

Spring 2020 Issue 37

Darter

Magazine

British
Dragonfly
Society



Hawker Highland Hiking

our Scotland team's adventures
hunting for Azure Hawkers

and

Clubtail Count Complete

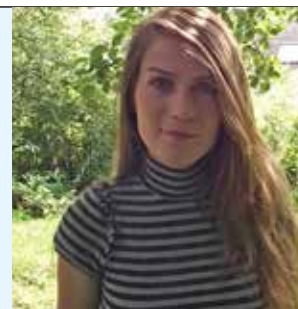
3 years of data collection comes to
an end



Editor's Welcome

Eleanor Colver

At the BDS we are excited about what 2020 has in store, with a variety of citizen science projects set to take place across the UK. There is also the State of Dragonflies 2020 report to release and we would like to say a huge thank you to all the volunteers out there whose survey efforts make our publications possible!



From the Records Officer

David Hepper

2019 has been a busy year for me but involving less travelling around the country to run training courses and much more behind-the-scenes work getting the Recording Scheme data into a fit state for our two flagship projects: producing consistent data for the State of Dragonflies 2020 analysis, by the statistics experts at the Centre for Ecology and Hydrology (CEH), and updating our NBN dataset. We did a dry-run in October, with merged records both from iRecord and the old DRN dataset totalling 1.3 million, and since then our CDRs have verified most of the unreviewed records in iRecord, including over 70,000 added since, mostly sightings in the last two seasons and including those imported from other schemes such as BTO BirdTrack. I will be requesting the final export from iRecord - far too large for me to download directly - shortly and I am hopeful that the de-duplication, internal checking and other processing will work reliably to generate the two output files.

Huge thanks go to our volunteer verifiers for their recent efforts. This year's deadline for getting the previous season's verifications done was even more challenging than last year's. We're all grateful to the Biological Records Centre (BRC) for making iRecord more resilient and faster than last year. Some CDRs verify across more than one county and if you'd like to help in your local area I (and they) would be delighted to hear from you. My contact details are at the back of this magazine. In particular, I'm keen to recruit for County Durham, North Northumberland, Glamorganshire but wherever you are do get in touch.

It is encouraging that some Local Environmental Records Centres are agreeing to share their dragonfly data freely with us and the world. I plan to encourage further co-operation this year.

With all the data processing to do I've been paying scant attention to what was seen last year and hope to put that right during 2020. In my spare time I organise the field meetings and other activities of the BDS local group for the Hampshire and Surrey Borders. The year's field meetings are advertised in the spring issue of Dragonfly News and are on the Events section of the website. Do find out what's going on near you. If there's no group nearby how about starting one? Members are also welcome to join meetings further afield; they are a great way to get a guided tour led by the local experts but you don't even have to be an expert yourself to arrange a meeting.

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Migrant and Recent Colonist Update

Adrian Parr, Migrant Dragonfly Project Coordinator

Following a dramatic year for migrant species in 2018, 2019 saw, in many ways, some even more spectacular events. Many of these are described in detail elsewhere in this issue of *Darter*, or in *Dragonfly News*, but a brief summary is given here in case it helps observers plan fieldwork for the coming season.

Willow Emerald Damselfly: A big push forwards in this species' ongoing range expansion was noted during 2019. Important sightings, which were a first for their respective counties, came from Wytham Woods near Oxford, a site near Coventry in Warwickshire and at Bramshill in Hampshire. However, the most dramatic event was a major surge northwards during late August and early September, when sightings were made in north Lincolnshire and in Yorkshire as far north as Harwood Dale Forest. This represents an almost 150km northwards shift in the species' range boundary.

Small Red-eyed Damselfly: As with the Willow Emerald, an important range expansion was noted for the Small Red-eyed Damselfly last season. During August the species appeared in both the Merseyside/South Lancashire region (for example, at the Liverpool Festival Gardens and in Towneley)

and also in the Cleveland/Co. Durham region, with records as far north as West Boldon. It will be valuable to see whether breeding populations have now become established in these areas, and whether further expansion will be noted during 2020.

Southern Migrant Hawker: During 2018 records came from several areas of southern England a good distance from the known Thames Estuary populations. Many of these areas also reported the species during 2019, either at the same sites where individuals had been seen during the previous year, or at other sites close by. This strongly suggests new breeding populations may have become established in these areas. Sightings from more new regions were also reported during 2019, most notably in south Wales, and it seems the species might now be on its way to becoming relatively widespread in southern Britain. Careful scrutiny of Migrant Hawkers during the coming year may well produce further important new records, and help us understand the current status of the species.

Norfolk Hawker: After a good scattering of records in south-east England during 2018, further new sites for the species were discovered during 2019. The most spectacular find was of a single male at the Medmerry RSPB Reserve in West Sussex on 5 July. The species is clearly continuing its spread away from the old East Anglian strongholds, and its habitat

Small Red-eyed Damselfly; males have red-brown eyes while females have brown-green eyes.



© Rory Morrissey



preferences also seem to be broadening somewhat. It will be important to track further expansion over the coming years.

Vagrant Emperor: This species is now being seen in the UK with some regularity, and 2019 was a record year with no less than three major influxes reported (during late winter/spring, early summer and autumn). As a highly migratory and nomadic species, influxes will not lead to the development of resident populations, but it will be of considerable interest in a more global context to see whether the current trends continue.

Lesser Emperor: With reports from roughly 75 sites, it was a record year for this species. Sightings included individuals seen in the Scottish Borders on 3 July and on the Isle of Rum on 25 July; these are only the third and fourth sightings ever recorded in Scotland. Although major immigration clearly took place, there were also a number of records that suggest local breeding populations exist. The Lesser Emperor may at last be becoming firmly established in the UK, and developing a detailed understanding of its local breeding status is now a priority.

Scarlet Darter: Males were noted at Longham Lakes in Dorset on 28 June and in the Pannell Valley, East Sussex, on 21 July. To have two records at Longham Lakes within the space of three years (one was also seen in 2017) seems rather a strange coincidence; perhaps there is a breeding population somewhere nearby.

Red-veined Darter: This was yet another species to experience an exceptional year. Sightings were made at well over 100 sites as far north as the Scottish Borders, with no less than 120 individuals present at Drift Reservoir in Cornwall on 8 July. Although there were several inland records, a significant proportion of sightings came from coastal sites during 2019. It will be of considerable interest to see whether the year's massive influxes leave any legacy, such as the establishment of transient resident populations.

Learn more about the Migrant Dragonflies Project by visiting the project page on the BDS website, under the 'Recording' section. **www.british-dragonflies.org.uk**

or get involved with the **Migrant Dragonflies** Facebook Group

Red-veined Darters can be distinguished from other Darters by their distinctive red (male) or yellow (female) wing vein colouration.



©Pete Hadfield





© Bob Wilkinson

Adult Common Clubtail can be spotted hunting in deciduous woodland near lowland rivers.

Clubtail Countto be continued. . .

Eleanor Colver, Conservation Officer

Three years ago, BDS Conservation Officer, Genevieve Tompkins came up with a plan to help one of the UK's rarest Dragonflies, the Common Clubtail (*Gomphus vulgatissimus*).

With jazzy yellow-green and black stripes, and green eyes, it's a species hard to misidentify. However, every year, the number of recorded sightings of this species is low, partly a result of the species limited distribution but also because of its elusive nature. Adult Common Clubtail spend most of their lives in woodland, feeding off insect prey in the tree canopy. Clubtail are known to be sensitive to a variety of man-made environmental pressures, such as water pollution which threatens the riverine larvae, and riparian deforestation, which destroys the adults' habitat. To best protect the species, environmental agencies and land managers need to have a good idea where populations are located and how healthy they are. This way their habitat, and the surrounding landscape, can be targeted for conservation activities. Back in 2017 this was a struggle as Clubtail records in the BDS database were few and far between, and many were from decades past. To develop an up to date distribution map of breeding populations we needed to create an easy survey that would allow volunteers to identify rivers producing new adults each year. The answer: search river banks for exuviae, the shed exoskeletons

left behind when larval Clubtail transform into adults. Clubtail exuviae are significantly different in appearance to exuviae of any other UK dragonfly species; because of this, and the fact Clubtail emergence is synchronous, your chances of finding exuviae during a single site visit, if a population is present, is significantly increased.

Over the past three years over 180 members of the public took part in the Clubtail Count, spending their weekends hunting for exuviae along the banks of their local river. Over 300 km were visited from 2017 to 2019, some were visited every year and some were searched up to three times in a single season. Rivers with historic records were targeted by volunteers.

Their hard work resulted in almost 2000 new records of Clubtail. These records nestled around rivers that maintain their Clubtail stronghold status, including the Wye (east of Monmouth), Severn (just south of Worcester to the Vyrnwy-Severn tributary), Teme (downstream of Rochford), and the Dee (between the east of Wrexham and Chester). Rivers that maintain smaller, less widely distributed populations include the Arun (between Arundel and Pulborough) and Vyrnwy (on the Welsh-English border). Although the Thames was searched from south of Bampton to Maidenhead results were scattered apart from a high density of records on a section east of Goring, a concerning result considering



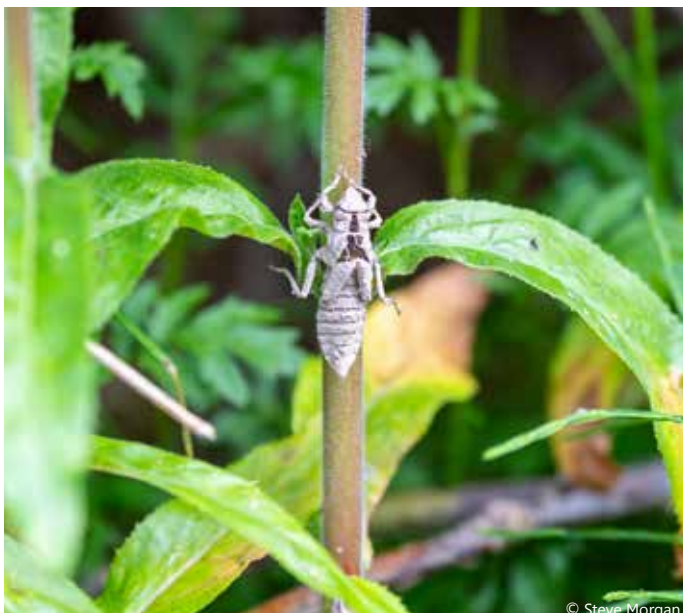
the Clubtail was historically distributed along the entire stretch. Many an unlucky volunteer had the less satisfying task of searching areas of river that no longer supported breeding Clubtail. However, their efforts were just as useful and provided us with valuable records identifying areas of population loss. No Clubtail were found along stretches of river historically populated on the Teifi, Avon, and Kennet, and only 2 exuviae were found on the Tywi.

Now that our Clubtail database has been well and truly updated the project's data collection survey will take a break for a few years (although those wishing to continue are welcome to do so). The data from this project, like all the records collected by the BDS, is free to use and can be accessed via the project webpage (under 'other projects' in the recording section of the BDS website), on iRecord or NBN atlas.

We hope that the results of this project will help raise the profile of this enigmatic river species. In addition, we hope it will motivate environmental agencies, and wildlife charities, to pursue conservation action for the species, as well as a greater level of protection that the Clubtail and its habitat desperately need.

Research is now needed to identify and combat the cause of the species declining distribution, whether it is a result of reduced water quality or terrestrial habitat loss. The apparent population loss from multiple river systems, documented in this report, heightens the value of our surviving populations. This needs to be reflected in updated conservation strategies and legislation, such as local Biodiversity Action Plans. The aim will be to increase population resilience, through habitat restoration and protection, and thus improve the Clubtail's capacity to spread and repopulate their historic range.

Common Clubtail exuviae can be identified by their pointy head and flat body.



© Steve Morgan

1km OS grid squares where Common Clubtail were found at least once during the Clubtail Count.



© Ordnance Survey



Dorset's Southern Damselfly Update

Eleanor Colver, Conservation Officer

The Isle of Purbeck has long been a favourite holiday destination for the British public, thanks to the area's unique natural history: its stunning Jurassic cliffs, white sandy beaches and, not forgetting, the thousands of acres of cedar orchards! However there's a secret, six-legged resident of Purbeck that the average holiday maker would be lucky to meet: the Southern Damselfly.

The Southern Damselfly (*Coenagrion mercuriale*) is one of the two legally protected species in the UK (the other being the Norfolk Hawker, *Aeshna isoeles*). This should give you a hint regarding the conservation importance of the species; unfortunately, the Southern Damselfly is now limited to highly localised populations in Hampshire, Devon, Dorset, Oxfordshire, Pembrokeshire, Gower and Anglesey. The difficulties in conserving this species stem from its picky habitat preference (base-rich, warm, shallow, well vegetated streams with a constant moderate flow) and inability to disperse more than a few hundred metres. The species' blue/green and black markings aren't particularly original in the world of the damselfs, creating the additional difficulty for surveyors in trying to identify and count them.

The Southern Damselflies of Purbeck currently survive at a handful of isolated heathland sites. As a result of these populations' small and vulnerable nature, as well as the species' specific habitat requirements, the Southern Damselflies are at significant risk of extinction in Purbeck without continuous care and attention. Thankfully, many of the Purbeck sites are managed by conservation bodies, including the Royal Society for the Protection of Birds (RSPB), the Amphibian and Reptile Conservation Trust (ARC), Natural England (NE) and the National Trust (NT). Dorset's Southern Damselflies Steering group includes these bodies and BDS Together; the aim of the BDS in this group is to provide support to the local land owners and conservation organisations in managing the landscape of Purbeck to support Southern Damselflies.

For example, last year the BDS commissioned survey work to be undertaken by Chris Dieck (RSPB Ecologist) at Blue Pool, a historic Southern Damselfly site. In 2016 a peak count of 17 individuals was recorded on 2 July. However, during



© Back from the Brink

To tell Southern Damselflies apart from more common blue/black damsels look for the 'mercury' sign below the wing base.

the next survey visits in July 2018, volunteers could not find any Southern Damselflies. These surveys were performed after a period of very dry weather and the volunteers raised concerns that water levels at the Blue Pool wetlands were low. Thankfully, in 2019 Chris was able to confirm that Southern Damselflies still survive at Blue Pool, with a peak count of 37 individuals on 21 June (from four visits). While this is a low count in comparison to previous peak counts (91 in 2003 and 93 in 2005) it is still a relatively respectable count for the size of the site. In addition, the 2019 results will likely have been influenced by poor weather at the beginning/middle of June, which pushed back the start date of the survey period (which was planned for the beginning of the month) and likely affected the emergence



period of the species (previous peak counts were from mid June). So for those of you planning a Dorset summer holiday put a visit to Blue Pool on your to do list; in addition to dragonflies and stunning scenery I hear the museum and tea room are well worth a stop.

www.bluepooltearooms.co.uk

Thanks to funding from D'Oyly Carte Charitable Trust the BDS will be able to support further survey work this summer, so we can keep an eye on the Purbeck populations' health and also look for potential habitat restoration opportunities.

In 2017 the BDS commissioned a population survey and habitat suitability assessment of Purbeck Southern Damselfly sites. The resulting report outlined habitat enhancement opportunities to support existing populations. In the autumn of 2019 the steering group met to outline how the report recommendations would be incorporated into site management plans. For many sites, including Blue Pool, this includes tree felling to create the sunny unshaded conditions we all know dragonflies crave. For Southern Damselfly sites vegetation control is a constant task as their small shallow streams can easily become choked with rush and overshadowed by wetland scrub, like goat willow. This can be dealt with through mowing, which has been carried out at RSPB Stoborough Heath, selective felling, which has been carried out at ARC's Creech Heath site, and grazing which is carried out at Hartland Moor by the NT.

Another difficulty is maintaining the optimum stream profile; as a stream ages its water cuts into its channel. This can create shaded conditions, as a result of the steepening banks, cooling the water, and also narrowing the stream, resulting in a deeper and faster water flow. This was identified as a key issue at a site called Three Barrows during the 2017 assessment. With the money from D'Oyly Carte Charitable Trust the BDS is funding the reprofiling of the stream at Three Barrows to create a broader shallower profile that will (fingers-crossed) entice Southern Damselflies to lay their eggs.

Just upstream of Three Barrows, is a stretch of stream that runs through RSPB Stoborough Heath. This area of wetland also does not currently support breeding Southern Damselfly, although individuals were recorded there in 2017, suggesting the site could be colonised if conditions were right. The RSPB are hoping to encourage breeding by improving conditions of the stream through tree felling and rush mowing. If either Stoborough Heath or Three Barrows becomes colonised then hopefully the other should follow suit. Both sites lie close to the boundary of Hartland Moor, which currently supports the largest population of Southern Damselfies of Purbeck (peak count of 127 males in 2019), which is managed through felling and grazing. If colonisation is successful then Three Barrows and Stoborough Heath could help support the Hartland Moor population by acting as 'stepping stone' sites, providing additional habitat, reducing isolation and risk of localised extinction.

Three Barrows and Stoborough Heath could be populated by the Hartland Moor Southern Damselfies.



© Google Maps 2020





Getting creative with willow dragonflies!

Discovering Dragonflies Project

Ferne Animal Sanctuary

Mark Hancock, Ferne Education Officer

Mark Hancock, Education Officer at Ferne Animal Sanctuary, writes about their recently completed Discovering Dragonflies Project, which was funded by the Heritage Lottery Fund under the natural heritage theme.

You may already be thinking: why did an animal sanctuary want to do a project about dragonflies? Well, Ferne undertook this project because:

1. We understand that caring for wild habitats and the species that live in them is not that different to caring for pets – both thrive if we provide the right conditions for them and meet their needs.
2. We wanted to generate inspiration for, educate about, and raise awareness of our natural heritage...

... and we chose dragonflies because Ferne has several large ponds and many resident dragonflies; but most importantly, dragonflies are a fantastic topic for generating inspiration. For example:

- Dragonflies have been around since well before the first dinosaurs appeared and have changed very little over these hundreds of millions of years. This shows how amazingly successful their adaptations have been – they are simply marvels of natural engineering.
- The adults are very visible; they are also beautiful, inquisitive, incredibly aerobatic, and some are territorial – basically great to watch.
- They have a fascinating life cycle and the best time

to see the adults is when the weather is good, which is the most enjoyable weather for humans to watch them too!

I know that saying this in a Dragonfly magazine is a bit like teaching grannies to suck eggs, but I still think it is worth repeating and stressing.

What did we want the project to achieve?

The main aim of the project was to generate inspiration for and interest in dragonflies, to care for them, and in the longer term actually help them by doing practical things such as sending in records of dragonfly sightings.

How did we do this?

We organised a range of creative activities and workshops designed to raise awareness and generate inspiration. This included dragonfly themed willow weaving, jewellery making, as well as children's activities and crafts.

One example of maximising the project's benefits was by organising several sessions of willow weaving just for representatives of community groups. The sessions were free, with the proviso that participants would place their large willow dragonfly in a community area together with a small project sign - thus spreading the message wider. Participants were also shown how to make smaller willow dragonflies, enabling them to run their own workshops showing others from their community groups how to make them – cascading the benefits.



We even tried to increase appreciation of the underwater element of the dragonfly life cycle through lots of pond dipping and use of an underwater camera. Whilst we struggled to observe many dragonfly nymphs, it certainly made people appreciate the diversity of life underwater – and comparing dragonflies as a top predator to sharks goes down quite well with youngsters!

Practical Skills & Training

As well as generating inspiration for dragonflies, we wanted to improve people's practical skills too. Two identification days, led by an expert, were arranged at two local wetland areas. As most of the sessions' attendees were regular volunteers at these sites, this should result in an increase in dragonfly records.

The project also featured dragonfly photography workshops with a professional wildlife photographer - being able to take a half decent photo of a dragonfly goes a long way in helping to identify them. We also organised a photography workshop for children, with places won by entering into a photographic competition (another sneaky way to generate extra publicity and interest in the project). Another reason for having these photography workshops, was that participants would give us their photos taken on the day for use on the project Instagram page, and a dragonfly photography display. This display was not only used at the end Celebration Event, but will be able to be viewed in local community spaces – further widening the project's reach.

The Power of Talking to People

Throughout all of the project events we found out that simply initiating conversations with people was one of the best ways to make an impact. These conversations revealed the overall lack of knowledge the general public have about dragonflies, their habitats and their lifecycles. Perhaps the best

Searching the watery depths for minibeasts.

example of this was through the many pond dipping sessions that took place. It was great to be able to talk to people and open their eyes about the fact that the generally dull-coloured dragonfly nymphs that we showed them will turn into some of the most amazingly adapted, fascinating and beautiful creatures that you can see in this country.

Thinking of Doing a Similar Project?

Please don't be daunted as I was to start with - it's not as hard as you think (or I thought). My advice would be not to try and do too much and concentrate on something you or your organisation are good at. In hindsight I would have removed the community practical habitat improvement element and focussed more on our stronger suit of generating inspiration – which is also what dragonflies are great at doing too!

Website www.ferneanimalsanctuary.org

Facebook @Ferne Animal Sanctuary

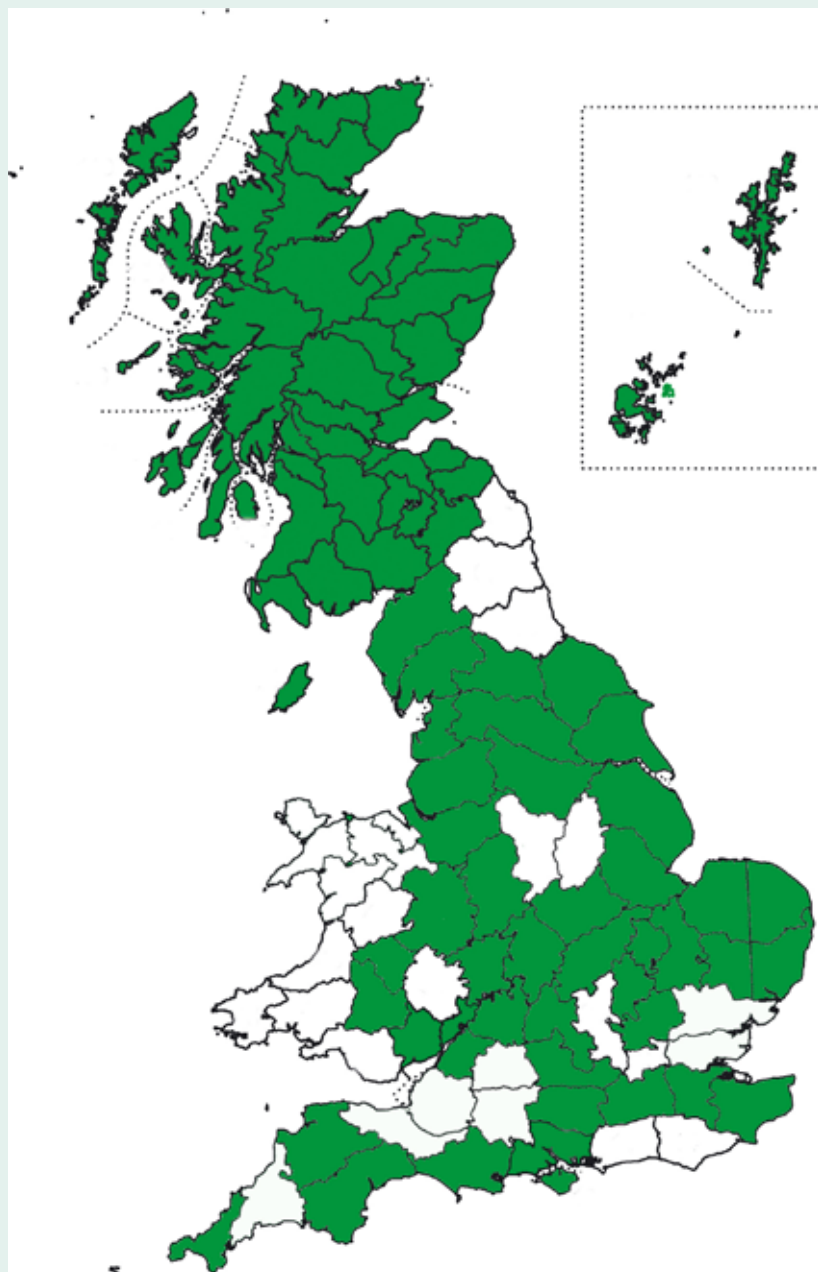
Twitter @FerneAnimalSanc

All images © Ferne Animal Sanctuary

Getting crafty with natural materials.



Vice Counties Reports



Vice county map. Vice Counties for which 2019 accounts have been written are coloured in green.

East Cornwall - VC 2

David Cooper

The 2019 season started in a very similar manner to that of 2018. In fact, the first sighting of Large Red Damselfly was only one day later than the year before; from then on it was pretty much business as usual with Large Red Damselflies popping up all over. True to form, roughly a fortnight after the first Large Red record we saw the first appearance of the Azure Damselfly, then the Common Blue Damselfly. Normally the next emergence expected would

be the Four-spotted Chaser, which usually appears in good numbers. However, in 2019 the Broad-bodied Chaser emerged first, with Four-spotted Chasers arriving a little later in lower numbers than would usually be expected. Their disappointing absence was compensated for by an influx of Lesser and Vagrant Emperors, as well as numerous Red-veined Darters, whose behaviour suggests the beginning of new colonies here in Cornwall. The blue damselflies were joined by an unusually high abundance of Emerald Damselflies, another

species that was late in emerging. During the start of the 2019 season there seemed to be a general shortage in dragonflies, which was probably a result of poor weather conditions. Mid-summer saw the arrival of the larger dragonfly species, but again in a lower abundance than previous years. Four-spotted Chasers remained relatively scarce; however, the Keeled Skimmer performed well, as did the Black-tailed Skimmer, which was more abundant than usual. Late season produced all the usual species sightings, such as Golden-ringed Dragonflies, and there were odd sightings of Southern Migrant Hawker. Common Hawkers were more abundant than in 2018, as were Migrant Hawkers which appear to be steadily increasing year on year. However, there were significantly fewer Black Darter sightings in 2019 compared to previous years and no White-legged Damselfly or Banded Demoiselle sightings.

Overall 2019 was a poor year for some species but good for others; the second season appearance of Red-veined Darters, as well as Lesser and Vagrant Emperor was encouraging. Hopefully these species will become a more familiar sight in our county.

Devon - VC 3 & 4

Dave Smallshire

Fine weather provided conditions for another interesting year for dragonflies. The season began with a presumed Vagrant Emperor sighting at Cornwood on 21 February, followed by confirmed records on Lundy on the 25th and sightings of single individuals at two South Hams coastal sites on 26-27th. Further records came from Torquay on 25 March (presumed) and Oreston, Plymouth, the next day. At the other end of the year, a Vagrant Emperor was seen at Dawlish Warren on 16 October.

In May-June, Hairy Dragonflies were reported, as usual, from Grand Western Canal, Stover,

around the Exe Estuary and in East Devon at Bystock and Squabmoor Reservoirs. More exciting, however, was a Hairy Dragonfly, photographed by Tom Parsons, egg-laying at Braunton Burrows, the first record for North Devon. Downy Emeralds and Red-eyed Damselflies were seen at Stover Country Park on 1 June, when the BDS Dragonfly Hotspot was launched. It was another early season emergence for Scarce Chaser, which had a good year at their regular sites at Grand Western Canal, the Exe marshes and Axe Valley, where at least 16 were counted at Lower Bruckland Ponds. Wanderers were found at Westerland Valley Country Park, Torbay, on 5 June, Stover Country Park on 5 July and Clennon Valley on 8 July. The latter record comprised a new species for the site; another three new species were found there in July: up to 10 Red-veined Darters and 40 Small Red-eyed Damselflies were present and egg-laying was recorded for both species, while a Ruddy Darter was seen there on 25 July. Red-veined Darters were reported in early July from Berry Head (three), Stover, Dawlish Warren, Thurlestone and Squabmoor, while later a female was seen at Aylesbeare Common on 18 September. On 14 July there were 10 Red-veined Darters at Meeth, including at least two pairs egg-laying, and a Lesser Emperor was also present; other Lesser Emperor were seen at Lower Bruckland Ponds, Squabmoor (or Vagrant Emperor), Stover and Slapton Ley in late June-July. Meeth also held Ruddy Darters in July-August – it would be nice to pin down a breeding site for this species in Devon!

Southern Damselfly had a reasonable year, with peaks on Dartmoor of 128 at Moortown Bottom, 173 at Prewley Moor, three at Lower Prewley and 126 at Tor View Moor. In East Devon, 98 were counted at Aylesbeare Common and 34 at Venn Ottery, but only five at Colaton Raleigh Common, where the colony is in danger of extinction. Ironically, Small Red Damselfly is thriving at Colaton Raleigh, with counts

of up to 50. Another of our rare damselflies, the Scarce Blue-tailed, was seen in the Cadover Bridge area, and for the second year at Meldon Quarry, with egg-laying observed. A few Small Red Damselflies were discovered at new sites on Gidleigh Common and in North Devon at the Devon Wildlife Trust Beaver enclosure – yet another positive mark for Beavers! Small numbers were also seen at Bicton Common, Bystock and at what remains of the former stronghold at Smallhanger (plus a few Scarce Blue-tailed); sadly the little remaining habitat there will be lost to clay-working in the not-too-distant future. Small Red-eyed Damselflies are now well-established in the Bovey Basin and large numbers were taking advantage of the strong growth of pondweeds at Stover in July. This species persists at Dawlish Warren, while Drakes Reservoir, Plymouth, was colonised in August.

Dorset – VC 9 *Andrew Brown*

Greetings from a rather soggy Dorset!

Last year saw some really positive developments for the county. Two keen BDS members, Kevin Edge and Paul Budgen, contacted me and asked if I would like to be involved in creating an Outreach Group to promote the BDS and reach out to the public with events relating to Dragonflies. Kevin had previously undertaken an outreach project at the London Wetland Centre and wanted to replicate it here in Dorset. The group wants to express its thanks to Fiona and Eleanor at the BDS as we received a lot of help, encouragement and support from them!

Having already contacted Bournemouth Council at Hengistbury Head, and after a very fruitful initial meeting, it was agreed that we would use Hengistbury Head as a base to launch the group's activities during Dragonfly Week 2019. Altogether we spent five days



©Dorothy Baynham

Immature male White-legged Damselfly

there, which covered two weekends in July, spoke to over 400 people, and recorded 12 species on the site; the whole thing proved to be very successful!

This year we are going back to give a talk at the same site, but we are also planning a few more activities across Dorset, and will be going to a new site for Dragonfly Week; a promising start with more to follow.

In terms of sightings, it was another very good year; there was confirmation of a tandem pair of Southern Migrant Hawkers at Lychett Bay, as well as a number of individuals, so there is a good chance they are now breeding there, which is very exciting. Longham Lake proved once again to be a kind of Dragonfly Mecca as another Scarlet Darter appeared, the second record in three years, and its annual number of Red-veined Darters and Lesser Emperors seem to be increasing. Ian Ballam also managed to spot a Vagrant

Emperor in Poole in December, which brought his species tally to 32, a rather spectacular year!

Isle of Wight – VC 10

Jim Baldwin

The 2019 Odonata flight season was the longest recorded for the Isle of Wight, spanning February to November. Coincidentally, it was the same species, the Vagrant Emperor, which started and ended the season. This species has only been recorded twice before on the Isle of Wight, both in 2011. One was seen along the revetment between Wheeler's Bay and Bonchurch on 23 February by Andy Butler and Dave Nordell. It was Andy who saw the first record at the same coastal location in May 2011. The second sighting in 2019 was a freshly dead female found at Yarmouth on 14 November.

Despite the Vagrant Emperor sightings, we still only recorded our usual count of 24 species for VC10 as no records were received for Downy Emerald in 2019, the first time the species has not been seen since 2005.

The recently established breeding colony of Southern Emerald

Southern Emerald Damselfly at Bouldnor Nature Reserve



© Peter Hunt

Damselfly at Bouldnor Nature Reserve was recorded in smaller numbers than the previous year. Peter Hunt again regularly visited the site and recorded a shorter flight period for 2019, from 31 May to 17 September, with a maximum count of 6 males on 1 August.

Scarce Chaser was recorded at its two breeding sites in south-east Wight with a maximum of seven adults on 27 June. It was a good year for Golden-ringed Dragonfly sightings with reports again from the East Wight indicating range expansion.

For the second successive year Red-veined Darter was recorded ovipositing at the reservoir in the Atherfield area, with a pair seen on 21 June along with two additional males. Double figure counts were received in 2019 with 19 on 3 July and 13 on 2 August, the last sighting of this species for the year.

Thanks to everyone who submitted their records and photographs during the year.

South Hampshire – VC 11

Paul Winter

At the time of writing 4269 records have been entered for 2019 compared with 3539 for 2018. A Large Red Damselfly at Calmore on 3 April heralded the best start to a season since 2011 with nine species on the wing by 30 April including VC11's earliest ever Azure Damselfly on 19th and earliest ever Banded Demoiselle on 29th. The summer species generally first appeared around the average date for the last 10 years although there was a very early Migrant Hawker flying at Foxbury on 29 June. VC11's latest ever White-legged Damselfly was seen on 1 September although, as for 2018, the season was generally somewhat curtailed. The last sighting for the year was a Common Darter on 29 November at Holmhill in the New Forest.

Red-veined Darters were seen at seven sites between 22 June and 10 October, all single individuals except for three at Ripley Farm Reservoir on 10 July and two at Blashford Lakes on 5 July. During July Lesser Emperors were seen on several dates at two lakes at Blashford, and also at Titchfield Haven on 14th and at IBM North Harbour on 21st. A short-staying Southern Migrant Hawker was found by the warden at Blashford Lakes on 17 July. Last of the migrants was South Hampshire's seventh Vagrant Emperor - a male photographed at Lepe on 30 October.

Unlike the much visited New Forest, the eastern half of VC11 remains underreported and I am extremely grateful for the efforts put in at Wildern LNR in Hedge End where 15 species have been recorded in the past two seasons, and further east where, for example, 14 species, including Small Red Damselfly, were recorded at Funtley Quarry in 2019 – the first reports this century.

Thanks to all who submitted records in 2019.



© John and Gill Brook

Vagrant Emperor at Sandwich Bay

North Hampshire – VC 12

David Murdoch

There was plenty of sunshine in 2019 but a disappointing lack of interesting records. At least two observers noted colonisation of new sites by Brown Hawker on the chalk which, being highly permeable, isn't a great dragonfly substrate. A search of possible sites for Southern Damselfly along the upper Test valley was unsuccessful, although they may well be there – a lot of suitable habitat there is not accessible. However, at the last minute (19 October, to be precise), a keen-eyed contributor finally added Willow Emerald Damselfly to the Hampshire list. This was at Bramshill, a site well watched, suggesting recent colonisation. We hope this is just the start of its spread into the county.

Kent – VC 15 & 16

John and Gill Brook

2019 started with the first emergence of the Large Red Damselfly on 18 April, followed by the Broad-bodied Chaser on 20 April. As usual, through the season we spent most of our time hunting for exuviae and checking up on Kent rarities. We were also asked to survey the dragonflies at Bedgebury Pinetum. The numbers of the Dainty Damselfly seem to be stable,

having seen about 20 adults at one of the usual sites on the Isle of Sheppey. As well as the original two sites in Kent, we also recorded it at another site in East Kent. About 20 adults were seen, some of which were ovipositing, but no exuviae were found, so it is likely that they were a new influx from the continent. We also went to the site on the mainland where we had seen a pair in tandem last year but, although we had a good search, none were found. However, we did find 58 exuviae of the Southern Migrant Hawker along just a section of one dyke. In July Terry Dove found a total of six exuviae of the Southern Migrant at a pond in his woodland. This was another new breeding site.

On 26 May a female Scarce Chaser was photographed by a volunteer at Bedgebury Pinetum, which is a new site for this species. The Willow Emerald continues to spread; on a visit to the Pinetum, on 4 April, we discovered its ovipositing marks on a young Silver Birch tree by the visitors' lake, and on 23 August two adults were seen, as well as a further eight during September.

Our highlight of the year was when Stefan Walton phoned us to say that there was a Vagrant Emperor at Sandwich Bay, which had stayed on a tree for a few days, probably due to the cold

weather, so we went straight down to Sandwich and managed to get some good photos as it was only about five feet up the tree.

Surrey – VC 17

Bill Budd

2019 highlights include the confirmation of a small colony of Scarce Chasers on the river Tillingbourne in the centre of the county (presumed but not proved to be breeding). There was also the occurrence, for the second year, of Norfolk Hawker at the London Wetland Centre situated on the northern border. A third noteworthy observation from the year's records was a virtual absence of Common Hawker from the west of the county; however, this is probably partly due to under-recording.

Hertfordshire – VC 20

Roy Woodward

The most significant event during 2019 was the number of Red-Veined Darters that reached Hertfordshire, mainly during June and July, as part of a larger influx into the country. The largest numbers were reported from Hilfield Park Reservoir, Wilstone Reservoir and Tyttenhanger Gravel Pits, which all produced double figure counts and records of ovipositing pairs. It was also a good year for Lesser Emperors at Hilfield Park Reservoir, with records between 27 June and 28 August, including an ovipositing pair and at least five additional males on 23 July.

Willow Emerald Damselflies continued to be found at new sites across the county, although they may still be even more widespread than records suggest, while Scarce Emerald Damselflies and Scarce Chasers were also reported from new sites. Norfolk Hawker and Beautiful Demoiselle, recent arrivals to the county, were again seen at sites where they had been recorded in previous years but showed no sign of any increase in their distribution.



Willow Emerald Damselfly oviposition (egg laying) scars

Another interesting record was the discovery of small numbers of White-legged Damselflies on the River Stort, which hopefully indicates that a viable population still exists in the eastern part of Hertfordshire.

Looking ahead, it is now 20 years since the start of the first systematic survey of the distribution of Hertfordshire's Odonata, when fieldwork was carried out between 2000 and 2005. With the changes that have taken place during the last decade, it now seems to be a good time to repeat the survey, and build on the information that was previously gathered. Over the next six years it is hoped that all 1 km squares within Hertfordshire can be surveyed for dragonflies and damselflies – so please submit all records and encourage others to do the same!

Berkshire – VC 22

Des Sussex

Over 3500 records were received for VC22 from over 110 different recorders, of which at least 10 people submitted well in excess of 100 records each. I am aware of a significant number of other records that have not yet been transferred to iRecord which may bring the total to about 4000 records. A good proportion of the records included proof of

breeding evidence. There was good reporting from many key sites, including excellent coverage of heathland species at many wetlands within the important Swinley Forest areas to the south-east of Bracknell.

Highlights included a male Lesser Emperor on 4 July at Woolhampton. In addition a Norfolk Hawker at Wildmoor Heath Nature Reserve was seen on 29 June by a visiting recorder; it is likely to be the first county record of that species. A couple of recorders tried hard to find Willow Emerald Damselfly at various sites, but the only records of the year were a tandem pair in Wytham Woods and a single male at Dinton Pastures Country Park, both in September.

Southern Damselfly was well recorded at the 'Cothill' sites by a number of observers, with counts of up to 80. There seems to have been a range expansion of Beautiful Demoiselle, and Small Red-eyed Damselfly was seen at 20 different sites across VC22, within a variety of habitats. Some good populations seem to have established.

There were about 19 records of Common Clubtail, mostly from the Thames at Goring, but with records from various sites on the Thames from Culham and downstream as far as Whitchurch.

A few records were of adults, but quite a lot of records were of exuviae, including two double figure counts. There were a few more records from the Oxfordshire bank, but we clearly need better survey effort for this species at other locations.

There were good counts of Variable Damselfly from various spots along the River Kennet and Avon Canal at the Burghfield Bridge site. However, the population at Cookham seems to have crashed and this needs further investigation. Brilliant Emerald remains elusive, and only four individuals were seen. More positively, Hairy Dragonfly, Downy Emerald, and Small Red Damselfly were all well reported from numerous sites.

There were no records at all of Common Hawker, Scarce Chaser or Red-veined Darter in 2019.

Oxfordshire – VC 23

Stephen Burch

In VC23, the season started with a Large Red Damselfly sighting on the typical date of 22 April, with an early Hairy Dragonfly shortly afterwards on 26 April, at its RSPB Otmoor stronghold. Hairy Dragonflies again did well this year, continuing their spread, but there was only one Downy Emerald sighting, again from Otmoor on 1 June.

There were 17 Clubtail records of exuviae and adults/emergent. As usual, nearly all were recorded from the River Thames downstream from Goring, with just one as far upstream as Buscot. There were over 40 reports of White-legged Damselflies, with most also from along the lower reaches of the Thames. Additionally, there were a few reports from the opposite end of the county at Lamb's Pool BBOWT. In May, a significant breeding colony of Beautiful Demoiselles was located on the River Cherwell near Oxford.

Later in the season, the hot conditions led to good numbers of the commoner species being

reported. One dedicated observer reported a good variety of species from the Trap Grounds (a small site near Oxford), including Emerald Damselfly, Beautiful Demoiselle, Hairy Dragonfly and most notably a single Small Red-eyed Damselfly (only about the third record for VC23).

Unfortunately, none of the UK's notable migrants reached land-locked VC23. Late summer was most notable for a "near miss" with Oxfordshire's first record of Willow Emerald Damselfly, reported from a small pool in Wytham Woods within about 2 km of the vice county boundary!

The last record was of a Common Darter at Otmoor on the late date of 27 November.

There were almost 600 records in iRecord of the same 22 species as last year. Further details can be found at:

www.stephenburch.com/dragonflies/OxonDragons.htm

Suffolk - VC25 & 26

Adrian Parr

As in 2018, there were some really exciting events in Suffolk during 2019, although several of the more common species had a relatively uneventful season, probably not helped by low water levels in many areas. Of the less common species, the Scarce Chaser was noted near Shottisham in the south-east of the county, while the White-legged Damselfly was seen on the River Brett close to Semer. Following other isolated records from these areas over the last few years, it seems the species have now successfully colonised these regions. The Scarce Emerald Damselfly, a relatively recent colonist to Suffolk, was also found at new sites during the year (principally farmland ponds to the east of Bury St Edmunds), though numbers at some of its strongholds were down. As in 2018, the real highlights of the year relate to rarities. Yet another new species was added to the county list when three

Scarce Blue-tailed Damselfly were noted on the coast near Kessingland on 1 July. The Suffolk Wildlife Trust reserve at Carlton Marshes again produced some truly exceptional finds, no doubt helped by habitat management work being done there. During late July and August, up to seven Vagrant Emperor were present, with oviposition being observed on several occasions. As with many tropical migrant species, the Vagrant Emperor has a short developmental cycle, but no progeny were noted during the autumn. Breeding could, however, have been overlooked, as it is now known that most second-generation individuals emerge overnight and then immediately leave the natal area. At the same time as the Vagrant Emperors were present, a Lesser Emperor and several Red-veined Darter were also seen at Carlton Marshes, with the latter indeed breeding

successfully. A smattering of other Vagrant Emperor and Red-veined Darter were observed elsewhere along the Suffolk coast during the summer (for example, at Kessingland and Minsmere), and a few more Lesser Emperors were noted, with Loompit Lake near Felixstowe possibly now holding a breeding population. A migrant Black Darter was discovered at Carlton Marshes in late August, and small numbers of Southern Migrant Hawker were also seen along the coast. The finding of a teneral near Walberswick in early July indeed confirms that Southern Migrant Hawker is now breeding in the county.

Norfolk - VC 27 & 28

Pam Taylor

After the general lack of migrants to the county in 2018, Norfolk certainly made up for it last year.

Small Red-eyed Damselfly



Between 24 July and 5 August up to three male Southern Migrant Hawkers were seen at East Winch Common. From further afield, Vagrant Emperors appeared between 17 June, when a female was seen near Sheringham, and 13 November when a newly deceased male was found at Honing Common. A huge influx of 28 Vagrant Emperors, including three pairs, near Wells on 29 June was accompanied by no less than eight Lesser Emperors and over 20 Red-veined Darters.

Lesser Emperors and Red-veined Darters now appear to be resident in Norfolk as well. In addition to fresh migrant sightings the former was once again present at the Trinity Broads and Felbrigg Lake. The latter was reported from Felbrigg Lake and Kelling Water Meadows, with an immature male found at Kelling on 8 September.

Another presumed colonist also continues to have a toe-hold in the county. A single Southern Emerald Damselfly was found at Winterton Dunes on 28 June, a female photographed on 15 August and both a male and female found on 21 August.

Two established resident species, Norfolk Hawker and Scarce Emerald Damselfly, continue to be found at new sites. Norfolk

Hawker has now reached both Hempton Common and Pensthorpe near Fakenham. It also put in further appearances this year at Felbrigg, where at least 10 Scarce Emerald Damselflies were found for the first time in late July. Felbrigg Lake certainly seems to attract a good range of special species.

Finally I'm delighted to report that Small Red Damselfly is not only still present at Scarning Fen, but there also appears to be a second colony in the county. There were fears for this species after the hot, dry summer of 2018.

Cambridgeshire and Huntingdonshire – VC 29 & 31 *Val Perrin*

2019, the last season for dragonfly recording for the forthcoming national atlas update went well in our two vice counties. A total of well over 1000 records were entered into iRecord and an additional 200-odd records were put into Living Record. All these have now been verified, as well as a backlog from previous years. It was encouraging to see that recorders had surveyed dragonflies at a number of new sites, as well as the traditional county hot spots. For example, it was good to know

that the large, newly-created lake at the Cambridge University postgraduate accommodation site at Eddington, west of the city, had already attracted at least eight odonate species this summer.

New sites for White-legged Damselfly were found at several locations including Overcote and Grantchester Meadows. It was also present at most of the lakes around Cambourne, as it was the previous year, which were surveyed comprehensively by Len Campbell. Variable Damselfly continues to be recorded in small numbers in scattered locations throughout Cambridgeshire. It normally flies in the company of other similar-looking blue Coenagrionid species and may well be overlooked because of the necessity of obtaining clear views of individual specimens.

Norfolk Hawker was again found away from its well-established breeding locality at Little Paxton, with records coming from Ouse Fen and Fen Drayton lakes (both RSPB sites). Another highlight of 2019 was the re-finding of Southern Migrant Hawker at Quy Water. Up to eight at once were seen here this summer, whereas only one was recorded in 2018, indicating possible breeding. Three were also seen at Ditton Meadows, Cambridge,

Red-veined Darter



in early August. Another migrant species, a Lesser Emperor female, was recorded at Barnwell Pit, Cambridge.

And Willow Emerald Damselfly has consolidated its presence in the county with sightings at a number of new locations. Populations have been quite high in some cases (for example, 95 individuals at Quy Water in September, with many pairs in copulation).

Bedfordshire - VC30

Rory Morrissey

The onward expansion of the Willow Emerald Damselfly's range continued so that all corners of the county turned up at least one specimen, or oviposition scars. Emergent individuals with exuviae were found at Felmersham NR and Duck End NR.

Breeding evidence of Keeled Skimmer was found at Sundon Quarry but the population is small and the situation precarious. Beautiful Demoiselle was again seen at Cranfield, so perhaps there is a small population in the Chicheley Brook. Variable Damselfly was seen ovipositing at Felmersham NR and probably breeds there but no such evidence has yet been seen.

Norfolk Hawker was notable by its absence in the west of the county, where it was hoped for at Felmersham NR. However, there were reports of several, including an ovipositing female, on the west side of the River Ouse at St Neots, Cambridgeshire, just inside VC30.

Scarce Chaser was relatively common right along the Ouse, with the number of sightings greatly increased, including emergent and exuviae at Felmersham NR.

Downy Emerald was seen rarely this year. The drying up of the pond at Sandhouse Lane Nature Reserve, which had produced exuviae in 2018, probably put paid to any developing larvae and none emerged there this year,



© Keith Noble

Banded Demoiselle

but one was seen ovipositing at the end of May, probably having arrived from the fishing lake next door.

There was an apparent reduction in the numbers of Common Darter and Southern Hawker, perhaps a consequence of the weather in 2018 and 2019.

The number of breeding species confirmed in VC30 now stands at 22, with possible breeding species comprising Variable Damselfly, Beautiful Demoiselle and Norfolk Hawker. The only vagrant reported was a Lesser Emperor seen briefly in Chicksands Wood in July.

Northamptonshire – VC 32

Mark Tyrrell

The year started off well with six species on the wing by the end of April and 4 species emerging several weeks earlier than usual, such as the Banded Demoiselle. Things then slowed down a bit, and by mid-May, Downy Emeralds and Scarce Chasers emerged only a couple of days ahead of

the norm. In late May, a new colony of Variable Damselfly was discovered at the fishing lake in Wicksteed Park, Kettering, which could be considered as atypical habitat. This prompted my paper published in the October Journal reviewing the habitats of the known sites in our County. Further males were recorded at Barnwell Country Park leading to more speculation that we are seeing a sporadic colonisation.

Beautiful Demoiselle and Scarce Chaser continue their spread in the county hunting for new breeding sites, with both recorded at separate sections of the River Ise for the first time. This river has fast flowing sections that are ideal for the Demoiselle and slow muddy sections ideal for the Chaser. Helpfully, both of these are easily accessible to me as the river runs through Weetabix, where I work (indeed, I recorded the Demoiselle below the footbridge that separates the carpark from the main site on my return from a lunchtime trip dragonfly hunting elsewhere!).



© Mark Tyrrell

Southern Migrant Hawker

On the migrant front, Lesser Emperors were photographed at Pitsford Reservoir and Rushden Lakes, but of course weren't showing when I visited so I still have not seen this species in my home county. Another, exciting event occurred in mid-August while I was photographing Common Darters in flight: I caught sight of a bright blue hawker whizzing past me, which turned out to be a male Southern Migrant Hawker, who proceeded to show very well hovering in front of me, allowing some great in-flight pictures. I have seen this species at Canvey Island, but they did not hover anywhere near as well there as this one.

To end the season, Willow Emerald Damselflies were recorded in the highest numbers so far, and at several new sites, where egg-laying and egg scars were noted.

Gloucestershire – VC 33 & 34

Ingrid Twissell

One of the highlights of the year occurred when a male Southern Migrant Hawker was recorded for the second year running at Netheridge, Gloucester on 25 July. At Walmore Common, a wetland area off the A48, a male was photographed on 1 August, with a second male present on 2 August, and at WWT Slimbridge a male was spotted on a "Wild Safari" on 4 August.

A further highlight was the presence of Lesser Emperor at WWT Slimbridge, when a male was recorded on 19 July, with a further male in a different area of the reserve on 25 July, and on the same day a male was spotted at Frampton Court Lake.

Red-veined Darters were recorded at Frampton Court Lake on 4 July, when a male was spotted; at WWT Slimbridge a male was seen on 19 July, and along the Stroudwater Canal at Whitminster, a female was present on 15 September.

Hairy Dragonfly was recorded in various areas on the reserve at Slimbridge. New locations for the species were discovered along the Stroudwater Canal, Whitminster – three recorded at the end of May with four at the end of June, and a single at Alney Island, Gloucester, on 10 May (although subsequently a Ranger told me of a record of one in 2017!). During May, three were present at Hempsted, Gloucester, two were recorded at Walmore Common, a male at Coombe Hill Canal, and in the Cotswold Water Park a rare sighting of a male at Whelford Pools NR. In late June/early July they were present in good numbers at Woodchester Park, near Stroud.

Scarce Chaser was present at a new location along the Canal at Whitminster, in June; also present at The Mythe during May and June (20 plus on 22 May), at Tewkesbury NR in June, at WWT Slimbridge 18 were recorded from

May to July, and appeared for the second year running at Pitville Park, Cheltenham, in late June and early July.

Common Clubtail was present at The Mythe and Apperley from May, and at a new location at Deerhurst, on the River Severn, along with Scarce Chaser in June. Keeled Skimmer is a rarely recorded dragonfly in the Forest of Dean, but a male was present at the same location for the second year running near Cinderford, and one male at Woorgreens Lake, with a further male at the nearby New Ponds/heathland area, possibly the same individual, all in July.

Downy Emerald was recorded twice at Woorgreens NR, a single male on 7 and 23 July.

Black Darter, another elusive dragonfly, was only recorded at one location at The Park, Forest of Dean, when four were seen in late August.

Ruddy Darter had an excellent year with large emergences in various locations in the county, notably Alney Island and Highnam RSPB NR, both near Gloucester, WWT Slimbridge, Stroudwater Canal at Whitminster and Coombe Hill NR. They were on the wing at all of these locations from July. Interestingly this dragonfly was scarcely recorded a few years ago. Small Red-Eyed Damselfly had an excellent year with new locations and high numbers in some places, including WWT Slimbridge, Stroudwater Canal at Whitminster, all in July, with Walmore Common in August, as well as a smaller colony at Coombe Hill NR near Tewkesbury and along another stretch of the Stroudwater Canal. They were also present in good numbers at the Barnwood Flood Alleviation site, near Gloucester.

Monmouthshire – VC 35

Steve Preddy

2019 was a notable year for dragonflies in Monmouthshire. The highlight was our first Southern Migrant Hawker, found by Gavin Vella at Llandegfedd reservoir. Then, in October, our second Vagrant Emperor was

found on the Gwent Levels. Small Red-eyed Damselfly continued to consolidate its range in the south of the county, and it will surely spread further still. The backlog of records from pre-2019 has now been completely processed in time for inclusion in the atlas. I have compiled a list of dragonflies for Monmouthshire, which you can obtain by emailing me. The most likely species to be found here next is probably Scarce Chaser, as this species has expanded its numbers in nearby parts of England. Downy Emerald is another possibility; there are no confirmed records but it is present next door in Gloucestershire. Another challenge for any recorders here is to establish if Small Red Damselfly is still present in the north west of the county; there are no recent records, but there is a good chance it is still here. Thanks to everyone who's kept me busy with a steady flow of records this year; keep up the good work.

Worcestershire – VC 37

Mike Averill

Migration is the theme of this year's account and it is a feature that many species of dragonfly exhibit to some degree or another.

The Red-veined Darter has been one of our regular visitors since 1998 and occasionally there are enough to breed and produce another generation. This year there were sightings at six locations in June, but the finding of immature adults with a shed larval case (exuvia) at Ripple three months later was the highlight.

The Lesser Emperor had been seen only five times from 2000 to 2017, but this year it was seen at Upper Bittell, Pirton, Ryall and lastly Ripple where it was spotted ovipositing, the first probable breeding record for Worcestershire.

As if that wasn't enough a third Emperor for Worcestershire, the Vagrant Emperor, also made it for the first time to the county and, at Ryall, a pair was seen in copulation, showing attempted

breeding. This was the 30th species to be recorded in the county and it is to be noted that the difficulty in finding and identifying unusual visitors is made easier with good observers and digital photography.

The Common Club-tail Dragonfly emergence rates at Bewdley were slightly below average this year with all the main rivers benefitting from a quiet period in which to emerge before the high river levels that we experienced in mid June. Unfortunately there was still no sign of any emergences on the River Avon this year. Puzzling as the disappearance of the Clubtail is from the Avon, one species that did very well there was the Scarce Chaser.

Insect melanism, has long been a textbook case of evolution in action but a melanistic Scarce Chaser, that was spotted by Bob Woodroffe, is probably due to the mutation of one gene, as it is such a rare occurrence, or was it just a temporary characteristic of a newly emerged individual.

Warwickshire – VC 38

Kay and Peter Reeve

The 2010s has been an exciting decade in Warwickshire. It started with the first county record of Scarce Chaser in 2010 followed by the first county record of Lesser Emperor and Vagrant Emperor

in 2011. The decade finished on a high note with the first Warwickshire record of Willow Emerald Damselfly.

The Willow Emerald was recorded on 21 September 2019 at a private site. It was among the branches of a Willow on an accessible part of the bank. At the moment the location must remain confidential.

This record further extends the range of the species westward. On a return visit, on 28 September, a further four individuals were spotted: three males and a female in tandem with one of the males. Even more exciting, at least nine oviposition sites on twigs and branches, showing the lesions caused by the egg laying, were found. Eight were on ash and one on willow. They were along an eighty yard length of bank where easy access is possible.

The only vagrant species to visit the county in 2019 was Red-veined Darter. At Earlswood Lakes, John Oates saw at least three males and a mating pair on 4 July. The following day Mick Schilling visited the lakes and saw three males.

The count of species recorded in Warwickshire in the 20th and 21st centuries is now 33. This includes two species that are doubtful records, the Golden-ringed Dragonfly and Variable Damselfly.

Melanistic Scarce Chaser



A Keeled Skimmer was recorded at the WWT Bubbenhall Meadow Reserve on 13th July by Ian Harris. This is only the second confirmed sighting in the county for the species. Hill, Shropshire or Parsonage Moor, Oxfordshire are a likely source.

The number of species recorded as breeding, or having bred, in Warwickshire is 25. Sadly, we have probably lost two: the Scarce Blue-tailed Damselfly, due to habitat destruction, and the Club-tailed Dragonfly for unknown reasons. We hope that they might be found breeding again in Warwickshire in the coming years.

For the latest news and sightings visit: www.warwickshire-dragonflies.org.uk/wdg/news_2019.php

Staffordshire – VC 39

Dave Jackson

Small Red-eyed Damselflies have eventually colonised the county this year. I found the first individual on 22 July at pools near Highgate Common, Enville. This was soon followed by a colony emergence at that site. Another small colony was found at Belvide Reservoir at the end of August by S. Nuttall.

First Willow Emerald Damselfly recorded in Warwickshire



There were reports of three sightings of Lesser Emperors at Belvide Reservoir including two males on 5 July.

Red-veined Darters were reported at Belvide Reservoir with 10 plus on 29 June and 6 on 7 July, with a pair seen ovipositing.

The Keeled Skimmer colony still holds on in small numbers at a lowland bog near Cannock.

Shropshire – VC 40

Vicky Fletcher

The beginning of 2019 was promising with a reasonably early start; Large Red Damselfly was the first species on the wing on April 17 (the earliest ever record is 8 April). This was followed by the earliest ever Four-spotted Chaser and White-Faced Darter sightings, both seen at Whixall Moss on 22 April.

However, the summer of 2019 was a low one for records, with dull weather and excessive rain and we received about 50% of the usual number of records. 2019 saw a total of 24 species recorded. Normally, 27 species are recorded in Shropshire each year and this is without the two new exciting species (discussed below) for the county.

There were unusually late dragon records too; Common Darter and

Black Darter were seen on 10 November at Whixall Moss!

Perhaps the best news for Shropshire in 2019 was some exciting new species. Firstly, there was a Lesser Emperor sighting at Alderford lake on 8 July. There has only been one other record in Shropshire from 2016. It was not breeding but is a definite record. Also, the Small Red-eyed Damselfly was confirmed to be breeding in Shropshire. It was first seen in Enville, near Shropshire in July – will it enter the county? YESSSS!! This species was seen breeding at Stokesay Castle on 24 July, on the Dudmaston estate on 7 August, and also near Albrighton on 15 August. Let's see how quickly it spreads through Shropshire!! It is clearly expanding its range from the east. There were also a few unconfirmed sightings of Red-veined Darter in Shropshire; these claims were bolstered by the fact that it was also seen in neighbouring counties.

Another interesting observation was that there were very early hawkers seen on Whixall Moss. These are likely to be the Hairy Dragonfly- very rare in Shropshire.

So despite the rain and low numbers of records in general, it was a pretty exciting year for Shropshire in terms of new species! Watch this space (or county) next year!

The Shropshire Dragonflies Website keeps recorders in touch with the comings and goings of the year via the flight season blog- definitely worth a look from April onwards!
www.shropshiredragonflies.co.uk

Breconshire - VC 42

Keith Noble

The first Large Red Damselflies emerged at Sarnau pools on 28 April. Variable and Common Blue Damselflies appeared at Llangorse Lake on 2 May, and by 16th there were thousands of Variable and about a hundred Common Blue.

On the same day three Hairy Dragonflies appeared, and eight Red-eyed Damselflies, a species first seen here in 2017. June and July sightings included Chasers, Black-tailed Skimmer and up to 11 Emperors.

A male Ruddy Darter sighting on 7 July was followed by a pair photographed the next day. More records reported through August and up to 19 September included eight males holding adjacent territories along 300 metres of lake edge. There were only three previous VC42 records of single Ruddy Darters, one of them at this site in 2018. Also, at least two Ruddy Darters were seen at Sarnau pools through August and egg laying was observed.



Variable Damselflies at Llangorse Lake

A few Demoiselles were reported from the River Wye, and the Usk River and Canal, more Banded than Beautiful, and White-legged Damselflies were seen at Glasbury and Hay-on-Wye. Rather more Brown Hawkers were seen this year, at Llangorse, Brecon, Sarnau, and on the Epynt at Pwll-du and Pant y llyn on 23 August. Pwll-du sits in a mossy rushy swamp; other dragonflies there were 10 Common Hawkers, about 100 Emerald Damselflies and 60 Black Darters. Pant y llyn is a shallow lake with smaller boggy pools; there was only one Black Darter but 153 Common Darters, including 32 ovipositing pairs, 15 Common Hawkers and 50 Emerald Damselflies.

The highest September count of 90 Migrant Hawkers at Llangorse was only a sample of the hundreds which must have been present around the whole of the lake, hunted by Hobbies. The last sightings were of Southern Hawker and Common Darter at Sarnau on 8 November.

Radnorshire - VC 43

Bob Dennison

The 2019 Radnorshire dragonfly recording effort resulted in 353 new records submitted by 30 contributors. This year, 60 of the records came via iRecord

whilst 293 were sent directly to me. Our flight season began at a large bog-meadow pond near Hay-on-Wye on 17 April, with the first emergences of Large Red Damselflies, and ended at a nearby pond on 24 October with the two last remaining Common Darters.

No new species were added to Radnorshire's 'regularly recorded' list of 22 species - 14 dragonfly and eight damselfly - and somewhat disappointingly, this season failed to turn up any records for Common Clubtail or Migrant Hawker.

In June, Dick Eastwood reported that the River Wye had "healthy populations of Banded and Beautiful Demoiselles and latterly, White Legged Damselfly". However, there were no signs of Clubtail despite several patrols. Levels of nutrient emanating from agricultural activities in the River Wye catchment continue to give concern in mid-Wales.

Here in Radnorshire, we are still awaiting sightings of any of the UK's recent 'newcomer' species; and it seems that the 2019 influx of migrants such as Vagrant Emperors and Red-veined Darters, witnessed in North Wales, didn't bother to stop in this part of Wales.

To end on a lighter note, in early June Richard Knight photographed this odd couple at his pond. At first glance he thought it was a copulating pair of Broad-bodied Chasers, but on closer inspection he realised he had two species in the lens! "They flew in tandem and as a wheel, parting occasionally to allow the female to go off egg laying - but soon coupling up again". They repeated this several times in the twenty minutes he watched them.

Lincolnshire – VC 53 & 54

Nick Tribe

2019 saw two new species for Lincolnshire. Chris Atkin photographed a male Vagrant Emperor at Donna Nook NNR on 9 June. Multiple sightings were made of highly mobile individuals by several observers until June 21, with a maximum count of between six and ten on the 16th. Away from Donna Nook one was seen at East Halton Skitter (Humber Bank) on 18 June and two were at Rimac (Saltfleetby-Theddlethorpe NNR) on 20 June (both by Graham Catley).

The second species new to Lincolnshire was Southern Migrant Hawker. Neil Drinkall saw an unfamiliar blue dragonfly flying repeatedly over a patch

of sea clubrush at Alkborough Flats on the 3 August. Species identification was confirmed by Graham Catley. The male was seen to climb to and attempt to mate with a passing female on 4 August.

Willow Emerald Damselfly continued its spread in Lincolnshire. New mid-Lincolnshire sites included Chambers Farm Wood (reported on 17 August by Mark Johnson) and Kirkby Moor (reported on the 18 August by Jodie Mellowship). Cleethorpes Country Park in north-east Lincolnshire had three individuals on 25 August. Alkborough Flats in North Lincolnshire hosted at least ten on 26 August (sighted by Graham Catley), and Far Ings near Barton on Humber had one on 21 September (reported by Simon Wellock).

Red-veined Darter appeared at Donna Nook NNR alongside the Vagrant Emperors between 9 June and 17 June, with a maximum of nine on the 16th. Three were seen at Rimac at Saltfleetby-Theddlethorpe NNR on 20 June. Gibraltar Point NNR hosted the species, between 21 June and 11 August, with a maximum of 12 individuals on the latter date. Lesser Emperor was seen twice with a male at Cove Farm Gravel Pits in North Lincolnshire on 5

Odd couple sighted by Richard Knight



© Richard Knight

September (by Steve Furber) and another single male seen at RSPB Frampton Marsh on 21 July (by Dave Fisher).

Leicestershire & Rutland – VC 55

Ian Merrill

New arrivals to the VC odonata atlas are always going to be the highlight of any year, so this is where the 2019 summary commences. Since its first appearance in the UK, close to Felixstowe in 2007, the Willow Emerald has spread rapidly westwards. It had reached Northamptonshire by 2016 and Lincolnshire by 2017, therefore its appearance in VC55 would surely be just a matter of time?

The honour of being the official finder of the first VC55 record goes to Alan Shorrocks, who discovered an adult in willows beside the Eye Brook inlet to Eyebrook Reservoir on 8 September 2019. Up to five were seen at the same site in subsequent days and as this well-watched site lies in the far east of VC55 it was no huge surprise when it was proven to be the inaugural location.

What was rather more intriguing was the subsequent discovery of another adult Willow Emerald at Watermead Country Park by Matthew Billings on 30 September. Watermead lies in the River Soar Valley, immediately north of Leicester, and represents quite a leap in distribution from Eyebrook Reservoir. One can only surmise that this late-flying damselfly has found other sites to its liking between the two locations mentioned above, and I would urge observers to diligently search for this somewhat unobtrusive insect during the 2020 flight season as we strive to understand its true distribution.

In other news, the Scarce Chaser made its absence felt again in 2019, demonstrating that it has not currently managed to break the bonds of its two-year life cycle; it has currently only

been recorded in VC55 in 2016 and 2018. Elsewhere, Beautiful Demoiselle has clung on to its toe-hold on VC55's southern boundary rivers, and Small Red-eyed Damselfly was discovered at a number of new localities, including Abbey Park in the very centre of Leicester City.

I would like to conclude by thanking all who have contributed records in 2019. Let's see if we can make a big impact on that Willow Emerald distribution atlas in the first year of the new decade!

Cheshire – VC 58

Chris Meredith

The season started very promisingly in VC58; after a fairly mild winter and largely fine weather in April the first Large Red Damselflies were recorded on 18 April, shortly followed by Azure and Blue-tailed Damselfly, Four-Spotted Chaser and Hairy Dragonfly before the end of the month.

After a very wet summer and early autumn, the tail end of the season, despite being very mild, ended just into November, with Migrant Hawker observed on 1 November, while both Common and Black Darters had last sightings on the 10 November in Delamere Forest.

Some of the more unusual species for Cheshire included Golden-ringed Dragonfly seen on the Pennine Fringe near Macclesfield, along with Keeled Skimmer. Downy Emeralds were recorded from several locations around Delamere Forest and Hairy Dragonfly had more records than 2018. Two Beautiful Demoiselles were recorded, one each in east and west Cheshire but more work is needed to identify if these were lone individuals or part of, until now, unnoticed populations. Scarce Blue-tailed Damselfly continue to do well at their sole site in the county, while Variable Damselfly were only recorded at a sole site, compared to three years ago when they were recorded at three sites.

Many thanks to all of the VC58 recorders that have managed to collect nearly 1500 records over 2019. Let's hope for a good surveying season in 2020 to answer some of the questions posed by the 2019 results.

South Lancashire & West Lancashire - VC 59 & 60

Steve White

After unconfirmed, but probable ('what-else-could-they-have-been'), sightings of Vagrant Emperors at three sites on 23-27 February, our second confirmed record, after one in Manchester in 2017, came on 27 June when three males and a female were found on Ainsdale NNR on the Sefton Coast.

After decades of restriction to a single site in Lancashire, Banded Demoiselles are now breeding in numbers everywhere, while the Beautiful Demoiselle remains a rarity. Prior to 2018 there were just three records, all of wandering insects; but in 2018 a male was found in suitable breeding habitat in the West Pennine Moors. Then in May 2019 another male was discovered close to the Cumbrian border; breeding has yet to be confirmed at either site.

There are fewer doubts about our later colonist though. The region's first Small Red-eyed Damselflies were discovered on 9 August at Towneley School, Burnley, and 50 miles away at Liverpool's Garden Festival site. Numbers increased during the month to six in Burnley and 22 in Liverpool, and mating and ovipositing was observed at both sites. Greater Manchester's first records appeared soon after on the Leeds-Liverpool Canal in Leigh on the 23rd and Marriot Golf course in Worsley on the 26th.

In contrast, Large Red-eyed Damselflies showed no sign of expanding their range to the north of the Leeds-Liverpool Canal in Aintree and Wigan, although two new sites were discovered in Liverpool. Keeled Skimmer remains firmly established at one Lancashire site but made its first appearance in



Golden-ringed Dragonfly (male)

Greater Manchester on Smithills Moor on 23 August. Migrant Red-veined Darters were much in evidence from the third week of June, predominantly on the Sefton and north Lancashire coasts, where records included 20 plus at Ainsdale and four flying in off the sea with 120 Painted Ladies at Heysham on 27 June.

South-east Yorkshire – VC61

Martin Roberts

The total number of records submitted for VC61 this year was 1335, a 16% increase over 2018, maintaining the consistent upward trend of recent years and reaching a new record for the vice-county.

The highlight of the year was undoubtedly the first record of Willow Emerald Damselfly in the VC. A single male was seen at the lake in East Park, Hull, on 8 September and a single male was also present two days later. Extensive searching around the lake on 14 September failed to find any further individuals, but a single female was seen at North Cave Wetlands (Yorkshire Wildlife Trust reserve) on 8 October. All three sightings were supported by clear photographs. The arrival had

been eagerly anticipated as this species has spread dramatically in the last few years and had been reported at several sites along the south bank of the Humber a few days earlier.

Vagrant Emperor (a single male in each case) was seen at three locations along the east coast from Spurn to Filey on four occasions between 9 and 22 June. A female Lesser Emperor was caught in a moth trap at Flamborough on 31 July. Two male Southern Migrant Hawkers were seen at Spurn Bird Observatory on 3 August. There were relatively few records of Red-veined Darter this year but the species was recorded at Spurn, a relatively consistent site for this species, on at least two occasions.

Two members of the Yorkshire Dragonfly Group carried out an extensive survey of Odonata at a wide variety of locations in the city of Hull and the immediate surrounding area. A total of 19 species were recorded, many with evidence of breeding. It is notable that Large Red Damselfly is rarely recorded in this area. The results will be presented to Hull City Council in the hope that it



© Keith Gittens

Boltby Reservoir after Larch removal, November 2019

will be useful in support of their Biodiversity Action Plan.

For the second year running, YDG members monitored a number of newly-restored dew ponds on the Yorkshire Wolds for Odonata, on behalf of Yorkshire Wildlife Trust. Slightly greater numbers of the expected common species were recorded this year.

North-east Yorkshire and North-west Yorkshire – VC 62 & 65

Keith Gittens

The year proved to be an exceptional one for finding new sites for Small Red-eyed Damselfly. In VC62 records were received from along the east coast between Scarborough, north through to Guisborough. There were also sightings, in VC65, along the A1 corridor from Nosterfield Nature Reserve to Scorton Quarry, near Richmond. A first for VC65!

The site at Scorton also produced records of Red-veined Darter in early July.

To top this, and a first for all Yorkshire, was a sighting of Willow Emerald from a pond at Harwood Dale within the North Yorkshire Moors National Park on 26 August.

Wykeham Lakes, a series of worked out gravel pits, near Scarborough, are proving something of a hotspot for Odonata. The site has a series of attractive spring fed fishing lakes and a larger water sports lake. Up to now 17 species have been recorded, including both species of Red-eyed Damselfly, and in June 2019 a record of Hairy Dragonfly. Dawnay Estates, who own and operate the site, are keen to promote the wildlife of the area and now allow public access. Thanks must go to the estate for allowing recording and I look forward to more finds in the year to come.

Conservation work in conjunction with the Fresh Water Habitats Trust and Butterfly Conservation continued in early 2019 at Worlds End, near York, and later in the year at Boltby Reservoir, near Thirsk. Both sites benefited from scrub clearance that threatened to shade the water margins. The dragonfly fauna at Boltby is developing nicely and hawker species were much in evidence on a visit in late August.

Many thanks to all those who volunteered or who sent in records through 2019.

South-west Yorkshire – VC 63

Alistair McLean

Weather-wise, 2019 was an interesting year, having seen some of the warmest temperatures ever recorded locally, but whilst also being extremely wet. It was the wettest year on record, according to Weston Park Weather Station.

The newly established Small Red-eyed Damselfly population does not appear to have continued to expand its range onto the Sheffield & Tinsley Canal as of yet. We will continue to monitor this in 2020. The Red-eyed Damselfly does now appear to be well and truly established in a few sites across the region.

In total, we received 948 observations, covering 20 species for VC63 in 2019. All of the established species were well represented, and records are spread nicely across the whole county. I did not receive any observations of the Golden-ringed Dragonfly for 2019, which appears to have recently founded a colony around the Agden Bog Nature Reserve (SK2593). I would be grateful for any reports on how the species is doing in this area for 2020.

As always, thank you to the many people who have submitted observations for south-west Yorkshire this year.

Mid-west Yorkshire – VC 64

Simon Joseph

450 records for 21 species at 44 sites were received in 2019. The most frequently recorded species were Common Darters, Common Blue Damselflies, Blue-tailed Damselflies and Brown Hawkers. The least frequent were Southern Migrant Hawker, Small Red-eyed Damselfly and Golden-ringed Dragonfly.

Last year I reported there were no Small Red-eyed Damselfly records. Some have since been submitted, so they are maintaining their presence in the vice county. Willow Emerald Damselfly have expanded close to the south-east edge of the vice

county, so we will keep an eye out for this species in the future.

There were no reports of Red-veined Darters this year.

The high point of the year was Rodley Nature Reserve, Leeds, being designated a Dragonfly Hotspot. On the day (22 June) seven species were recorded and there was an open day with stands and walks. They have worked hard to create a mix of habitats, all beautifully landscaped and with information boards. Well worth a visit.

A couple of fun teaching sessions and walks were held at Fairburn Ings and St Aidans RSPB reserves, and over 170 records were submitted by their birdwatching group. At Fairburn Ings a lone female Southern Migrant Hawker was photographed; ironically, on the same day, I was in a muddy ditch in Canvey Island looking for them.

My local site, Grindleton Forest Pools, dried up briefly in the summer but there was no noticeable effect on the range of species or number of individuals.

Unfortunately Lomeshaye Marsh LNR, a small site next to an industrial estate, has suffered a decline since an aquarium was emptied into it and the site is now choked with crassula. Interestingly, I have made contact with the Ministry of Justice Dragonfly Champion outside my area and I am hoping to give some teaching sessions to the men in a prison in 2020, and help them with their pond.

Westmorland and Cumberland – VC 69 and 70 *David Clarke*

2019 was a relatively quiet year on the whole for dragonflies. The late February warm spell, experienced over much of the UK, brought the area's second confirmed record of Vagrant Emperor. A male was found dead in a pool on the south-west coast at Silecroft, Millom

(SD18), on 5 March, so it may have been a February arrival. Two other sightings of unidentified dragonflies near the Morecambe Bay coast (at Foulshaw Moss and Allithwaite, SD37 and 48) were both on 25 February, so could even have been the same individual, and almost certainly were the same species. A third unconfirmed record came from St Bees Head (NX91), interestingly also on 25 February. The county saw comparatively little of the widespread immigration of Red-veined Darters this year. Coastal records included several seen at Hodbarrow (SD17) on 27 June, and one at Drigg Point (SD09) on 13 August. Inland, one was reported at Soddy Gap on 18 July and another at Talkin Tarn (NY55) on 14 July.

The cool early season weather seemed to delay the appearance of some species. Large Red Damselfly was, as usual, the first on the wing, from about 20 April at both ends of the county. Banded Demoiselle again seems to have done well, although its 'dispersal movements' were not as extreme as in 2018. As reported in Dragonfly News 76, one of each sex was found at the Beautiful Demoiselle colony at Skelwith Bridge, Ambleside, on the River Brathay in mid-June (NY30), a long way from known breeding sites. One on the River Irt in

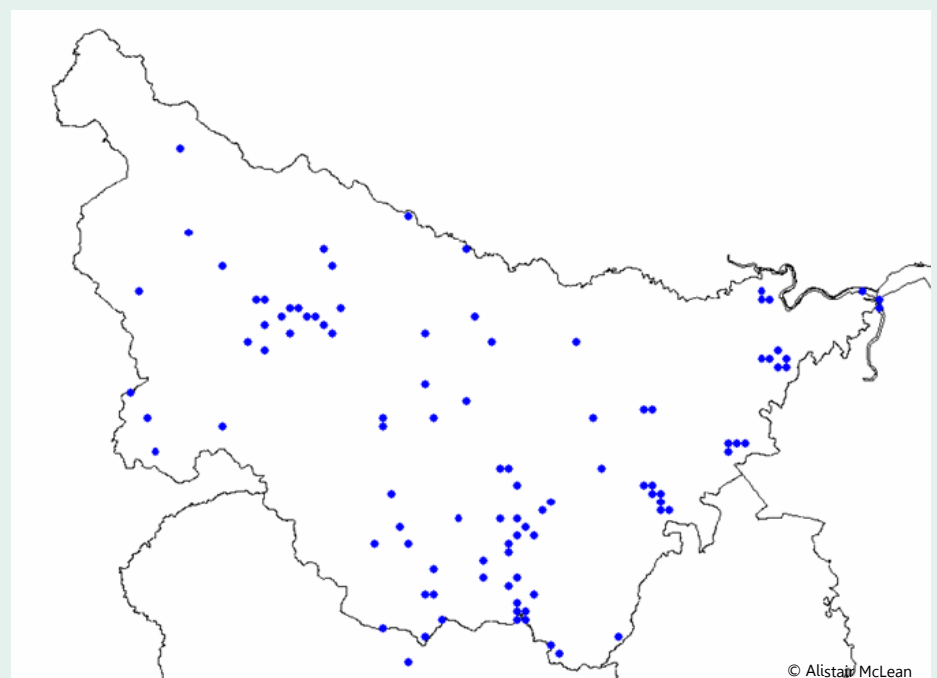
Wasdale (SD29) on 12 August was further evidence of the spread of this species.

It was good to have the continued presence of Downy Emerald confirmed at its most northerly site on the south-west side of Derwentwater, near Grange-in-Borrowdale (NY22). More than 10 individuals were present as late as 29 June. Amongst other established species, the emergence of Common Hawker and Black Darter seemed noticeable for having lower numbers than normal, or at least a delayed appearance at some north Cumbria sites. This made us speculate on the possible effects the exceptionally warm period in summer 2018 had on their development.

Black-tailed Skimmer and Broad-bodied Chaser are both breeding in the south of the county. The two species produced only a few records in the northern half of the county, the former at Soddy Gap, Cockermouth (NY03), with a max count of two on 23/25 July, the latter in the Eden valley at Fishgarth, (NY54), 24 May, and Broadwath (NY45) on 10 July. The May record was early enough in the species' flight period to have been a local emergence.

The success of the White-faced Darter re-introduction at

Location of records for 2019 in south-west Yorkshire



Foulshaw Moss (SD48) has been such that we felt safe in scaling down voluntary monitoring, although exuvia counts will continue. The emergence season weather was poor but, even with this complication, over 500 were counted. The Claife Heights area (SD39) produced no sightings in 2019, but this has been the case in other years, so extinction there is far from certain. A new introduction project at Cumbria Wildlife Trust's Drumburgh Moss NNR on the south Solway (NY25) commenced this year. Mature larvae were translocated in spring, as well as Sphagnum moss containing eggs later on, into a group of pools specially designated for the project. Translocations and monitoring will be ongoing for several years, so it will be a while before we are able to reach firm conclusions regarding the success of the project.

By the time that this issue of Darter is available, we expect that a new Cumbria online dragonfly atlas will be available. This will be on the website of the Cumbria Biodiversity Data Centre (Carlisle) at www.cbdc.org.uk/wildlife-in-cumbria/cumbria-dragonfly-atlas. More details have been submitted to Dragonfly News 77.

Isle of Man – VC 71

Pete Hadfield

Early this year I received reports from Andy Qualtrough dating

back to 2011 regarding the Arragon Estate on the east coast. This confirmed our second known breeding location for Emperor Dragonfly (at the time).

On 16 February I was informed of a Hawker-sized Dragonfly flying past Peel Castle rocks on the west coast. A Vagrant Emperor had been seen during the same week in North Wales, so it's quite possible this was also one.

A Large Red Damselfly was seen on the 21 April at Ballannette, which was the earliest odonata record ever for the county (the previous earliest was 24 April in 1944).

On the 6 July a Hawker-type Dragonfly with a "blue bit" behind its wings was seen flying over the low tide rocks at Scarlett on the South coast. This was during the UK Lesser Emperor influx; the individual was not seen again, but it's plausible this was a Lesser Emperor.

In early July, Island Aggregates gave Manx Bird Life control of the Point of Ayre Gravel pits northern non-worked section to turn it into a nature reserve. This is the largest area of freshwater on the island and on the 7 July one Red-veined Darter was found on a satellite pond. We were lucky enough to be permitted to carry out dragonfly surveys at the reserve for the first time. Our aims were to confirm Emperor Dragonflies were still at the site after finding a female

oviposting there in 2011. A visit on 14 July produced Emperors on every satellite pond (total of 19), and four females were found oviposting, the largest count of Emperors ever recorded. On the larger southern pool there was a Lesser Emperor, a second for the Isle of Man.

On 20 July a Black-tailed Skimmer was found on the southern pool at the Pits. This was a first for the Isle of Man. Red-veined Darters increased to two and then three were seen on the 24 July.

On 1 August the MBL manager sent me photographs of a pair of Lesser Emperors in tandem oviposting on one of the small ponds at the gravel pits.

Reports then came in of possible Brown Hawker sightings at the same location. This would be a first for the Isle of Man mainland (although there are two previous records from the Calf of Man dating from 2003 and 2004). On 3 August two Brown Hawkers were photographed with one oviposting. On the same day an immature male Migrant Hawker was found, confirming it as a new resident species on the island. Migrant Hawkers would also be confirmed as resident on the Calf of Man, from records passed on by the wardens, and at Arragon Estate, from Andy Qualtrough. By the end of August Migrant Hawker numbers at the Gravel Pits rose to 14.

Elsewhere there was a superb count of 42 Black Darter at Stoney Mountain on 17 August, which is the highest count of Black Darter in Isle of Man records.

Brown Hawker





Scottish Updates



Highlights from Scotland

Pat Batty, Scotland Dragonfly Recorder

The most exciting news and sightings from Scotland.

The Scottish weather in 2019 was a mix with warm sunny spells interspaced with cooler wetter conditions. In the east there were reports that dragonfly numbers were low, possibly due to the very dry conditions in 2018.

Early spring was dry and cool; Large Red Damselfly was first reported on 22 April and Four-spotted Chaser was first recorded on 12 May. There were only a few reports of the Hairy Dragonfly in 2019. It was first recorded on 19 May at Knapdale and a new breeding site was discovered in Glen Troo, Kirkcudbrightshire. Beautiful Demoiselle were discovered emerging at a new site on Taynish NNR in Argyll on 1 June, and the species was also sighted on Mull, Mainland Argyll and Skye.

The Banded Demoiselle was first seen emerging on 27 June. This Damselfly is known to be spreading within the Borders and a scattering of records from new sites were received in 2019 from the area. The Banded Demoiselle now seems to be established at Newmains Farm and Millars Moss in the Borders; other notable sightings were made at a site near Edinburgh and at Klrkunzean Lane in Dumfriesshire. However, the most interesting sighting was on the River Dee at the edge of Aberdeen on 2 July, the most northerly sighting yet.

The Keeled Skimmer was recorded from 10 June to 10 August west from Argyll and northwards. There were more sightings than usual, from Sunart, Ardnamurchan, Morven, the Islands of Islay, Arran, Mull and Skye. It was also seen as far north as Inverewe and Ben Alligin in Wester Ross, which is unusual, and there was an interesting possible sighting from near Grantown-on-Spey.

Water levels in the country's bogs (such as pools and runnels) generally seemed more stable in 2019 than 2018. Emergence was first recorded for the White-faced Darter on 11 May at Silver Lochs in the Loch Maree area, and the 20 May north of Loch Carron. The full extent of the distribution of White-faced Darter is not known and new sites are found annually. This year sites were discovered in the north west at Flowerdale, Gairloch and Kinlochewe, in Glen Etive and at Druim nan Slatt on Rannoch moor, at Abernethy and in Moray. Healthy population continue to survive at Loch na Loistre in Ardnamurchan and Little Scatwell north east of

Dingwall. The breeding pools at Moss of Achnacree are much wetter now as a result of bog restoration work, which will benefit the species.

The Northern Emerald was emerging from 4 June in the north west, and was seen at several new sites in 2019 including at Flowerdale and Kernsary in Wester Ross, north east of Dingwall at Garva Bridge, Treshnish on Mull, the Moss of Achnacree and near Loch Rannoch. There was also a record from East Sutherland. Unfortunately the runnels in Doire Darroch Argyll, which were previously a good site for the species, are becoming overgrown due to fencing to exclude deer for pine regeneration.

The Downy Emerald was seen from 7 June to 12 August, mainly at the known sites in Argyll, Glen Affric and the Loch Bran area.

The known range of Brilliant Emerald is expanding thanks to the dedication of Larry Templeton who has been targeting this species for survey work. He discovered another seven new sites in 2019; there are now 71 sites in East Inverness-shire, 37 newly found in the past few years covering 14 hectads. In Argyll there were 4 new sites reported in 2019. This species is now known to occupy more areas than was previously estimated, a result of many sites being fairly remote and rarely visited.

There were a small number of sightings of male Azure Hawker in West Sutherland in 2019. An adult was also seen at Rasaal for the first time in many years (unfortunately few people record as far north as this). Emergence is known to have first taken

2019 Common Hawker emergence was early.



© Roger Mepsted





© Keith Noble

The range of Migrant Hawker is slowly extending northwards

place sometime before 19 May at Grudie, as exuviae were found on this date. New hectad records were recorded at Clunie, the Ben Nevis area, Daviot and Altguish east of Dinwall. Further survey work was carried out on Rannoch Moor and Corroul (the result of which will be reported at a later date). The Northern Damselfly continues to breed at many of its known sites, including Castle Fraser, near Dinnet on Deeside, Logierait in Perthshire and on Speyside at Insh Marshes, and Abernethy. Survey work in 2019 revealed 5 new sites on Speyside, 3 with breeding records and one at 410m above sea level. Emergence was observed on the 22 June and 28 June, and exuviae were found earlier on 9 June at the wood of Achnatone in Moray. Some of the pre 2000 sites, however, no longer look viable due to infilling with vegetation and transformation to mire. This is part of the natural succession process, which may have been hastened by recent warmer drier summers. The species favours well vegetated pools but has the ability to disperse to new pools when old breeding sites start to fill in. Variable Damselfly was recorded at some of its known sites in the south west and Argyll. The Southern Hawker continues to extend and consolidate its range from southern Scotland to the north east. It has been recorded on the islands of Shuna and Lunga in 2019. Emergence was seen on the 19 June at Portmoak near Tain, which seems very early for a species that is more commonly seen later in the year. Common Hawker emergence also seems to be becoming earlier now and it was first recorded on 19 June.

The Emperor Dragonfly made a come-back in 2018 and was recorded from even more sites in 2019. It was first recorded on 16 July in Holyrood Park, Edinburgh, and was seen ovipositing on seven occasions from 24 July to 25 August at Newmains Farm, in the Borders, and on 25 August at Aberlady, Edinburgh. There are records from Caerlaveroch in the south west and other sites in East Lothian. The most interesting records were from Tentsmuir in Fife and from Forvie, north of Aberdeen, the most northerly record yet.

There are now annual records for the Migrant Hawker and 2019 was no exception. It was recorded from Merse and Cummnock in the south west, Newmains Farm, Mire loch and Whinney ponds in the Borders, and also in Dundee. Sightings were reported from 13 August to 10 September. The Red-veined Darter was present again this year at Millars Moss in the Borders (previously reported in 2017) and was observed ovipositing on 2 June. The Lesser Emperor was seen on 7 July at St Abbs and on 25 July on Rum where reporters observed it being caught and gruesomely decapitated by a Common Hawker.

The Scotland team have been working in partnership with Forestry and Land Scotland, the RSPB, Scottish Wildlife Trust and National Trust for Scotland, who we would like to thank. We would also again like to thank the Butterfly Conservation Society for passing on dragonfly records from their recording scheme. Lastly a huge thanks to the large number of recorders who have submitted over 4000 records and together have totalled over 1000 days of recording time spend in the field.



Orkney Update

Graeme Walker

News from the Northern Isles of Scotland.

It seemed that the big talking point for the 2019 flight season would be how the hot, dry summer of 2018 had affected the county's Odonata assemblage. However, whilst the weather was a significant factor in 2019, it was for different reasons, with much more cloud and rain than usual. Most significantly, there was not really a prolonged spell of fine weather all summer, conditions being very changeable, which did not give encouragement for either insects or humans to consider emerging. However, a total of 186 records were submitted by 26 keen-eyed folk.

Despite the foreboding meteorology, Large Red Damselflies confounded expectations by appearing bang on schedule, with the first sightings on 14 May. This was exactly the same date as in 2018. However, these insects were very much outliers on the curve and no more sightings were reported until early June. A little later than normal, Blue-tailed Damselflies were first reported on 7 June. Records trickled in very slowly through the month but it wasn't until July when sightings were being more regularly reported. Towards the end of June, Common Blue Damselflies began to emerge, with a first sighting on the 28th.

Emerald Damselflies began emerging on 7 July, but the biggest Lestes news of the year in Orkney was the sighting of a single male on a garden pond in Holm on 3 August. This confirmed the arrival of the species in East Mainland, continuing the expansion from Hoy, Flotta and South Ronaldsay. There were only three recorded sightings of Golden-ringed Dragonfly during 2019, all seen in the north of Hoy between mid-July and mid-August, and located around the Dwarfie Stane car park.

Common Hawker began appearing just before National Dragonfly Week. Locally, the event presented something of a quandary as, presumably due to the weather, not all species were yet on the wing. Even for Orkney, this week is usually 'peak dragon', so the annual walk was postponed for a few days in the hope of improving the chances of actually finding some dragons. Thankfully, on Thursday 25 July, a trip to Wee Fea and Lyness in Hoy produced good totals of Damselflies and a solitary Common Hawker, as well as offering excellent opportunities to watch Emerald Damselflies emerging.

Eventually, on 2 August, Black Darters finally put in an appearance with 20 found on a pool at Muckle Billia Field in Evie, whilst the last Odonata sighting



© Roger Mepsted

Black Darter were late in 2019 on Orkney

of the flight season was of another Black Darter on 30 September in Rendall.

Of all the Orkney species, Black Darters seemed to have been the most affected by the cool Spring of 2019. It seems likely that the poor weather either delayed the breaking of the diapause or slowed larval development, with the consequent result of late emergence dates of the adult insects, a full fortnight later than expected. Still mindful of any lingering effects from the hot summer of 2018, when many permanent pools dried up, the only definite evidence of a negative outcome were from Hoxa Head. Here, the pools in the 1 km square ND4193 have usually yielded a few Black Darters during late Summer, but for 2019, despite repeated visits, none were seen.

No reports of the small local population of Four-spotted Chaser were received, and whilst many counties of the UK had visits from dispersive European species during 2019, none were found in Orkney.



The Azure Hawkers of Rannoch Moor and Corroul

Pat Batty, Scotland Dragonfly Recorder, and Daniele Muir, BDS Scotland Conservation Officer

In 2019 survey work continued searching for Azure Hawker in the Highlands.

In late April, pools on Rannoch moor, west of Loch Rannoch, were sampled for larvae. Early dry conditions had caused concern but luckily the pools had filled up again after a spell of wet weather. Several sites near Rannoch Moor summit and Black Rock Cottage, which lies at the foot of Meall a' Bhuiridh, were reported to support Azure Hawker larvae in the 1990s. Unfortunately, none were found in 2019 and the pools surveyed nearer the road looked too dry or peaty for the species.

Thankfully the pool complex near Loch Ba proved more productive: a large, 35mm long, larva, that looked close to emergence, was found in a small shallow pool. Seven additional larvae, ranging from 16mm to 23mm in length, were found in five other pools. Interestingly their pools were slightly deeper than the average Azure Hawker pool; the water was cooler than that in the large larva's pool and the smaller larvae were darker in colour. All of these larvae must have survived the drought of 2018. Surprisingly no Azure Hawker larvae were found in pools which were recorded as being populated in 2018; in fact, one pool looked like it had been dry

earlier in the spring.

Recorder Kevin Green conducted additional visits in September and also found Azure Hawker larvae but in different pools in this area. He also reported seeing an adult at Allt na Slach pools further west between the Loch Ba site and Rannoch.

September Azure Hawker surveys also proved very successful for Daniele Muir, BDS Scotland Conservation Officer, during a visit to Corroul Estate, near Loch Ossian. Conditions were ideal with plenty of water in the bog pools, which had warmed nicely after a dry sunny spell. In the area north of the track to Loch Ossian, about 100m from the station, is a flatter area of blanket bog with a number of adjacent pools amongst *Racomitrium* (moss) hummocks. 139 Azure Hawker larvae were found in nine pools within a small area, some just a few metres apart. The following day, with the help of Allan MacLeod, Conservation Manager for Corroul Estate, and an Argocat off-road vehicle, we were able to explore six other areas and larvae were found in at least one pool in each of these. In total, over the two days, 231 larvae were found in 16 pools. Larvae ranged from 7mm to 34mm long; the distribution of sizes is shown in Figure 1. From the clustering it is difficult to speculate age

Pat Batty looking for larvae at a typical Azure Hawker bog pool



© Pat Batty



classes but at least 3 years of development are represented.

It is evident that Corrour Estate has a major population of Azure Hawker. Only a few pools of the potential tens of thousands in the extensive blanket bog were sampled and only a small area searched. Given the number of larvae found, and the extent of suitable habitat available in the area, there is likely to be an extensive population. In fact the blanket bog extends for at least 20 km and links Rannoch Moor with the Corrour sites. Azure Hawker takes at least three years to develop and the range of larval sizes found indicate that all stages were present. Eight pools (57% searched) had a range of sizes and age classes in them; others had larger or smaller

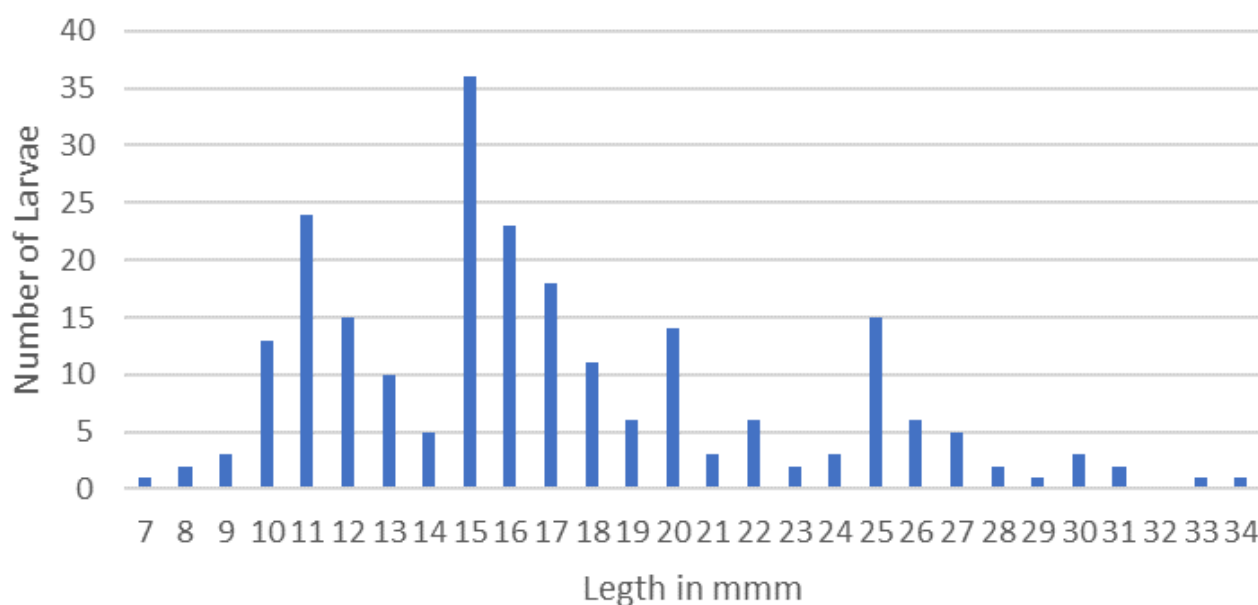
larvae. This is an encouraging finding as there were concerns that the species may have suffered during the summer drought of 2018 when numerous of pools became very dry throughout Scotland.

Thanks to 2019 survey efforts the blanket bog between Rannoch moor and Corrour has been identified as a stronghold for Azure Hawker. In addition, we are happy to confirm that Corrour Estate is now a Priority Site for Dragonflies. The future of the Azure Hawker populations of Corrour Estate looks bright as owner and staff are very supportive of Dragonfly conservation and are looking to positively manage the site for Azure Hawker and maintain its wetlands.

Azure Hawker larvae



Figure 1: Length of Azure Hawker Larvae at Corrour 19-20 September 2019



Northern Emerald Dragonflies at Flanders Moss Dragonfly Hotspot

Daniele Muir, BDS Scotland Conservation Officer

Flanders Moss National Nature Reserve, near Stirling, is one of our Dragonfly Hotspots and is a fantastic location to enjoy watching dragonflies.

It is an excellent site for public engagement and we have run a number of awareness-raising training courses, guided walks and volunteer days there over the past few years. It is one of the largest lowland raised bogs in the UK and one of the most intact raised bogs in Europe. With many of the classic raised bog features, it plays an important role in carbon and water storage – and contributes to natural flood management.

It is an especially important site for dragonflies as it is home to the most southerly (known) population of Northern Emerald Dragonfly. A number of small-scale larval surveys have taken place over the years so we have an idea of where the dragonflies are breeding, which is at the western side of the reserve in shallow bog pools and runnels. In the summer of 2019 we had a record of an adult Northern Emerald near the boardwalk at the other side of the reserve, about four kilometres from the known breeding sites.

Last year we got together with the site managers, NatureScot, to discuss a dedicated Northern

Emerald survey to be carried out to research the species' distribution, and habitat preference, at the Moss. After receiving approval from the BDS Dragonfly Conservation Group, we approached Stirling University to see if any of the students would be interested in carrying out the research for their dissertation.

Ashleigh Campbell, who is studying for a Masters in Environmental Management (Conservation) was keen to take on the project and together we conducted a site visit in early November to look at where the larvae have previously been recorded. Unfortunately it was a cold day and all the pools were frozen over so we didn't find any larvae. However, it was a useful trip that helped familiarise Ashleigh with the reserve; in addition, we saw Snipe, Stonechat and a male Hen Harrier.

I look forward to working with Ashleigh to discover more about the life of the Northern Emerald at Flanders Moss.

In 2019 I was also lucky to see emerging Northern Emeralds when carrying out training at Beinn Eighe NNR in June. One was at Tansley Bog, which is also home to Azure Hawkers and White-faced Darters, and the species was also observed at a new site close to the path between the reserve and Kinlochewe.

White-faced Darter (left) and emerging Northern Emerald Dragonfly (right) observed at Beinn Eighe NNR



© Daniele Muir

© Daniele Muir



Nothern Emerald Dragonfly



The ancient landscape of Flanders Moss is made up of a mosaic of water, sphagnum moss and other specialised bog plants.

Northern Emerald Dragonfly Research Project

Ashleigh Campbell

The Northern Emerald Dragonfly (*Somatochlora arctica*) is an uncommon species which is most often found in moorland bogs and pools containing vast areas of Sphagnum. Flanders Moss National Nature Reserve has been identified as one of the hotspot areas for this flagship species. The nature of the Flanders Moss site is a perfect breeding ground for this species, although sightings have been few and far between.

As a postgraduate student, studying MSc Environmental Conservation, I have been given the opportunity to conduct further research on the elusive *Somatochlora arctica* in order to identify the factors which impact its status and distribution.

In collaboration with the British Dragonfly Society and Nature Scot, I will be looking at water chemistry as a driver for Northern Emerald status and distribution at Flanders Moss NNR. This will consist of collecting water samples for further analysis to identify whether pH and conductivity have an impact on species richness and community structure. This will lay the basis of further research and conservation of dragonfly species (including *Somatochlora arctica*), sighted and recorded within active raised bogs.





Volunteers carrying out maintenance in a dragonfly pool.

Dragonfly Hotspot Update

Danièle Muir

One of the main aims of our Hotspots is to engage people interested in dragonflies, and our summer guided walks and training days did just that. Autumn is the best time of year to carry out wetland management as it causes the least amount of disturbance to the wildlife in the pond.

Our volunteer day at Flanders Moss took place on a beautiful day in early October, with the aim being to open up one of the dragonfly pools by removing vegetation, and making it deeper and, therefore, less likely to dry out in summer. The vegetation and peat from the pool was then placed on top of an existing dam close by to increase its height and keep water on the Moss in times of high rainfall. Flanders Moss has undergone a substantial amount of peatland restoration over the past few years and is becoming increasingly wet, which is great news.

We were lucky to have a good number of volunteers turn up on the day. The task was run in conjunction with Scottish Natural Heritage (soon to be known as NatureScot) so we had SNH volunteers come along, as well as BDS participants, whose numbers were boosted by five Network Rail staff on one of their corporate volunteer days. The weather was warm and sunny and there were lots of dragonflies on the wing: Common Hawkers, Black Darters and Common Darters, some of which were very friendly and joined us for lunch!

We worked in three teams with the first and biggest team working in the pond. Steve from SNH had a drysuit on so was able to go in up to his waist while

a couple of people wheelbarrowed the material to the dam and a couple more placed the material on the dam.

It was a fantastic day where we achieved what we set out to do, and we had the added bonus of seeing lots of dragonflies which hopefully sparked off a love of Odonata amongst the new Network Rail Volunteers.

Our day at Portmoak Moss was run in conjunction with the site managers, the Woodland Trust, and local volunteers, Portmoak Community Woodland Group. Portmoak Moss is, like Flanders Moss, a raised bog which has undergone recent peatland restoration work. It was a very dreich day but we had a good number of volunteers to dig out a new dragonfly pond on the Moss, and use the material to fill in cracks in the peat dome where some water has been escaping. We removed some tree regeneration from the Moss too.

The trickiest part of the day was moving the peat from the new dragonfly pool to the edge of the Moss, as it involved wheelbarrowing the material across a very uneven peat bog surface! However, we were able to use some wooden boards that a contractor had left on site. We also created a hibernaculum close to the pond for any reptiles and amphibians on site. And as a thank you for our work, the Woodland Trust kindly took the volunteers out for lunch!

We had a few volunteers from Dundee High School's John Muir award to do some work at our Hotspot Crombie Country Park. The John Muir award is an environmental award scheme where participants discover, explore, conserve and share experiences about a wild place. We removed vegetation from Heron Pond, which needs regular management to



maintain areas of open water. We found a number of larvae so the students were able to see what amazing creatures dragonflies are.

Our final task of the autumn was at Morton Lochs and again we were very lucky to have a beautiful sunny day with a number of dragonflies on the wing. The aim of the day was to remove sedges and rushes that were growing vigorously in two areas that we have been trying to maintain with open water for the past few years.

All our tasks were run in partnership with the site owners/ managers – thanks to SNH reserve staff, Angus Alive Rangers, the Woodland Trust, Portmoak Community Woodland Group and all our fabulous BDS volunteers! There will be more of the same this autumn!

All images © Danièle Muir



Darter joins the volunteers for lunch.



Creating dragonfly pools at Portmoak



Volunteers at Portmoak



Checklist of British Species

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

Damselflies		Dragonflies	
Common Name	Scientific Name	Common Name	Scientific Name
Demoiselles (Calopterygidae)		Hawkers (Aeshnidae)	
Banded Demoiselle	<i>Calopteryx splendens</i>	Azure Hawker	<i>Aeshna caerulea</i>
Beautiful Demoiselle	<i>Calopteryx virgo</i>	Southern Hawker	<i>Aeshna cyanea</i>
Emerald Damselflies (Lestes)		Brown Hawker	<i>Aeshna grandis</i>
Emerald Damselfly	<i>Lestes sponsa</i>	Norfolk Hawker	<i>Anaciaeschna isoceles</i>
Scarce Emerald Damselfly	<i>Lestes dryas</i>	Common Hawker	<i>Aeshna juncea</i>
Coenagrionidae		Migrant Hawker	<i>Aeshna mixta</i>
Northern Damselfly	<i>Coenagrion hastulatum</i>	Emperor Dragonfly	<i>Anax imperator</i>
Irish Damselfly	<i>Coenagrion lunulatum</i>	Lesser Emperor	<i>Anax parthenope</i>
Southern Damselfly	<i>Coenagrion mercuriale</i>	Hairy Dragonfly	<i>Brachytron pratense</i>
Azure Damselfly	<i>Coenagrion puella</i>	Gomphidae	
Variable Damselfly	<i>Coenagrion pulchellum</i>	Common Clubtail	<i>Gomphus vulgatissimus</i>
Red-eyed Damselfly	<i>Erythromma najas</i>	Cordulegastridae	
Small Red-eyed Damselfly	<i>Erythromma viridulum</i>	Golden-ringed Dragonflies	<i>Cordulegaster bontonii</i>
Large Red Damselfly	<i>Pyrrhosoma nymphula</i>	Emeralds (Corduliidae)	
Common Blue Damselfly	<i>Enallagma cyathigerum</i>	Donwy Emerald	<i>Cordulia aenea</i>
Blue-tailed Damselfly	<i>Ischnura elegans</i>	Northern Emerald	<i>Somatochlora arctica</i>
Scarce Blue-tailed Damselfly	<i>Ischnura pumilio</i>	Brilliant Emerald	<i>Somatochlora metallica</i>
Small Red Damselfly	<i>Ceriagrion tenellum</i>	Darters, Chaser and Skimmers (Libellulidae)	
Platycnemididae		White-faced Darter	<i>Leucorrhinia dubia</i>
White-legged Damselfly	<i>Platycnemis pennipes</i>	Broad-bodied Chaser	<i>Libellula depressa</i>
* includes dark specimens in the north-west, formerly treated as a separate species		Scarce Chaser	<i>Libellula fulva</i>
		Four-spotted Chaser	<i>Libellula quadrimaculata</i>
		Black-tailed Skimmer	<i>Orthetrum cancellatum</i>
		Keeled Skimmer	<i>Orthetrum coerulescens</i>
		Black Darter	<i>Sympetrum danae</i>
		Yellow-winged Darter	<i>Sympetrum flaveolum</i>
		Red-veined Darter	<i>Sympetrum fonscolombii</i>
		Ruddy Darter	<i>Sympetrum sanguineum</i>
		Common Darter	<i>Sympetrum striolatum</i> *

Table 2. Category B: vagrant species: Since 1998 records of these species have been assessed by the Odonata Records Committee.

Damselflies		Dragonflies	
Common Name	Scientific Name	Common Name	Scientific Name
Emerald Damselflies (Lestes)		Hawkers (Aeshnidae)	
Southern Emerald Damselfly	<i>Lestes barbarus</i> **	Southern Migrant Hawker	<i>Aeshna affinis</i>
Willow Emerald Damselfly	<i>Lestes viridis</i> **	Vagrant Emperor	<i>Anax ephippiger</i>
Winter Damselfly	<i>Sympecma fusca</i>	Green Darner	<i>Anax junius</i>
Coenagrionidae		Gomphidae	
Dainty Damselfly	<i>Coenagrion scitulum</i>	Yellow-legged Clubtail	<i>Gomphus flavipes</i>
** - has bred. † - has bred in the Channel Islands		Darters, Chaser and Skimmers (Libellulidae)	
		Large White-faced Darter	<i>Leucorrhinia pectoralis</i>
		Scarlet Darter	<i>Crocothemis erythraea</i> †
		Banded Darter	<i>Sympetrum pedemontanum</i>
		Vagrant Darter	<i>Sympetrum vulgatum</i>
		Wandering Glider	<i>Pantala flavescens</i>
		Yellow-spotted Emerald	<i>Somatochlora flavomaculata</i>

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

Damselflies		Dragonflies	
Norfolk Damselfly	<i>Coenagrion armatum</i>	Orange-spotted Emerald	<i>Oxygastra curtisii</i>



List of BDS County Dragonfly Recorders, last updated 6 March 2020

BDS RECORDING SCHEME

Please submit records directly through iRecord or send them in bulk to the local County Dragonfly Recorder for upload.

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	
8. South Wiltshire		07970 875155. rosiehams@yahoo.co.uk
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	*	<i>Position vacant.</i>
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	
16. West Kent		07834 280205. heathym007@aol.com
17. Surrey ¹	Bill Budd	07968 297045. rab@budd.demon.co.uk
18. South Essex ¹	Neil Phillips	
19. North Essex		neil_fal@yahoo.com / @uk_wildlife
20. Hertfordshire ¹	Roy Woodward	62c High Street, Cheshunt, Hertfordshire EN8 0AH 07855 567332. roy.rkwoodward@ntlworld.com
21. Middlesex ¹	Nigel Scott	55 Manygate Lane, Shepperton, MIDDLESEX, TW17 9EJ Tel 01932 267645. nigel.mcm@ntlworld.com
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	
26. West Suffolk		10 Orchard Way, Barrow, Bury St Edmunds, Suffolk, IP29 5BX 01284 810 465. adrian.parr@btinternet.com
27. East Norfolk	Pam Taylor	
28. West Norfolk		Decoy Farm, Decoy Rd, Potter Heigham, Norfolk, NR29 5LX 01692 670 311. pamtaylor@british-dragonflies.org.uk
29. Cambridgeshire	Val Perrin	13 Pettitts Lane, Dry Drayton, Cambs, CB23 8BT * Te: 01954 780467. valperrin@aol.com
30. Bedfordshire	Rory Morrisey	25 Alwins Field, Leighton Buzzard, LU7 2UF 01525 372477. dragonflies@bnhs.org.uk
31. Huntingdonshire	Val Perrin	<i>See VC 29, above</i>
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	Ingrid Twissell	
34. W. Gloucestershire		Arfonia, The Green, Churchdown, Glos., GL3 2LE 01452 714413. canditwissell@btinternet.com
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



List of BDS County Dragonfly Recorders, last updated 6 March 2020

40. Shropshire	Vicky Fletcher	45 Shropshire Street, Market Drayton, Shropshire, TF9 3DA 07598 938660. info@shropshiredragonflies.co.uk / 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, Clarbston 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, Clarbston 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.british-dragonflies.org.uk/local_groups/north-wales-dragonflies
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@btpopenworld.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, Hushwaite, 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	*	<i>Position vacant.</i>
67. S. Northumberland	Michael Gardner	11 Garden Crescent, Ebchester, CONSETT, County Durham, DH8 0PT 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. iomodoni@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.

