twenty Brilliant Emerald larvae from 9mm to 22mm. This is the most ever found at a Scottish site before. The two largest larvae had well developed wing buds and were in the final instar for emergence in the spring.

The lochans on the hills above Millness in beautiful birch woods are easily accessible and there is Glen Strathfarrar to explore too. The whole area is for great for wildlife and if you visit please pass on any dragonfly records. I have lasting memories of sitting in the sun on the top of Mam Sodhail viewing mountains all around, hearing stags roaring and finding Common Darters basking on the track on my descent.

Photos: Previous page - header image Corrie Loch by Pat Batty, Brilliant Emerald by Pat Batty.

This page: top left White-faced Darter at Loch Awe by Stephen Carter, top right Loch Maolachan Millness by Pat Batty. Bottom left Lochan Dubh Brilliant Emerald site by Pat Batty, bottom right male Keeled Skimmer by Stephen Carter.



Priority Sites

Ellie Colver

The British Dragonfly Society may be small, but we are mighty! With only a small team, as a charity we extend our reach and influence with the help of dedicated volunteers, and by working in partnership with the big players in wildlife conservation, such as the Wildlife Trust. However, the landscape of the British countryside is changing rapidly, and with limited resources, we sadly have to prioritise how we spend our time and energy. If you've read the BDS's recent State of Dragonflies report (see page 10 for more details) you will know that one of the main drivers of population decline is believed to be habitat loss. This can be a result of direct habitat destruction, such as the drainage of wetlands to make room for urban development or agricultural activities. It can also be a consequence of inappropriate management or lack of management altogether; for example, removing grazing animals from open heathland which then become overgrown with vegetation. To help us identify the most important sites for safeguarding the BDS has a tool called the Priority Sites Assessment.

Previous BDS Officer Graham French developed the Assessment back in the early 2000s, during the BDS Key Site Project. The process involves monitoring dragonfly breeding activity within a wetland: collecting records of the numbers of each species present and evidence of breeding, which includes: ovipositing, copulation, larvae and exuviae. If the site is found to have a breeding population of a nationally or locally important species, or a significantly high diversity of breeding species, the wetland is classified as a Priority Site. What species are classified as locally important, and the number of breeding species that need to be present, varies from county to county.

Nationally important species include those listed in the BDS Odonata Red List:

Endangered

Southern Damselfly (*Coenagrion mercurial*)

Northern Damselfly (*Coenagrion hastulatum*)

Norfolk Hawker (*Aeshna isoceles*)

White-faced Darter (*Leucorrhinia dubia*)

Vulnerable

Azure Hawker (*Aeshna caerulea*)

Brilliant Emerald (*Somatochlora metallica*)

Near Threatened

Scarce Emerald Damselfly (*Lestes dryas*)

Scarce Blue-tailed Damselfly (*Ischnura pumilio*)

Variable Damselfly (*Coenagrion pulchellum*)

Northern Emerald (*Somatochlora arctica*)

Scarce Chaser (*Libellula fulva*)

Common Clubtail (*Gomphus vulgatissimus*)

Nationally Scarce

Small Red Damselfly (*Ceriagrion tenellum*)

Due to lack of resources, the Priority Sites Project has fallen by the wayside in recent years, apart from in Scotland where staff receive funding from NatureScot to identify Priority Sites that support breeding populations of Azure Hawker and Northern Damselfly. In addition, a number of CDRs and volunteers have continued to actively monitor Priority Sites. Dave Smallshire, County Recorder for Devon has, over the years, built a database of Priority Sites in his county, such as Stover Country Park, which supports a breeding population of Ruddy Darter (*Sympetrum sanguineum*), a locally important species for Devon. However, the classification of 'Priority Sites', is still very useful tool. As mentioned, it allows the BDS to identify Britain's most important

sites for Odonata. The evidence of the sites value can then be used to persuade the sites owners/tenant to manage the area for the benefit of its Odonata populations as well as to monitor the populations present; it is also a useful starting point for striking up new partnerships. In addition, the classification of Priority Site can be useful for landowners wishing to apply for funding related to dragonfly conservation and habitat management.

One of the more stressful roles BDS staff have to fulfil is the task of objecting or commenting on potentially harmful developments in or near dragonfly wetlands. The lack of legal protection for Odonata and their wetland habitats often leaves us feeling powerless when facing major developers (there are only two legally protected species of Odonata in the UK: Southern Damselfly and Norfolk Hawker). However, the species records collected during Priority Site Assessments, and during subsequent monitoring, provides us with valuable evidence of a site's ecological value and, consequently, gives the BDS authority to object to planning applications that could reduce the suitability of a site for Odonata.

If you are confident at identifying your local dragonfly species, please visit the Priority Sites page on the BDS website (under the Recording tab) for full details on how to perform Priority Site Assessments; your support will be invaluable. Even if you are not a confident recorder, any species record you enter into our database helps build our understanding of the distribution of species across Britain and can help us identify potential Priority Sites that require assessment. So whether it is a Common Blue Damselfly or a White-faced Darter, please drop that record into iRecord!

You can submit sightings by going to the 'Submit Your Records' page on the BDS website, in the 'Recording' section.



Review

Peter J Mill

Dragonflies and Damselflies of Britain and Western Europe. A Photographic Guide. 2021

**Boudot, J.-P., Doucet, G. & Grand, D.
(Illustrations by Doux, Y.)**

This is an exceptionally good field guide. It is comprehensive, beautifully illustrated throughout and is a pleasure to use. It starts with a chapter on the life cycle of dragonflies and damselflies. This includes information on egg-laying and incubation, as well as details of the morphology of both larvae and adults. The illustrations are well labelled and the anatomy of the wings is made very clear by using colours to highlight the different areas. There is also information on emergence, polymorphism and colour change. There is then a brief account of habitat types, followed by information on surveying, observation and photography. As this is a field guide 106 of the 160 pages are devoted to keys for the identification of adults and exuviae.

The field key to the adults, comprising 76 pages, comes first and all of the species found in the region are covered. This guide has a novel approach which works well. Instead of the usual format of a key followed by descriptions of each species, the species' descriptions are embedded within the key. It starts with a page on how to use the key. There is then a dichotomous key to the families with all the features accompanied by excellent diagrams and photographs, again using colour to highlight wing features. The keys to individuals in each family follow. There is a double page spread for each species. On the left-hand page there are diagrams showing the key features in colour as well as information on flight periods, distribution, habitat and species which might cause confusion. On the right-hand page photographs are



provided to illustrate key features for that species; these are clearly labelled using letters and coloured dots. With between two and four (mostly three) species on each double page spread, comparisons are very easy to make.

The next section (30 pages) is a field guide to the exuviae (and final instar larvae). It starts with some helpful information on exuviae and how to prepare them for examination. There are keys to the families of the Zygoptera and the Anisoptera, each followed by keys to the species. Photographs of the complete exuviae and of the details required for identification are provided, the photographs generally being well labelled. This larval key is as comprehensive as it can be but, currently, not all exuviae can be keyed out to species' level, notably in the Coenagrionidae. In regions where there are fewer species to consider, local guides would be of help and, where appropriate, the reader is referred to the bibliography.

There is a section on pterography (wing photography) where the wings of males (and of females where they differ from the males) have been scanned at 2,400 ppi (pixels per inch). These are mostly shown at actual size and the pattern of their venation

is an aid to identification, at least to the level of genus. There is a helpful plate comparing the colour patterns of the abdomens of males and females of Coenagrion, Enallagma, Erythromma and Ischnura.

There is a good bibliography, except that Cham's excellent field guide to the larvae and exuviae of British dragonflies and damselflies (Cham, 2012) has been overlooked. A checklist of the species is provided, giving details of the country in which they are to be found and, where appropriate, their conservation status. The book concludes with some information regarding the authors and with indices to common and scientific names.

In conclusion this is a brilliant, well-produced book that is easy to use and is an absolute must for anyone with an interest in identifying dragonflies and damselflies. The authors and the publishers must be congratulated for producing this book and I highly recommend it.

Publisher: Bloomsbury (Bloomsbury Wildlife), London

ISBN: PB: 978-1-4729-8222-3. 160 pages.

RRP £30.00 (softback).



Field Notes



Left: Cross Species Pairing. of an Emerald Damselfly and a Large Red Damselfly.

Location: Disused gravel pits near to Coulags, Wester-Ross. River flowing close by with a wooded area close by and surrounding boggy moorland.

Date: 21st July

By Graham Rennie

Adult damselflies on live for a matter of weeks so they need to make the most of mating opportunities, this rush to mate can lead to mistakes like this.

Right: Small Red Damselfly, female.

Location: Plymouth, Devon

Date: 18th June

By Jonathan Hicks

This photo caused quite a stir online due to its dark colour, known as 'melanogastrum'. This is not typical for Small Red Damselfly, at first glance it resembled a recently emerged Willow Emerald Damselfly.





Left: Lynne Warner captured an Emperor Dragonfly devouring a Common Darter at Hickling Broad in Norfolk. Emperors are the biggest species of dragonfly in Britain and really are impressive hunters.

Middle left: Photographing dragonflies in strong sunlight when they perched on surfaces can result in annoying shadows, often giving the impression of eight wings rather than four. In this instance, I actually like the monochrome virtual dragonfly beneath the real one: its wings, seemingly etched upon the rock, remind me of those real fossil impressions in stone from many millions of years ago: here, in a moment of repose, the dragonfly itself creates an ephemeral artwork, referencing its ancient past. **David Clarke.**



Right: "My daughter, Penny, noticed this unfortunate female Southern Hawker dangling from barbed wire on top of a gate near Stover Country Park in Devon. It had managed to impale its head on a downward-pointing barb, which had firmly penetrated the frons – so firmly, in fact, that a day later it was still dangling, and spinning freely around in the breeze. The hawk was very fresh when we first saw it, but a day later, the colours had darkened significantly. As to how it came to spike itself like this, we can only speculate. Perhaps she changed direction suddenly while in pursuit of prey. Maybe vision is impaired right in front of the 'nose', as it is in humans. (In case you are thinking that a shrike had impaled it: there was no sign of damage to the rest of the dragonfly, and no shrike has been here since Red-backed died out locally in the 1950s. They impale prey on thorns and barbs to allow vertebrates to be ripped apart or stored for later consumption, while insects would be eaten straight away.)" **Dave Smallshire.**



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



Championing Dragonflies

Pat Batty

Pat Batty is our Scotland Recorder and has been a dedicated volunteer with us for over 30 years. Pat first became interested in recording dragonflies in 1985 after moving to Argyll and meeting Bob and Betty Smith, well known odonatists, at Taynish National Nature Reserve. Bob and Betty introduced Pat to the lovely creatures that are dragonflies and taught her all about guddling - looking for larvae using a colander.

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



BDS is an enthusiastic organisation promoting dragonflies, from finding out more about the species and their distribution to passing on the love and knowledge of dragonflies to others of all ages.

2. Tell us about your favourite Dragonfly encounter

When I first saw the striking Keeled Skimmer flying around a bog near home, when I was new to dragonflies and discovering it was a new site.

Now I enjoy, surprisingly, guddling around bog pools looking for larvae and hopefully finding some Azure Hawker larvae amongst them

3. Where is your favourite spot to watch dragonflies?

Loch Barnluasgan in Knapdale. A lovely loch at the edge of Oak and Hazel woodland. It has 14 species, a lot for Scotland including the Hairy Dragonfly and Beautiful Demoiselle. As well as watching dragonflies, there is a chorus of bird song in the spring, and a diversity of plants and butterflies. It is also accessible to all.

4. What is your top tip for helping Dragonflies?

Keep your eyes peeled, make a note of what you see and send in your records, especially in Scotland. You will be adding information about the distribution of these species and may even find a new site.

Photos: above: Pat surveying for dragonflies at Corrour Estate, below left: Pat inspiring the next generation of dragonfly fans at a pond dipping event, directly below: Pat 'guddling' for larvae out in the field.





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.



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 (nc = no change in name).

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> Calopterygidae <i>Calopteryx splendens</i> <i>Calopteryx virgo</i> Platycnemididae <i>Platycnemis pennipes</i> 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>	Emerald Damselflies Willow Emerald Damselfly Southern Emerald Damselfly Scarce Emerald Damselfly Emerald Damselfly Banded Demoiselle Beautiful Demoiselle White-legged Damselfly 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	ANISOPTERA (cont'd) <i>Anax ephippiger</i> <i>Anax imperator</i> <i>Anax parthenope</i> <i>Brachytron pratense</i> Gomphidae <i>Gomphus vulgatissimus</i> Cordulegastridae <i>Cordulegaster boltonii</i> Corduliidae <i>Cordulia aenea</i> <i>Somatochlora arctica</i> <i>Somatochlora metallica</i> 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> *	Dragonflies (cont'd) Vagrant Emperor Emperor Dragonfly Lesser Emperor Hairy Dragonfly Common Clubtail Golden-ringed Dragonfly Emeralds Downy Emerald Northern Emerald Brilliant Emerald 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
ANISOPTERA Aeshnidae <i>Aeshna affinis</i> <i>Aeshna caerulea</i> <i>Aeshna cyanea</i> <i>Aeshna grandis</i> <i>Aeshna isoceles</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		

* - 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> ANISOPTERA Aeshnidae <i>Anax junius</i> Gomphidae <i>Stylurus flavipes</i> Corduliidae <i>Somatochlora flavomaculata</i>	Emerald Damselflies Winter Damselfly Dragonflies Hawkers Green Darner River (Yellow-legged) Clubtail Yellow-spotted Emerald	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

** - 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>	Orange Bluet	<i>Crocothemis servilia</i>	Oriental Scarlet
<i>Enallagma signatum</i>	Fragile Forktail	<i>Erythemis simplicicollis</i>	Eastern Pondhawk
<i>Ischnura posita</i>	Marsh Bluetail	<i>Rhodothermis rufa</i>	Spine-legged Redbolt
<i>Ischnura senegalensis</i>		<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.

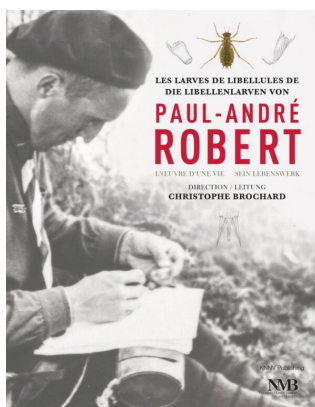
Price £75.00 postage £6.50 or via the shop page

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.

Price £38.00 plus £5 P&P or via the shop page



To order goods, please contact Peter Brown, Hill House, Flag Hill, Great Bentley, Colchester, Essex, CO7 8RE, Tel 01255 823400 e-mail: shop@british-dragonflies.org.uk or visit www.british-dragonflies.org.uk to order online. When ordering please include your name, address and telephone number. Postage prices are indicated, but if you are ordering more than one item the highest postage price only (within reason) should be paid. Please allow at least 28 days for delivery. Cheques should be made payable to: British Dragonfly Society.

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

Price £22 plus £3.00 P&P

