



Durham
Wildlife Trust
From Tees to Tyne



Dragonfly Survey 2022
Vice County 66
Durham Wildlife Trust Region



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Summary

The British Dragonfly Society (BDS) works in conjunction with the Durham Wildlife Trust (DWT) to actively survey the region between the River Tees and the Tyne. This approach allows us to pay particular attention to a wide range of known sites, plus pick up any other recorded sightings within the region.

The first excellent news is that there continues to be considerably more sightings recorded. A “sighting” could be any number of a particular species, with the range in 2022, being from 1-300 spotted at each sighting. There were 3932 sightings in 2022, compared to 2315 in 2021 and 1257 during 2020 (lockdown year). Having said that, 1200 came from one observer, and primarily at one site, so we still need to increase the number of regular contributors.

In recent years it has been apparent that there are 19 resident species in VC66, plus the occasional visitor that gets the local Odonata spotters excited and brings the total of observed species up to 21. 2022, turned out to be a particularly interesting year, with a single confirmed sighting at RSPB Salthome of a **Southern Migrant Hawker**, which caused a paparazzi like swarm of photographers for a few days. However, no other sightings were reported of the individual Hawker, who became the record holder for the most northerly sighting ever. Then at Twizell Woods, a photo of a strange looking Skimmer was identified as a **Keeled Skimmer**, a first since I have been Recorder. As Twizell is such an excellent site for breeding, we will be paying particular attention in 2023.

Another high point was the large number of breeding **Small Red Eyed Damselfies** at Brasside Pond just outside Durham, making it the most northerly confirmed breeding site in the UK. One was also spotted further north at Washington Wildlife and Wetlands Trust, so again, we will be monitoring those locations carefully in 2023.

Lastly, in terms of exciting sightings, over 300 **Migrant Hawkers** were spotted on 13th September at Oakenshaw Nature Reserve, most of which were coupling or laying eggs, so next September we expect a similar show.

In 2022, a small group of DWT spotters were also fortunate to be allowed (after some H&S training) to survey 3 Northumbrian Water sites that are not accessible to the public. 24 visits were made throughout the season and 9 species were spotted, however, we were thwarted by the weather on many occasions, and nothing was seen. We had expected there to be far more Odonata, and recommendations will be made on how to make the sites even more attractive to different species.

The season started on the 20th of April with the first **Large Red Damselfly** being seen at Twizell Woods, making it the first site in the north to have an Odonata sighting. Possibly due to the wet winter, or simply more observers, there were 275 sightings of Large Reds compared to 183 in 2021. While the wet winter might have helped them, the incredibly dry summer did not, and they were last seen on August 4th. The Summer was one of the driest on record and most small ponds were dry until the end of the season, plus some of the

larger ones such as Shibdon, which was very upsetting as this will probably impact the number of early species next year.

The second species to appear was an **Azure Damselfly** on May 3rd and a **Blue-tailed Damselfly** on May 4th. In total, 9 species emerged during May, up from 6 in 2021, so again it would appear that the weather was favourable in the Spring.

Normally in VC66 we only see Damselflies until well into June, apart from the occasional individual Dragon, but in 2022, both **Four Spotted and Broad Bodied Chasers** were being seen from 8th May, with the first **Southern Hawker** on 18th May, and a **Golden Ringed Dragonfly** on the 24th, so all very early. As mentioned, the excitement soon wore off when many of the sites at which they were laying eggs, dried up during the Summer.

Once again, we missed out on **Beautiful Demoiselles** who are often tantalisingly close to our borders but don't stray across the River Tees or Tyne. Luckily though, the River Wear provides an ideal habitat for the **Banded Demoiselle**, and they were spotted on 93 occasions at a variety of locations between 15th May and 17th August, which is 4 weeks more than the year before.

Golden Ringed Dragonflies continue to evade most spotters, with just 8 people recording them, however, one spotter knows where they are and recorded them on 71 (out of 79) occasions. Therefore, if you want to see the Golden Ringed Dragonfly, you should go to DWT Black Plantation in June, Langley Park Wetlands or Oakenshaw NR during June/July.

There was one unconfirmed sighting of a **Willow Emerald Damselfly** at Joe's Pond (Rainton Meadows). The spotter is from the south and knows them well, but as there was no photographic evidence and an exhaustive search by other spotters could not confirm it, we will put it as a "maybe". A study of the overhanging branches at Joe's Pond has not recorded any of the tell-tale scarring that is caused by Willow Emeralds when they lay their eggs.

The most common species in VC66 was the **Common Darter**, observed on 494 occasions, closely followed (441) by the **Blue Tailed Damselfly**. **Southern Hawk**s, often thought to be the most common in the UK, came in third with 379 sightings, followed by the **Azure Damselfly** with 341. Interestingly, the quintessential Damselfly, the **Common Blue**, was 7th. One "bad" year doesn't make for a trend, and it could be that spotters are getting better at differentiating Azures from Common, however, we will monitor this species.

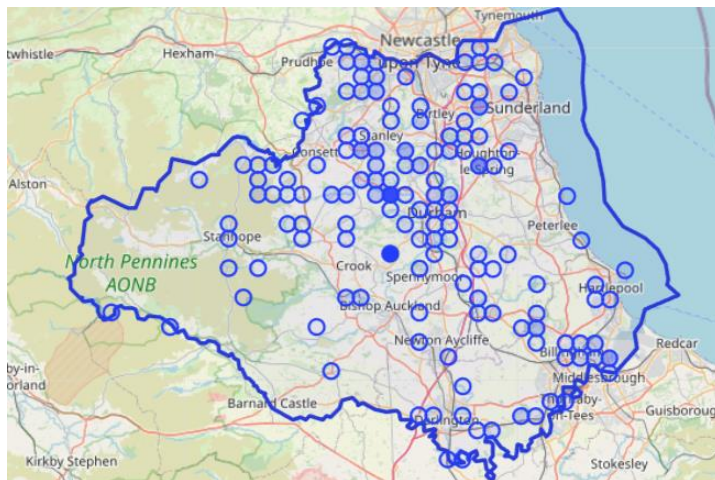
Emperor Dragonflies continued to become far more common than they used to be, and their bold territorial patrolling right next to humans makes them a delight to see. 4 years ago they were hardly observed in this region, but in 2022 they were observed on 194 occasions at 29 locations.

Autumn brought the **Migrant Hawk**s as usual, and while they were spotted 227 times, most of those were at Oakenshaw NR where the large ponds just managed to keep at least some water. As they tend to emerge around the time that the region's small ponds dried out, it appears that their numbers were impacted at such sites. Hopefully, after a mass emergence at Oakenshaw NR, many of them will have spread out and laid eggs.

Another species that seems to be on the rise, is the **Black Tailed Skimmer**. Hardly seen 4 or 5 years ago, they were spotted at 9 sites, and they appear to be spreading.

Black Darter sightings were down, however, that is mainly due to one spotter not visiting the main stronghold, Greencroft NR in Anfield Plain, as often as other years. They like boggy areas and so they are generally in locations that spotters find difficult to get to, so it is likely that they are more common than our survey indicates.

The season ended a couple of weeks after most of us had packed away our binoculars and field guides, when a hardy Common Darter was photographed at Rainton Meadows on 26th November. This is two weeks later than ever seen in recent years.



The sightings in VC66 continue to primarily come from the central region, although there were more from near the coast this year. Spotters are encouraged to look in the areas that do not have circles on this summary map.

Sites to visit in 2023, if you want to spot a wide variety of species are: Rainton Meadows, Low Barns, Twizell Woods, Oakenshaw NR, RSPB Salthome, Wildfowl and

Wetlands Trust (Washington) and Daisy Hill LNR. Ward Jackson Park near Hartlepool has also been mentioned by a few keen spotters, and it was one of the locations at which Small Red Eyed Damselflies were spotted. To see the best sites in VC66, [use this link to view a Google Map](#) that includes directions, parking information and a little detail on what you might see.

In 2022, three BDS/DWT guided walks were run, and it is hoped now that restrictions have eased, that far more will go ahead in 2023. These will be on the [Durham Wildlife Trusts Events page](#) and will be circulated by the BDS. My thanks as always to those who submit sightings.

Cover photo Christopher Bill

Background

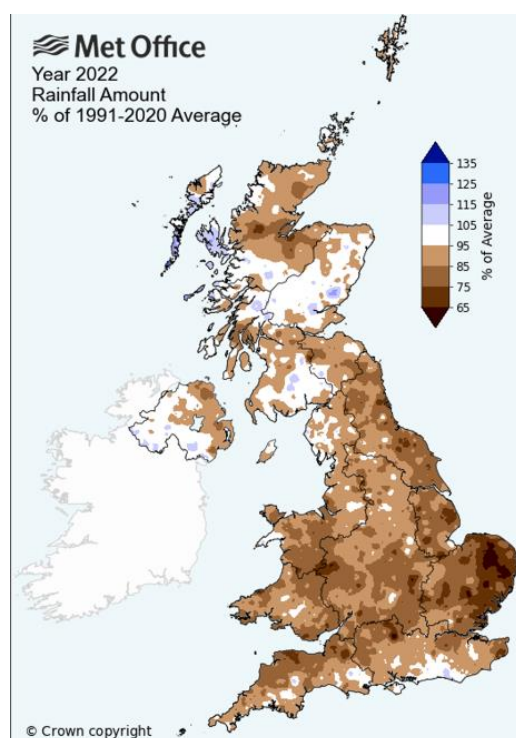
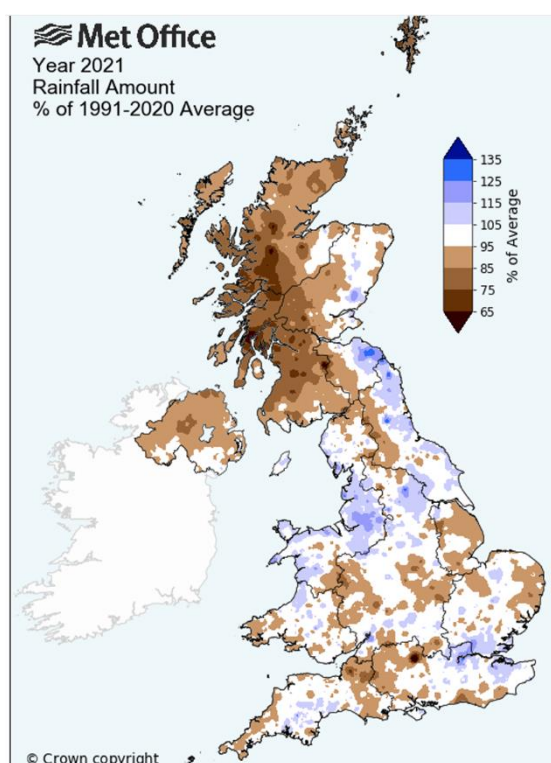
The Durham Wildlife Trust owns and manages 50 nature reserves throughout the former County Durham region (VC66), between the River Tyne and the River Tees.

(<https://durhamwt.com/reserves/>). For some years, the DWT has surveyed Odonata at those sites along with ones in nearby nature corridors. That survey is now combined with the records submitted via iRecord to create this joint BDS/DWT report.

The northeast of England generally has a cooler climate than the rest of England as the weather is impacted by air masses, that in turn are influenced by very cold winds from the Arctic. The VC66 region is also very close to the coast, and sea surface temperatures vary from about 5°C in winter to 13°C in summer (compared to a range of 8 °C to 18 °C off SW England).

However, in recent years the annual temperature has been increasing and rainfall has become less predictable, with long dry spells often followed by flooding. Possibly due to global warming, since 2001, five species, Migrant Hawker (*Aeshna mixta*), Emperor Dragonfly (*Anax imperator*), Ruddy Darter (*Sympetrum sanguineum*), Willow Emerald Damselfly (*Chalcolestes viridis*) and Hairy Dragonfly (*Brachytron pratense*), have moved progressively north, and once again, three of those species were observed as part of this survey.

2022, was memorable for the very hot Summer that left many ponds and streams dry. The difference in the North East between 2022 and 2021 is easy to see if you compare these two Met Office summaries showing average rainfall compared to the national average since 1981.



The dry weather meant that most surveyed ponds dried out completely for a couple of months and many still did not have more than 10% of their usual levels towards the end of the season. The big difference in 2022, however, was that this also applied to much larger ponds and lakes, for instance, Shibdon Pond near Gateshead. Normally it looks like this.



However, by the end of September, it had totally dried up, with this second photo taken on September 11th.



While Odonata are more prevalent in hot countries and warmth encourages emergence and flight activity, if it leads to wet areas drying out it both limits the locations at which eggs can be laid and might kill off larvae. So, the question is, will 2023 see a dramatic drop in the species that emerge first, and will they have completed their breeding cycle before the ponds etc dried up?

To understand that we need to look at countries in which drought is more commonplace and also understand the breeding cycle of Odonata. The author spends many months per year in Mexico, near to two ponds similar to Shibdon Pond in size. In recent years they have dried up completely in Winter (rain falls in the Summer) and yet Odonata appeared to be unaffected. While it is possible that the observed Odonata had emerged from other local waterways, it is also likely that the eggs and possibly the larvae survived in vegetation such as reeds. To see how that is possible, here is a brief summary of the early life stages of Odonata.

Egg Laying (Ovipositing)

Many readers will be familiar with female Odonata repeatedly dipping their Ovipositors in water, sometimes with the male still attached. However, there are two distinct methods for egg laying which are thought to be carried out to protect their eggs from predation, excessive heat and drought. The first method is "*endophytic oviposition*" where the eggs are inserted one at a time inside living or decaying aquatic plants, wet dead wood, or mud. Hawkers and most damselflies lay their eggs in this manner. In the photo below (Ian & Elaine Burnell), two female Southern Hawkers have decided that this piece of wet dead wood is the best place for their eggs. Placing an old log at an angle into your pond is a great method for encouraging Hawkers to breed there.





Damselflies often lay their eggs in vegetation very close to the surface, but if you observe them long enough you might see that they then go well below the surface, relying on a thin layer of air to bring them back up at some point – a technique that doesn't always end well.

The Blue Tailed Damselfly on the left is just starting that journey. (M Coates).

This Emperor Dragonfly (M Coates) is laying eggs into vegetation underneath the water surface, however, they have been seen doing so well away from existing water, the logic probably being that the water level will rise later in the season.



The second method is called “*exophytic oviposition*” and that is the dipping motion we often see. Eggs laid in this way have a jelly-like covering that helps them bind to any underwater vegetation.

In this photo (Joe Finlay), Common Darters are laying their eggs in shallow water with access to mud and vegetation. The photo also highlights how clear the wings are of most UK Odonata, which is helpful for ID when you see one with distinctly coloured wings.

The Emerald Damselfly, Darters and Chasers oviposit exophytically, and it's them you see covering large areas of water

and mud. Their eggs are most at risk if there is a prolonged period of drought, with their only chance being to sink down into mud crevices that remain moist.

Eggs laid in the Summer are likely to hatch within a few weeks due to the warm weather, however, those laid late in the season might not do so until the following year, meaning that

eggs can remain in a state called “diapause” if the conditions are not optimal. This diapause is the same process that stops larvae from emerging during the winter. Similarly, eggs inserted into vegetation will typically only hatch when the surrounding area appears to be wet enough, meaning that the prolarva will get out of the vegetation and fall or drift into the water. This could be the following year or potentially only when their surroundings appear to be moist again.

Once in the water, the larva moults at various stages as it grows, and to do this it needs to eat. Therefore, if the eggs have hatched just before the pond dries out, it is likely that they will not survive. So going back to our ponds in 2022, the impact will primarily have been on larvae and to a slightly lesser extent on the eggs that had already been laid. It is possible that the mass emergence of Migrant Hawkers at Oakenshaw was triggered by the rapidly receding water and that might have also triggered other larvae in the region to emerge. That’s the theory, and we will know a few months after this report comes out whether we see the emergence of early species such as the Large Red Damselfly, or not.



The good news is that December 2022 was very wet and so the smaller ponds are full again, for instance, this pond hidden at the back of Milkwellburn Wood, which was completely dried out in the Summer. This photo was taken on 1st February 2023. You can clearly see the bright green long grass that had grown in the mud when

the pond was dry. This is the result of “pond succession” and if it happens repeatedly, the pond becomes a marshy area and then wood or grassland. While rewilding supporters would see this as a natural next step, for our Odonata, unless new wetland areas occur then this will impact their breeding. Most larger DWT ponds have a management plan which aims to ensure at least 30% of the pond is free of vegetation, but for those sites with no such plan, succession is likely.

Method



In recent years a number of identification training sessions were run, and outdoor ID talks acted as a refresher.

There are two methods by which sightings were recorded. Firstly, using an application developed by the author for reporting sightings at DWT sites and other hotspots.

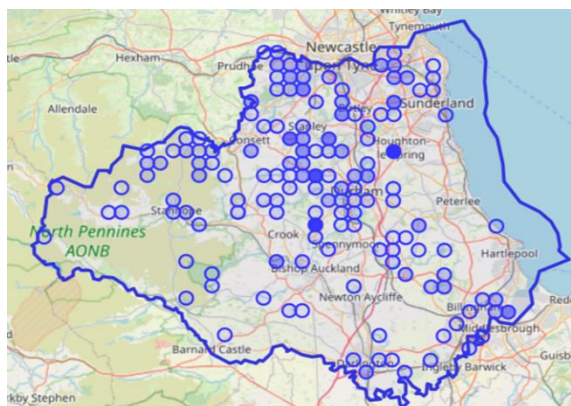
For 2023, use this URL to access it <https://survey.protostarsurveys.com/zs/o6zhYB>

The other method is via [iRecord](#), into which at the end of the season, all the DWT data is uploaded. While the iRecord data is used in national studies, it has quite limited reporting capability compared to the DWT app, hence the two methods in our region. A number of people also report sightings via the iNaturalist app, which as of 2022 also links with [iRecord](#).

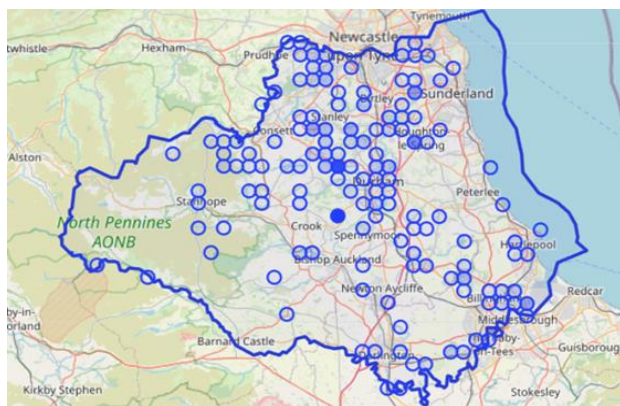
Whatever the method of submission, photographic evidence is encouraged even for the common species, as it is so easy to make a mistake and it provides us with a great source of images. In the event of a record being submitted by a new observer for a “scarcer” species, if no photographic evidence was provided, then normally the author would visit the same location to confirm. As this is not always possible, photographic evidence is encouraged, especially for rarer species.

Locations

In 2022, although there were many more records, they were concentrated on slightly fewer sites, with the west of the region not being surveyed at all. This is one of the downsides of relying on spotters doing so casually, and in 2023, it may require some specific requests to be made in order to ensure a suitable spread of surveys. NB: darker colour indicates more sightings or sightings from sites in close proximity.



2021



2022

2021/22 Odonata Sightings in VC66

Only nine DWT reserves were surveyed, down from thirteen, so in 2023 spotters are urged to visit DWT reserves more often. Low Barns, one of the North East's best sites for Odonata was only surveyed on five occasions, compared to forty-two at Rainton Meadows. Particularly as the Trust took on new locations in 2022, about which we know very little, DWT sites need to be the priority as we have direct control over their management and can make changes that will support Odonata.

The British Dragonfly Society (BDS) denotes a site in the North East to be a "Priority Site" if it has:

- Nationally scarce species breeding (none of ours do)
- Locally scarce species breeding (Brasside Pond – Small Red Eyed Damselfly)
- 14 or more species

Within VC66 the following sites are therefore considered to be "Priority", however, as other great sites such as Low Barns were hardly surveyed, it is quite possible that they also meet the criteria.

- Brasside Pond – Small Red Eyed Damselfly
- Oakenshaw Nature Reserve (16 species)
- Langley Park Wetlands (16)
- Rainton Meadows/Joe's Pond (14),
- RSPB Salthome (14, including a single Southern Migrant Hawker)

Coatham Woods (13), Cowpen Bewley NR (13), Greencroft BR (12) are not far behind.

The site that was surveyed the most, mainly by Keith Walton, was Oakenshaw NR with eighty surveys resulting in over six hundred sightings of individual species, which when multiplied by the number of each species, means that thousands of Odonata were observed. On September 13th, three hundred Migrant Hawkers were observed, something that would have gone unnoticed if it had not been for Keith's ongoing dedication. Similarly, he also surveyed Langley Park Wetlands (NZ 2145, near Diggerland) on many occasions, with sixteen species recorded, including many Common Hawkers.

Account of Species

Species by Number of Recorded Sightings (Times Observed)

NB: A sighting means at least one was seen, it is not the quantity observed.

Accepted name	Common name	No. of records	First record	Last record
1. <i>Sympetrum striolatum</i>	Common Darter	494	07/06/2022	26/11/2022
2. <i>Ischnura elegans</i>	Blue-tailed Damselfly	441	04/05/2022	21/09/2022
3. <i>Aeshna cyanea</i>	Southern Hawker	379	18/05/2022	07/11/2022
4. <i>Coenagrion puella</i>	Azure Damselfly	341	03/05/2022	11/09/2022
5. <i>Aeshna juncea</i>	Common Hawker	277	24/05/2022	17/10/2022
6. <i>Pyrrhosoma nymphula</i>	Large Red Damselfly	275	20/04/2022	04/08/2022
7. <i>Enallagma cyathigerum</i>	Common Blue Damselfly	271	14/05/2022	15/09/2022
8. <i>Lestes sponsa</i>	Emerald Damselfly	232	07/06/2022	01/10/2022
9. <i>Aeshna mixta</i>	Migrant Hawker	227	18/07/2022	07/11/2022
10. <i>Libellula quadrimaculata</i>	Four-spotted Chaser	195	14/05/2022	17/08/2022
11. <i>Libellula depressa</i>	Broad-bodied Chaser	194	08/05/2022	04/08/2022
12. <i>Anax imperator</i>	Emperor Dragonfly	194	07/06/2022	15/09/2022
13. <i>Orthetrum cancellatum</i>	Black-tailed Skimmer	94	03/06/2022	15/09/2022
14. <i>Calopteryx splendens</i>	Banded Demoiselle	93	15/05/2022	17/08/2022
15. <i>Aeshna grandis</i>	Brown Hawker	86	07/06/2022	15/09/2022
16. <i>Cordulegaster boltonii</i>	Golden-ringed Dragonfly	79	24/05/2022	21/08/2022
17. <i>Sympetrum danae</i>	Black Darter	31	08/07/2022	28/09/2022
18. <i>Sympetrum sanguineum</i>	Ruddy Darter	28	12/07/2022	30/10/2022
19. <i>Erythromma viridulum</i>	Small Red-eyed Damselfly	10	25/07/2022	27/08/2022
20. <i>Orthetrum coerulescens</i>	Keeled Skimmer	1	08/07/2022	08/07/2022
21. <i>Aeshna affinis</i>	Southern Migrant Hawker	1	12/08/2022	12/08/2022

Species in VC66 in order of Emergence

NB: 2021 sightings Show as ().

Accepted name	Common name	No. of records	First record	Last record
<i>Pyrrhosoma nymphula</i>	Large Red Damselfly	275 (183)	20/04/2022	04/08/2022
<i>Coenagrion puella</i>	Azure Damselfly	341 (232)	03/05/2022	11/09/2022
<i>Ischnura elegans</i>	Blue-tailed Damselfly	441 (166)	04/05/2022	21/09/2022
<i>Libellula depressa</i>	Broad-bodied Chaser	194 (122)	08/05/2022	04/08/2022
<i>Enallagma cyathigerum</i>	Common Blue Damselfly	271 (196)	14/05/2022	15/09/2022
<i>Libellula quadrimaculata</i>	Four-spotted Chaser	195 (147)	14/05/2022	17/08/2022
<i>Calopteryx splendens</i>	Banded Demoiselle	93 (61)	15/05/2022	17/08/2022
<i>Aeshna cyanea</i>	Southern Hawker	379 (243)	18/05/2022	07/11/2022
<i>Aeshna juncea</i>	Common Hawker	277 (63)	24/05/2022	17/10/2022
<i>Cordulegaster boltonii</i>	Golden-ringed Dragonfly	79 (27)	24/05/2022	21/08/2022
<i>Orthetrum cancellatum</i>	Black-tailed Skimmer	94 (72)	03/06/2022	15/09/2022
<i>Sympetrum striolatum</i>	Common Darter	494 (325)	07/06/2022	26/11/2022
<i>Lestes sponsa</i>	Emerald Damselfly	232 (132)	07/06/2022	01/10/2022
<i>Anax imperator</i>	Emperor Dragonfly	194 (60)	07/06/2022	15/09/2022
<i>Aeshna grandis</i>	Brown Hawker	86 (74)	07/06/2022	15/09/2022
<i>Sympetrum danae</i>	Black Darter	31 (32)	08/07/2022	28/09/2022
<i>Orthetrum coerulescens</i>	Keeled Skimmer	1 (0)	08/07/2022	08/07/2022
<i>Sympetrum sanguineum</i>	Ruddy Darter	28 (36)	12/07/2022	30/10/2022
<i>Aeshna mixta</i>	Migrant Hawker	227 (141)	18/07/2022	07/11/2022
<i>Erythromma viridulum</i>	Small Red-eyed Damselfly	10 (3)	25/07/2022	27/08/2022
<i>Aeshna affinis</i>	Southern Migrant Hawker	1 (0)	12/08/2022	12/08/2022

Azure Damselfly (Coenagrion Puella)



Azures were spotted on 341 occasions (up from 232) at 44 separate locations.

The rise in numbers, as is the case with most species detailed in this report, is partly due to one observer submitting so many records. However, as he also did so in 2021, it is also true that other observers were correctly identifying Azure's

more often. This is probably an opportune point to remind everyone of the easiest way to tell the difference between the Azure and the Common Blue, however, it is acknowledged that if you are looking at a large group of damselflies, an estimate will have to be made of how the species were split.



The Azure Damselfly has broader black stripes on the top of the thorax, and is thinner than a Common Blue, however, without a Common Blue nearby, those differentiations might not help. Look for the black cup shape on S9 and 10 plus the black half spur on the side of the thorax. The Common Blue

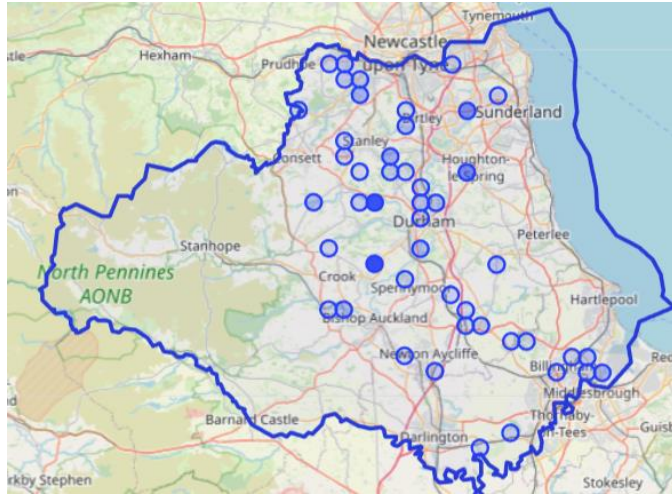
has uninterrupted blue at the end of its appendix (S9 and 10) and uninterrupted blue sides to the thorax.

Azure females are *polychromatypic* meaning that they can be seen in two distinct colour forms, with green being the more common, as well as the less frequent blue form. As the green form comprises 90% of the UK's sightings, **a challenge for 2023 is to look for blue form female Azures.**

Azures prefer small sheltered lakes/ponds and occasionally slow-flowing water. They tend to avoid acidic water and sites with little marginal and aquatic vegetation, into which they would insert their eggs. In colder regions such as the North East, there have been studies indicating that larvae might take up to two years to emerge, with females tending to emerge first.

Azures were seen in large numbers at Langley Park Wetlands, Oakenshaw Wildlife Reserve, Rainton Meadows, Washington Wildfowl Reserve and Twizell Woods, plus they were seen across the center part of the region.

Sightings started on 14th May and ended 15th September, which is only a day either side of 2021 sightings.



As can clearly be seen in the map, most sightings were in a central corridor, so in 2023, spotters are asked to also go further west. Many Azures were seen coupling and laying eggs, however, as their season ended when the smaller ponds were dried up, it is likely that in 2023 Azures will primarily emerge from larger lakes.

2022 Azure Damselfly Sightings VC66

Banded Demoiselle (*Calopteryx splendens*)



The Banded Demoiselle is a particularly striking damselfly, which is probably why in some countries it is called a Banded Jewelwing. They have metallic blue or green bodies and partly tinted wings. The males have a distinct dark band in their wings (see photo on left).

Their flight style is also distinctive, with a slow fluttering flight and their wings can be distinctly seen to flick with each beat.

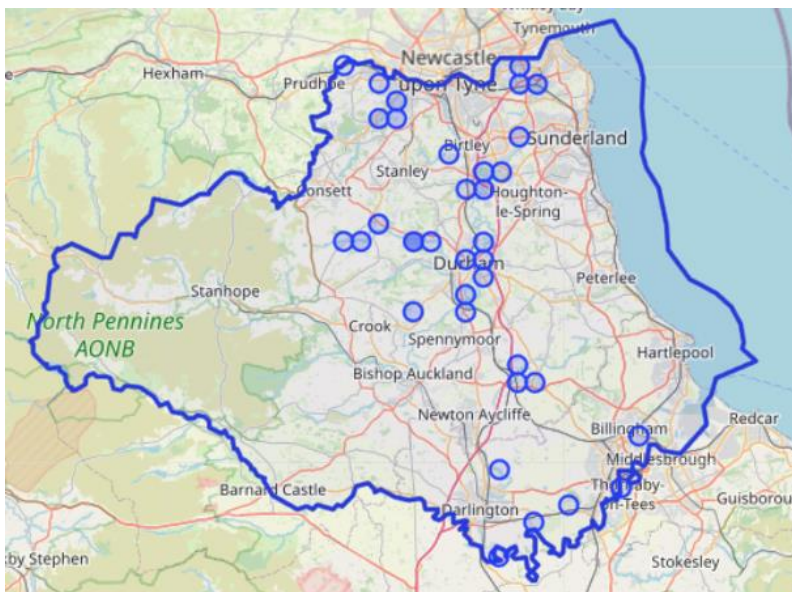
They prefer slow moving rivers or streams, but going by the records, they clearly maintain quite large hunting territories, with some sightings coming well away from potential breeding areas. Those sightings also tended to be females (see photo on right) and that would concur with studies indicating that the females tend to stay away from rivers until they are ready to mate. Having said that, the 31 locations (up from 28), mainly consisted of paths or bridges next to the River Wear, Browney or Skerne.



Spotters may well also see groups of Banded Demoiselle, and it is well worth watching them for some time if it is at the edge of a river. Males fly in front of the females and display an exaggerated wing flicking action, and they might then fly down to the water with their abdomen pointing upwards. This is thought to be a means of suggesting to the female that it's a good place to mate and lay eggs. If this approach works, then coupling is brief and the female will fly off to lay eggs inside vegetation.

Their larvae typically do not emerge for two years, and as they spend most of their time in sediment at the bottom of rivers, they are less likely to have been impacted by the dry Summer.

The season started on 15th May (early) in Durham next to the River Wear, and they bowed out at around the usual date on 17th August, at Bowesfield Nature Reserve.



Sadly, once again we did not see any Beautiful Damselflies, despite sightings south of our border at Forge Valley and Scarborough. So if you have never seen one, it would be worth heading down the A19 for the day, as Forge Valley is excellent for Odonata.

2022 Banded Demoiselle Sightings VC66

Black Darter (*Sympetrum danae*)



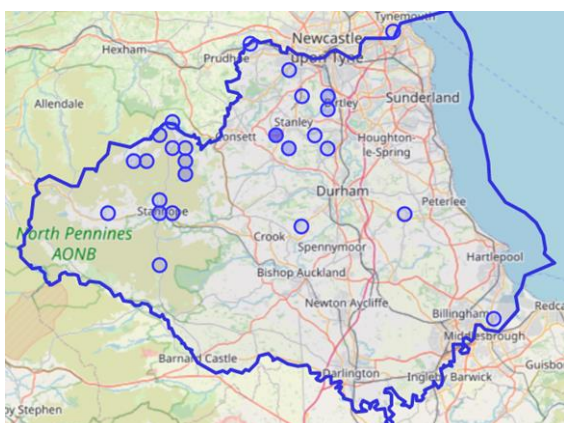
Black Darters were seen at 14 locations (up from 13), which is particularly important as the [BDS State of Dragonfly report](#), shows that Black Darter numbers have fallen considerably over the last 50 years and the trend continues.

They are unfamiliar to many spotters in the North East, so here is a quick refresher. Usually seen in late Summer (in 2022, it was from 8th July to 28th September), they are characterised by short erratic flight patterns. They prefer boggy acidic ground or ponds. The immature male on the left is partially black, while the mature male on the right is very dark. The female

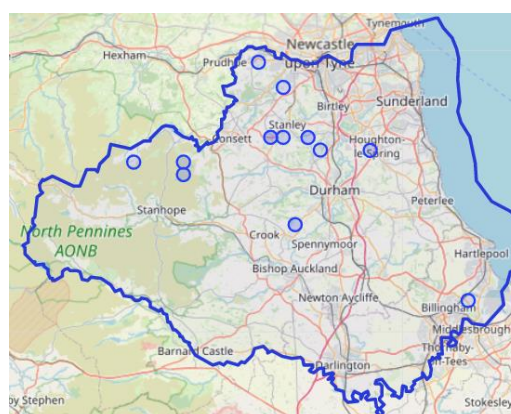
has a black underside on an otherwise golden abdomen. Females can get very dark like males, when “very old”.

Both sexes when immature, are golden in colour which can lead to misidentification. With immature males and females, look for dark markings on the top of S8-10. Males have a nipped “waist” around S3 and their legs are completely black.

As can be seen in the distribution map, there were no records from the west in 2022, unlike in 2021, despite the fact that this Darter likes mires and blanket bogs. Lack of accessibility for spotters to such sites might be the reason.



2021 Black Darter Sightings VC66



2022 Black Darter Sightings VC66

Known breeding sites with multiple sightings include, Oakenshaw Wildlife Reserve, Twizell Woods, Rainton Meadows, and their stronghold at Greencroft NR.

Sightings started at Rainton Meadows, quite early in the season (8th July), and they were last seen at Greencroft NR on 28th Sept, which was also an early finish.

Black Tailed Skimmer (*Orthtrum cancellatum*)



While they were spotted on 94 occasions, most of those were at Oakenshaw NR, with Rainton Meadows and RSPB Salthome also having breeding pairs.

Part of the reason why relatively few other spotters saw them is that they tend to lay on asphalt or bare ground, making them difficult to spot.

This female, seen at Rainton Meadows by

Christopher Bill, has a deformed wing, but like many Odonata with damaged wings, it does not appear to be impacted. They prefer to rest on paths, bare ground and short grass as they are *thermophilic* at all stages, meaning they seek out the warmest conditions in the water or on land. The larvae live in shallow water, and as mentioned, adults like to bask on

warm surfaces. Emergence might be delayed for 12 months in cooler years, possibly for that reason. Therefore, as the North East gets warmer we might see them emerge consistently after one year.



While they are very distinctive once you see them close up (their body shape and colouring), they can, from a distance or in flight, be mistaken for Broad Bodied Chasers.

Immature males and females

look very similar, and apart from a yellow *costa* (leading wing edge), they have a characteristic black ladder pattern on their abdomen. To tell the gender difference, look at the anal appendages (spread out on the female) and also the male has dark blue green eyes, compared to a light olive colour for females. The second photo (Joe Finlay), clearly shows this male's Yellow costa, dark black *pterostigma* (wing markings) and while the angle does

not allow you to see the yellow side dots, the blue and black abdomen is obvious, as are its olive green eyes.



Confusingly though, immature males look a lot like females. In this photo by Keith Walton, an immature male is golden like the female, also with black markings. However, even at this young age the end of the abdomen is black, and the markings are more pronounced than in the female. A close up of its appendages shows them to be close together where they join S10, whereas a female's are spaced apart.

Mating is often done on bare ground and can be prolonged. (Photo M Coates).



Up until a few years ago, Black Tailed Skimmers were rare in VC66, and their continued spread reflects the national trend.

BDS suggested distribution is from the north of England to south, from April to October.



Our sightings were for a shorter season, from 3rd June at Rainton Meadows (therefore likely they are breeding there) to 15th September at Oakenshaw NR.

2022 Black Tailed Skimmer Sightings VC66

Blue Tailed Damselfly (*Ischnura elegans*)



In the recent [BDS State of Dragonflies report](#) that summarises the last 50 years of records, it was apparent that the Blue Tailed Damselfly seems to be in decline over the last 10 years.

Bearing in mind that the Blue Tailed is one of the most pollution-tolerant species, it is possible that they have been impacted in recent years by the use of neonicotinoid pesticides (Barmantlo et al., 2019) which were introduced in 1991. Therefore, the Blue Tailed Damselfly is one to keep a close eye on.

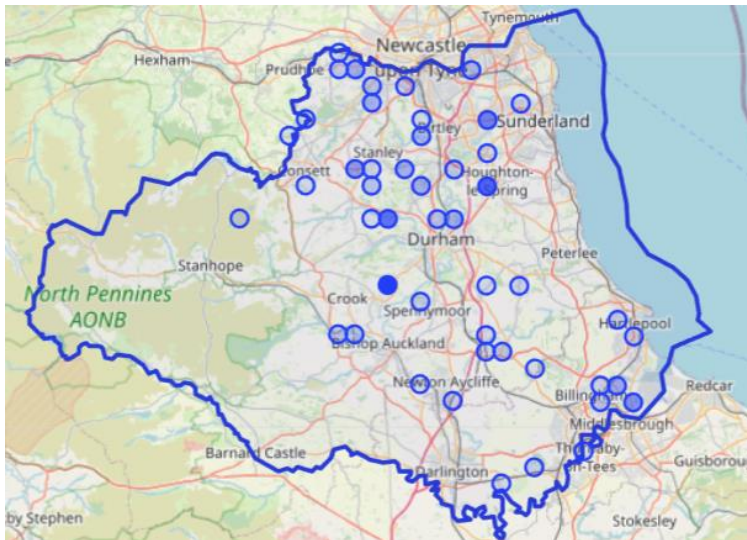
In VC66 during 2022, there were 442 sightings up from 166 the year before, which is excellent news.

They were seen at a wide variety of sites, and apart from the locations mentioned a few times so far, they were also seen in abundance at, Bowes Valley NR, Brasside Pond, Cowpen Bewley NR, Daisy Hill NR, Gibside NT, Stargate Ponds and RSPB Salthome. They were also present at the Northumbrian Water sites we were allowed access to.

One of the interesting characteristics of the Blue Tailed Damselfly is that they have a range of colour forms, which also vary with age. Males appear dark, with a metallic black abdomen, a bright blue segment 8 (the blue “tail”), and a blue thorax. This makes the males easy to identify. The females, however, can have a black, green, orange or violet colouration, with immature females starting as either *rufescens* (reddish pink) or *violacea* (violet) changing after about a week to their adult colours, thus making the females great to photograph and to try and see all colourations. Luckily, the coloured S8 still makes them easy to identify. As their name incorrectly suggests that the whole “tail” is blue, it is interesting that outside of the UK, they are called “Common Bluetips”, which frankly is a better name.

They appear to be more tolerant of cooler weather and can still be seen when it is raining or overcast. Adults tend to perch on stems that are narrower than their head, allowing their eyes to still be visible when looked at head on, (a great photo angle). To avoid detection (including by photographers), they move around that stem, always maintaining their uninterrupted view.

Males typically remain attached for some time during mating, however, once he releases the female, she will lay eggs alone. Eggs are laid into vegetation just below the water’s surface.



The season started on May 4th at Oakenshaw NR and ended on 21st September at Greencroft NR.

2022 Blue Tailed Damselfly Sightings VC66

Broad Bodied Chaser (*Libellula depressa*)



With only 8 sightings in Northumberland, just north of our region, VC66 represents the most northerly area where these highly distinctive dragonflies are frequently observed.

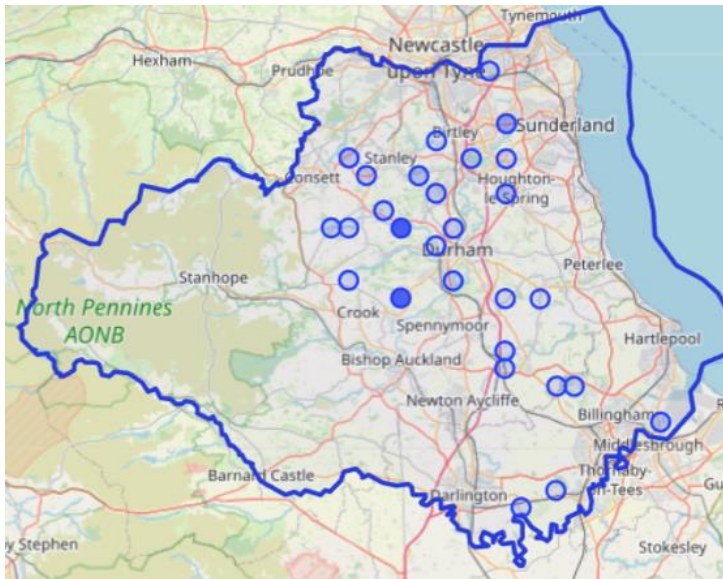
They were spotted at 27 (down from 38) sites on 196 occasions (up from 122).

They first appeared on 8th May, three weeks earlier

than 2021, at the same location, Twizell Woods. They were seen regularly until 4th August, at Oakenshaw NR. Although occasionally mistaken for a Black Tailed Skimmer when in flight (as they are both either blue or gold), once they settle they are quite distinctive. The body is bulky and broad, with the adult male having a dusty blue abdomen, with yellow patches on its side.

Spotters sometimes get confused when they see an immature male, as they are golden at first and the blue slowly appears meaning they can be both colours.

As can be seen in the main photo (Christopher Bill), the females have a darker golden central area down from S1-S10 and their appendages are spaced apart.



2022 Broad Bodied Chaser Sightings VC66

Males are very territorial so when photographing a male at rest, take the shot quickly as they might be pursued. Mating and egg laying happens in flight.

Their flight is fast and erratic, which probably explains why we have so few photos of them in flight. As they seem to like resting on sticks, placing one in the water at a slight angle may well attract one.

Brown Hawker (Aeshna Grandis)



VC66 is about as north as these large Hawkers get in England. Luckily for us, they are breeding successfully in the south of our region, in particular at Oakenshaw NR, Cowpen Bewley NR, Langley Park Wetlands, and Coatham Woods.

One disappointment was that they were not seen at Joe's Pond, Rainton Meadows, but hopefully, that was just lack of spotters on the right day.

They appear mid-season, which in 2022, was just before the drought which might explain why most records were from sites with large lakes. The first sighting was on 7th June and the last was on 15th September.

Although relatively rare in our region, they are easy to identify, partly due to their large size, but also because they are the only species that is predominantly brown. The amber wings are also very easy to see even in flight.



While both genders are brown with amber wings, the male has a nipped waist, blue tinted eyes, while the female's eyes are yellowish brown. If in doubt about the sex, get a photo of S10 and consult a field guide as their appendages are quite different.



It is hoped that the drought will not have impacted 2023 sightings as the eggs of the Brown Hawker will be laying in *diapause* until Spring 2023. Also, it might not be possible to tell if the local population was impacted, partly because they emerge at night and also because in Autumn they are often joined by immigrants from mainland Europe.

2022 Brown Hawker Sightings VC66

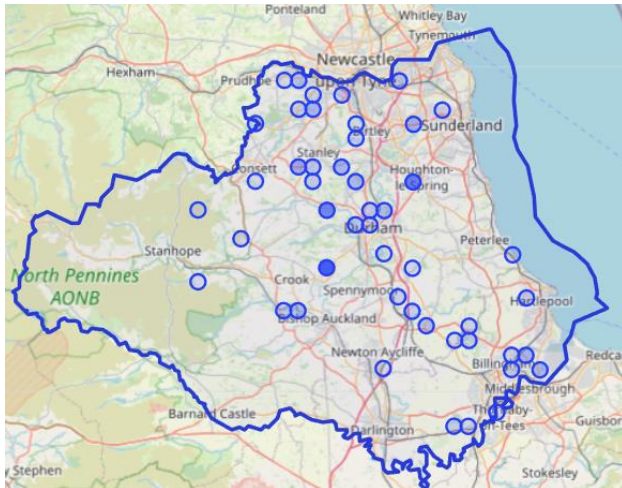
Common Blue Damselfly (*Enallagma cyathigerum*)



Generally regarded as the UK's most commonly seen damselfly, they are typically spotted at most sites and normally in large numbers.

However, in 2022 they were the 6th most common Odonata and the third most Common Damselfly. We do not need to worry though as they were still seen on 274 occasions between 14th May and 15th September at 53 sites.

As mentioned earlier, they are difficult to differentiate from the Azure, (unless you get close) and previously I have suggested that if in doubt, assume it was a Common Blue, but with so many Azures having been spotted that advice no longer applies. If you see a large number that appear to have both species, record them as 50/50.



I would also urge spotters when they see either species to check for red eyes, as the Small Red Eyed Damselfly looks very similar apart from the eyes, and they are typically found amongst other species.

2022 Common Blue Damselfly Sightings VC66

Common Darter (*Sympetrum striolatum*)



Common across all of the UK, this was, once again, the most frequently observed Odonata in the VC66 region.

There were 457 sightings (up from 325) at 69 sites.

Common Darters will often lay on paths, bare ground or fence posts, and simply move a few metres further

on as you walk towards them. Therefore, with care, you can get quite close. As with all species, avoid sudden movements and don't allow your shadow to fall over them. If you get close you will notice that compared to other species, they seem to move their head far more often, surveying their relatively small territory.

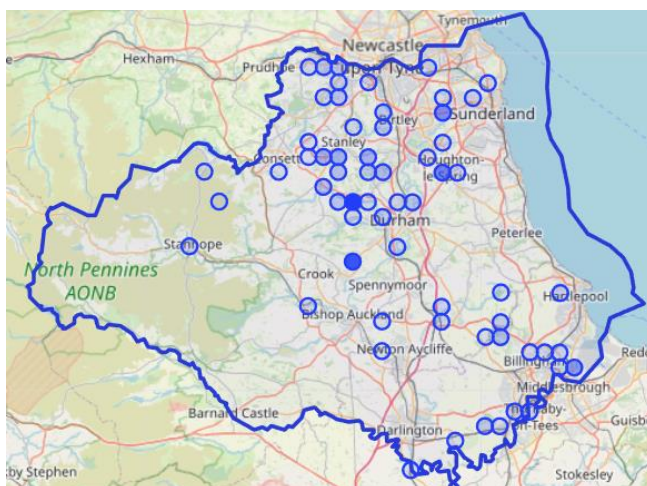
Typically, the male will remain attached to the female during egg laying and guide the location. They are commonly seen dipping the female repeatedly across large portions of ponds and the surrounding wet shore. Those eggs will hatch within a few weeks, and they will emerge the following season.

In this photo (Christopher Bill) you can see how the male holds the female, and the rather drab colours of the female are apparent, which is probably why more sightings of males occur.



The season started at Langley Park Wetlands on 7th June, and one particularly hardy individual at Rainton Meadows was seen on 26th November, which is very late in the year. It was particularly nice for it to have been at Rainton, as until a few years ago Rainton was the

place to go for Common Darters. They would emerge in large numbers from the small scrape ponds by the main path. Since those ponds have become overgrown and dried out most years, Common Darter numbers have fallen considerably. They were seen, however, in good numbers at Langley Park Wetlands and surrounding areas, plus Oakenshaw NT, RSPB Salthome, Twizell Woods and Washington Wildfowl Reserve.



2022 Common Darter Sightings VC66

This male Common Darter, at RSPB Salthome, came up with a novel way to take a rest during the frantic mating process. (Photo M Coates)



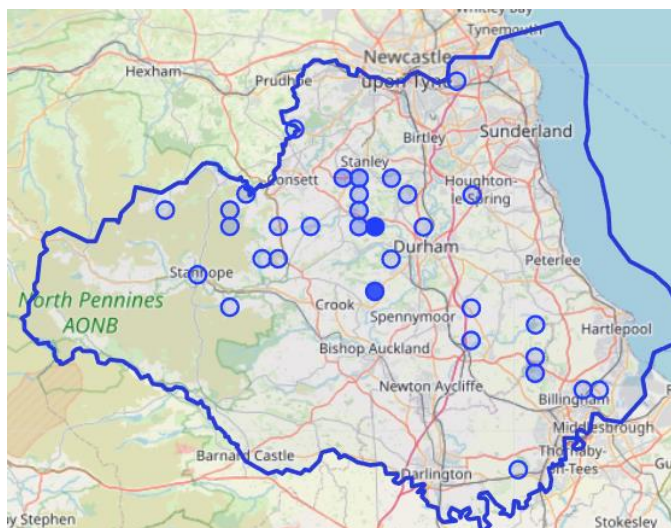
Common Hawker (*Aeshna juncea*)



Starting with the positive, Common Hawkers were recorded on 274 occasions (up from 63), however, most of those were by one observer at two sites, Oakenshaw NR and Langley Park Wetlands, where they are breeding very successfully.

If we exclude those sites, they were seen on 92 occasions at 30 locations, which is

excellent for a species that, despite its name, is not common. The photo (Christopher Bill) is an excellent example of both a relatively rare Common Hawker (male) and an even rarer in-focus flight shot!



They prefer acidic bogs, pools, lakes and moorland, which is why they are often called a “Moorland Hawker”. That partly explains why in previous years sightings were mainly in the west, where unfortunately we have less spotters. In 2022, the spread was more varied.

2022 Common Hawker Sightings VC66

It is useful to be aware that in parts of Scotland and in Ireland, there are various colourations and so it is always possible that we might observe that too. Primarily though, in England the Common Hawker males are quite dark with blue, brown and some yellow markings. The females are usually brown with distinct yellow/green markings.

Their season started at DWT Black Plantation on 24th May and ended at Langley Park Wetlands on 17th October, so a long season.

Emerald Damselfly (*Lestes sponsa*)



Easily identified when in its adult state due to the bright iridescent emerald colouring of its upper thorax, and as you can see here in Joe Finlay's photo, the male has bright blue eyes, along with a dusty blue colouration on the sides of its thorax and S9/10. You can also just see in this photo that the male's abdomen is narrow and gets wider around S8.

The distinction between a male and a female is obvious when you look at

Joe's second photo below, where a female is in side profile. Here we can see that the emerald colouration is along the top of the whole abdomen, there is no blue and the eyes are also not blue. Looking at the female from the side also allows you to see the ovipositor, which while short, would obviously be absent on a male.



Nationally, the Emerald Damselfly is in a steady decline. It is thought that this might be because it emerges late in the season, and as it prefers shallow waterbodies and boggy ground, the increasingly long dry summers, such as in 2022, might be drying them out too soon.

Similarly, farmers are draining land more effectively, and nature reserve management plans often include removing vegetation from ponds,

which benefits other species, but makes the water deeper than Emeralds prefer.

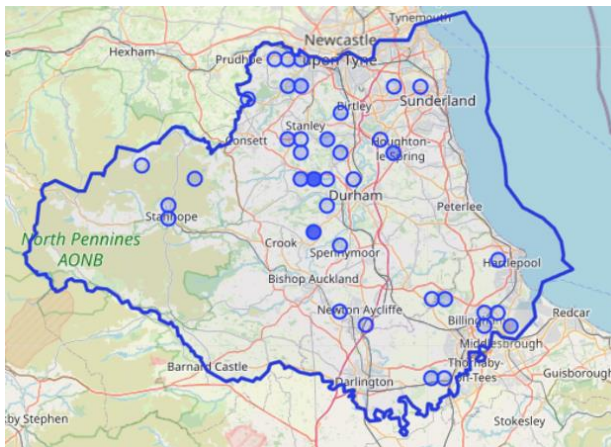
Despite the drought, there were 232 sightings of Emerald Damselflies, with the season starting at Oakenshaw NT on 7th June and ending at Gibside NT on October 1st.

This photo (Ian & Elaine Burnell), is interesting, as the appendages look distinctly claw like, which is a characteristic of the very rare, Scarce Emerald Damselfly, however, the eyes are not blue, so it is “just” a male *Lestes sponsa* that has probably recently let go of a rather active female, and is a little out of shape as a result.



A sighting of a Willow Emerald Damselfly at Joe’s Pond (Rainton Meadows) was classified as a “maybe” because while the spotters are from the south and are familiar with Willow Emeralds, there was no photograph. A thorough search of Joe’s Pond over the following days did not bring about any confirmation and no evidence of scarring was found

on overhanging trees, however, we will pay particular attention to any Emeralds at Rainton in 2023.



Interestingly, there was a confirmed sighting on 12th October at Gosforth NR, which is just north of the Tyne, so an encouraging sign that we might have Willow Emeralds in 2023.

2022 Emerald Damselfly Sightings VC66

Emperor (*Anax imperator*)



Easy to identify, as it is the UK’s largest dragonfly and both sexes have an apple green thorax without any obvious black markings. The photo on the left (Joe Finlay) is of a male, showing the clear blue colouration of the abdomen and its green thorax.

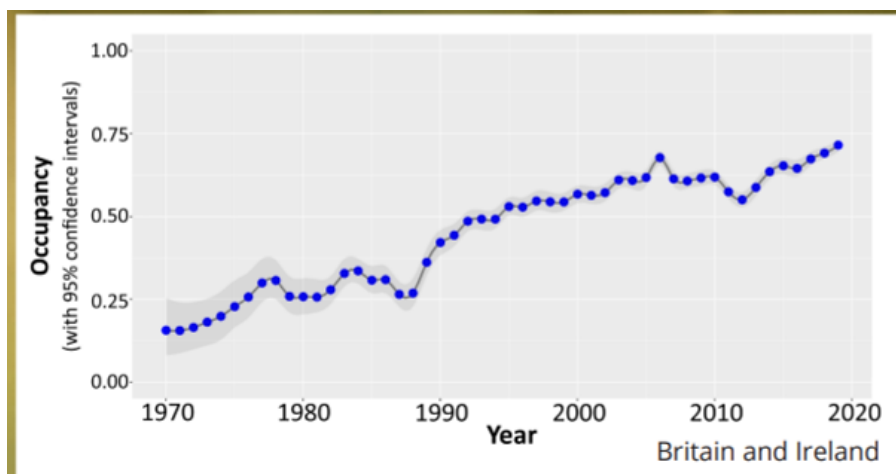
While this might only be seen at night, the Emperor is unusual as its abdomen changes colour when the temperature drops, so if you see one on a cold day, try to get a photograph. Mating is normally high up in trees or at least away from water, so again, if you see this happening, try to get a photo.



Similarly, emergence tends to happen during the night so that they can fly at dawn – photos please!

This female was running a little late, and had recently emerged at RSPB Salthome, about 3 metres away from a sign explaining how Emperor Dragonflies breed and emerge! (Photo M Coates).

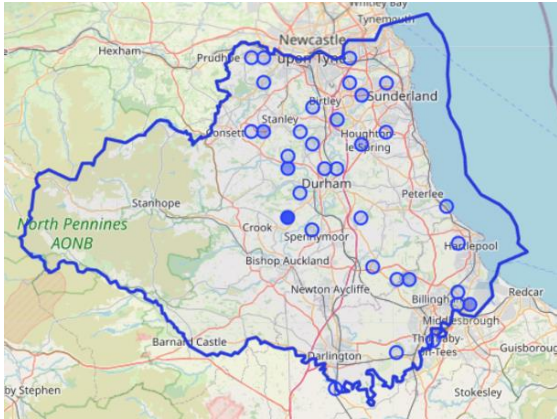
The size of this recently emerged Emperor gives you a feel for how large the exuvia are, and why they require a sturdy piece of vegetation to emerge from. The wings have not unfolded completely at this point, and they are vulnerable to predation.



Nationally, the Emperor is the species that has shown the most significant growth in numbers over the last 50 years, and since 1990 it has also spread far more widely.

Emperor Records Last 50 Years

The likely reason for its success is that they are flexible on water location, ranging from ponds to flowing rivers, and they are big and strong so can compete when resources are scarce. Having said that, they can live for up to three months, so it is more likely than with most species that the same individual was recorded on multiple occasions.



The season started on 5th June, with a female soaking up the sun on a wooden post in a Sunderland garden (so probably from a garden pond), and ended at Oakenshaw NT on 15th September. Other sites to see them at include, Rainton Meadows, RSPB Salthome and Cowpen Bewley NR. Unfortunately, there were no sightings of the Lesser Emperor in 2022 (or 21).

2022 Emperor Dragonfly Sightings VC66

Four Spotted Chaser (*Libellula quadrimaculata*)

They were spotted at 31 locations (up from 26) on 195 occasions (up from 120), which is a big increase, reflecting the national growth. It is also interesting because if you read the 2004 “Field Guide to Dragonflies and Damselflies” by Brooks (an excellent, albeit out-of-print guide), it says “They are common throughout most of England but are absent from many parts of the north east”, so it would appear that this is another species that is clearly moving north.



As can be seen in Christopher Bill’s photo, Four Spotted Chasers are very striking due to their wing colouration near their thorax, and of course, the distinctive four spots. They are quite aggressive and territorial, so if you see more than one, expect some action. While none of our spotters saw more than ten at any one time, in mainland Europe they have

been known to swarm with up to 2.5 billion of them. Apparently, these swarms, which were first studied in detail in 1971 by [Dumant and Hinnekint](#), happen about every ten years, so maybe one day we will be on the trail edge of such a swarm.



Great sites to see them at (in rather lower numbers than 2.5 billion) are, Oakenshaw Wildlife Reserve, Rainton Meadows, NT Gibside, Greencroft NR and RSPB Salthome.

2022 Four Spotted Chaser Sightings VC66

In 2022, their season started at Bowes Valley NR on 14th May (early for a dragonfly in VC66), and ended at Oakenshaw NR on 17th August. Their larvae normally do not emerge for two years, so it will be interesting to see the impact of the Summer drought.

Golden Ringed Dragonfly (*Cordulegaster boltonii*)

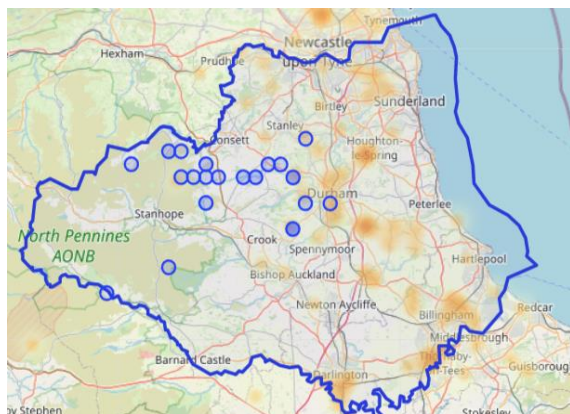


There were 79 records, however, 71 of those were by Keith Walton on various dates, at 16 different sites! So, to make it easier for everyone in 2023, here is the complete list of where they were seen between 24th May and 21st August 2022.

The first sightings were at DWT Black Plantation.

Black Plantation	Longfordham Quarry
Blackburn	Malton Picnic Site
Browney Bridge	Oakenshaw Wildlife Reserve
Burnthill reserve Waskerley	Partridgeclose Mill Bridge
Coalgate	Ragpath
Durham University Botanic Gardens Meadow	Ramshaws nr Blanchland
Edmundbyers	Redburn Wood
Far Sandyford	Sharnberry Gill
Harehope Burn	Stuartfield Bridghead
Horsleyhope Burn	Tunstall House Farm
Houselope Bridge	Twizell Woods
Langley Park Wetlands	Longfordham Quarry

2022 Golden Ringed Dragonfly Sightings VC66



While they are sexually *dimorphic*, meaning that males and females have a different body shape and size, plus their black and yellow patterning also varies, there is no mistaking this species. Females, such as the one above, are larger and longer than males, with a very long ovipositor. Males have a nipped “waist”. If you do get to see one up close (either sex) take a look at the eyes from above, as unlike most dragonflies where the eyes meet along a broad edge of each eye, with this species they meet at a small single point.

Keeled Skimmer (*Orthtrum coerulescens*)



On the 8th July at Twizell Woods, Carol Spencer photographed this Skimmer, but sadly as it was the peak time for sightings coming in, I didn't look closely until a few weeks later. That was very annoying because this is a Keeled Skimmer, a very rare sighting in VC66.

Easily mistaken for the Black Tailed Skimmer, simply because in VC66 it's the only blue coloured Skimmer you would expect to see, we now know that we must look carefully for the following characteristics.

Teneral have yellow tinted wings. Mature males, unlike the Black Tailed Skimmer and

Broad Bodied Chaser, do not have yellow on the sides. While S10 is dark, there is very little black towards that area. The abdomen is blue all the way up to the thorax and the eyes are blue grey. Pale yellow Costa.

Mature females have a rich ochre/golden abdomen, with parallel sides and dark narrow rings separating each section. They have a golden infusion at the base of the wings.

Let's keep a close eye out for them in 2023, especially at Twizell Woods and nearby Waldrige Fell.

Large Red Damselfly (*Pyrrhosoma nymphula*)



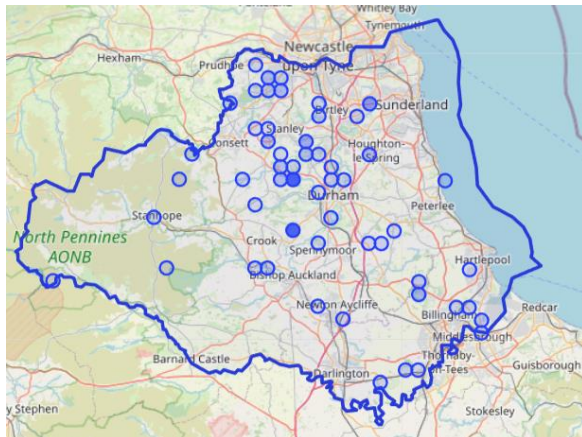
The author was delighted to have seen the year's first Odonata at Twizell Woods on 17th April, a week earlier than in 2021, and as expected it was a Large Red Damselfly. This was also the first sighting of Odonata in the north of England in 2022. Always the first to arrive, that is no doubt why they are also called "Spring Redtails".

So how do they always emerge first? They grow in the previous year to the final instar (larval growth stage) and then they diapause over winter, allowing emergence to happen often synchronously. Other species would moult and get to the final instar after winter, thereby delaying their emergence.

When they first emerge, they are very pale and lack the red colouring, making them look very much like green plant stems. So, if you want to see the first Odonata in 2023, look very carefully.

When they mature, the female has three colour forms:

1. melanotum (mainly black abdomen)
2. intermedia (S1-5 red, S6-10 black)
3. fulipes (S1- 6 red, S7-10 black)



Large Red Damselflies were seen on 284 occasions, at 57 sites, which essentially means that you can spot them at most suitable locations even at high altitudes.

2022 Large Red Damselfly Sightings VC66

Migrant Hawker (Aeshna Mixta)

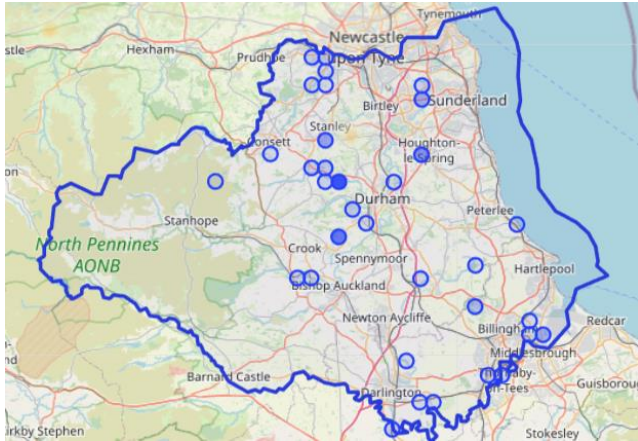


Often called the Autumn Hawker, they are traditionally found further south than VC66, however, since 1970 their numbers have steadily increased nationally.

The larvae can tolerate low temperatures and that might explain why they are increasingly being seen in our region.

Although they are now residents, they are also migratory, and therefore,

with a strong wind from the south, we could be benefiting from continental migrants.



They were first seen on 18th July at Framwell Gate Moor, and then very frequently throughout August and September, and were still being observed throughout October, with the last one in Stockton on November 12th.

They were seen at 39 sites around the region, however, there were no sightings in the west, but once again that's probably due to a lack of spotters rather than them being rare.

2022 Migrant Hawker Sightings VC66

On 13th September, 300 were seen at Oakenshaw NR, and as most were coupling or laying eggs it is likely that there will be large numbers around the same week next year. The eggs lay in diapause and will hatch in Spring 2023 and grow rapidly through the Summer, before emerging in late Summer/Autumn.

BDS distribution indicates that the northeast of England is their furthest northerly point, and in 2023 there were only 19 recorded sightings in South Northumberland, so we do appear to be the most northerly area in which they are breeding in large numbers.

A great indicator that Autumn is fast approaching or is upon us, the Migrant Hawkers often perch on autumnal leaves, making them particularly beautiful to watch.

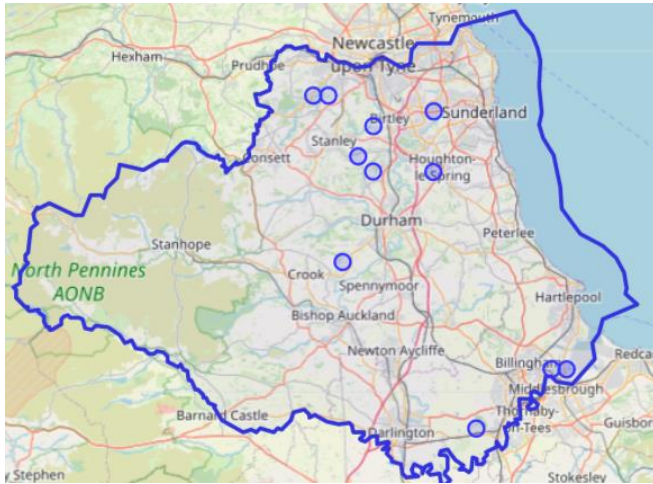
Ruddy Darter (*Sympetrum sanguineum*)



Occasionally confused with male Common Darters, observers are getting better at spotting this striking species.

The key differentiators can easily be seen in this photo (Joe Finlay), those being, that Ruddy Darters are a deeper red, with solid black legs (no white stripe) and have a nipped "waist".

In 2021, they were observed at 16 sites which was a big increase on 2020, however, in 2022 they were only seen at 10 locations on 28 occasions (down from 36), which makes them one of the rarer species in the northeast. The first was seen at Rainton Meadows on July 7th, and at this former stronghold, they were only spotted on 5 more occasions. The last sighting was on 30th October at RSPB Salthome, which was one of the main sites where they were seen each month.



Once again, very few sightings and photos were submitted of female Ruddy Darters possibly due to spotters having difficulty identifying them, particularly as their colours darken with age.

The females are typically bright yellow, with thin black markings down the side. Their abdomen tapers from the thorax to S10.

2022 Ruddy Darter Sightings VC66



The BDS suggest that they have increased their ranges to include both Scotland and the northeast, a change from twenty years ago.

As there were relatively few sightings, spotters are urged to look out for them in 2023.

Small Red Eyed Damselfly (*Erythromma viridulum*)



In 2021, at Brasside Pond next to Frankland Prison, Small Red Eyed Damselflies were spotted by the author. Working on a hunch that nature can be very good at keeping time, the author returned on the same date, 24th July 2022, and not only were they there but they were in large numbers. They are therefore breeding successfully at this site making it the most northerly in the UK. (Photo M Coates).

There were also sightings at Ward Jackson Park near Hartlepool and at Washington Wildfowl Park, however, as yet we can't confirm if they are successfully breeding there, so please visit in July and August 2023. The season was very short (24th July to 27th August), so we need to be mindful of this small window of opportunity.

It is possible that while very rare, they might have been seen more often than we suspect, as to the casual observer, particularly if they are looking at a group of damselflies, they can easily be mistaken for Blue Tailed Damselflies. The key is to look for the distinctive red eyes in the males. Females do not have red eyes, but nor do they have a blue or coloured ring on s8-10. Once mature, they have a much broader black shoulder stripe than any of the colourations of the female Blue Tailed. Fortunately, as with most Odonata, where there is a female, there is likely to be a male, so spotters should first look for the male, and then photograph any likely female and consult the guidebooks.

Southern Hawker (*Aeshna cyanea*)



Despite their name, Southern Hawkers are present even in the north of Scotland, and in 2022, they were observed at 58 VC66 locations (up from 55).

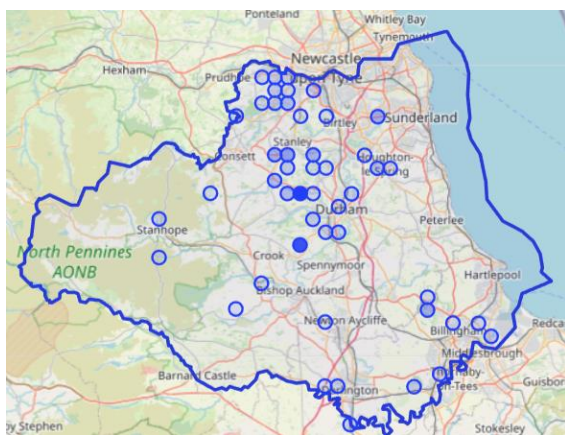
They were the third most common Odonata in VC66, with 381 sightings, up from 243.

Southern Hawkers are easy to identify by the two yellow "headlight" patches on the front of their thorax. This is apparent in both sexes. The photo on the left (Christopher Bill) is a female.

Always a delight to see, they are highly curious and will often hover right in front of you. They do, however, also tend to straddle vegetation and keep those distinctive “headlights” hidden, as in this photo by Joe Finlay.



First seen at Washington Wildfowl Reserve on May 18th, and frequently until November 7th at Rainton Meadows, which is very late.



2022 Southern Hawker Sightings VC66

While commonplace, the best sites to see them are, Twizell Woods, Burnhope Ponds, NT Gibside, Greencroft NR, Langley Park Wetlands, and Oakenshaw Wildlife Reserve.

Nationally, the Southern Hawker has always been common, but has gained stronger footholds in the north since 1988.

The female will typically lay eggs in dead wood on or under the water surface, so always check such wood, and if you want to attract this species to your garden pond, laying an old log from the water and up onto the side, might help.

This has been done at RSPB Salthome on a number of their ponds. (See photo)



Southern Migrant Hawker (*Aeshna affinis*)

The author happened to be at RSPB Salthome on August 13th, when it was clear that there was some excitement at a small pond on the left just past the dragonfly sculpture. Soon there was a crowd and people were phoning friends telling them to “come quick”. There were soon more long lenses than at a film premiere. The cause was a Hawker flying left and right about 2 metres in front of us. According to the many experts there, this was a Southern Migrant Hawker, as one had been seen and photographed there the day before by Mark Stokeld, who has kindly allowed his photos to appear in this report.



The author tried to take photographs of this fast moving Hawker but the vegetation at the rear of the pond made focusing virtually impossible. However, upon looking at the blurred images on a PC, there were tell-tale yellow stripes on the thorax of a Migrant Hawker (not a Southern Migrant). We had experienced “group think”, where the convincing words of the majority, bring the sceptical minority with them. So, the lesson is, be confident and speak up! The author visited each day for three more days, along with a large number of spotters, and no one recorded a sighting of this rare migrant. Had it not been for Mark’s excellent photos this record would not have been accepted as the most northerly sighting ever.



As most spotters in the North East will have never seen one, here is the diagnostic advice.

The Southern Migrant Hawker has a blue thorax (green when younger), while the female is green.

Neither have stripes on the side of their thorax. In the photo on the left of a Migrant Hawker, the yellow panels on the side of the thorax are very clear.

The Southern Migrant Hawker does NOT have those. Seen from above, they also lack the yellow golf tee shape that appears on the Migrant Hawker’s S2.

A Dragon in the Hand is Worth...

A common question is “do dragonflies bite?” The answer is yes if you are an insect or possibly another Odonata, but humans are quite safe. As if to prove this point, Keith Walton, who submitted so many records in 2022, also took a number of photos, where clearly the Odonata trust him!



Discussion Points

In 2021 and in 2022, a greater number of people submitted sightings via [iRecord](#), but a smaller number submitted large amounts of data. While it is wonderful news that so many different people are submitting records, it does increase the reliance on their photographs to confirm the species, (as they are unknown to the author), and also the BDS has less influence over where they go and survey. A small group of spotters originally from the DWT survey, have continued to submit large numbers of sightings and be proactive in trying to reach all the 60+ hotspots. However, a few have moved away or have stopped submitting sightings. It is hoped that in 2023, we can re-engage with everyone.

The Google map, that shows the hotspots in VC66, along with directions, parking information and a guide to what you might see can be found at <https://tinyurl.com/rdr75zd>

As mentioned earlier, in 2023 it would be great if more DWT reserves could be surveyed, so that we have long term data and can use it to influence management plans. In addition two of the recently acquired sites have the potential for Odonata, but have not been surveyed at all. Cuthberts Moor might have Golden Ringed Dragonfly and Black Darters, while Ricknall Carrs could be an ideal site for Banded Demoiselle.

While [iRecord](#) is an excellent tool for submitting sightings, as mentioned, the DWT app is better in that it allows easier recording of behaviours, and it encourages spotters to visit the key sites. A revised version is available via this link <https://survey.protostarsurveys.com/zs/xSCN2T>

In 2022, a single Willow Emerald Damselfly was spotted just north of our region at Gosforth, however, mainly the northerly sightings were just north of Whitby. So, observers are asked to support the British Dragonfly Society's Willow Emerald Watch and keep a close eye out, particularly at Joe's Pond (Rainton Meadows) as there was an unconfirmed sighting there. [Willow Emerald Watch - British Dragonfly Society \(british-dragonflies.org.uk\)](http://british-dragonflies.org.uk).



While the species can be easily identified, as it is slimmer than the Emerald and has brown eyes, it also lays eggs on flexible branches over water, creating small galls (swellings). These eggs then drop into the water as larvae, leaving a scar on the branch. These oviposition scars and galls are a great indicator that Willow Emeralds are around, even if they have not emerged yet. Observers are asked to look out for them at Joe's Pond, and in the south of the region, particularly on overhanging branches near the coast.



Exuvia

While observing Odonata and recording those sightings is great citizen science, strictly speaking, the only way to be sure that they were not simply passing through, is to see them emerge or observe their exuvia. There were 78 sightings of exuvia in 2022, however, it is unlikely that someone would record exuvia using iRecord unless they were a real enthusiast, and so we are most probably missing a lot of data. The DWT app (where all 78 sightings came from) is better in this respect, in that it encourages the recording either by species if known (or guessed) or just in general. Photos are also requested.

If you recover a particularly striking exuvia or one that appears to be from a scarce species, please leave it for Michael Coates at Rainton Visitor Centre. Otherwise, please upload a photo, using the DWT app, or iRecord.

Acknowledgements

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Lastly, thanks also go to the DWT volunteers and staff who maintain the reserves and create new habitats for these iconic creatures.



The Author, Michael Coates.

Photo Acknowledgements

Page	Subject	Photographer
1	Male Migrant Hawker	Christopher Bill
6	Shibdon Ponds	DWT Website
7	Two Southern Hawkers laying eggs	Ian & Elaine Burnell
8	Blue Tailed Damselflies	Michael Coates
8	Female Emperor	Michael Coates
8	Common Darters	Joe Finlay
9	Milkwellburn Wood	Michael Coates
10	Dragonfly ID Training at Rainton Meadows	Michael Coates
14	Azure Damselflies	Ian & Elaine Burnell
14	Male Azure Damselfly	Michael Coates
15	Male Banded Demoiselle	Ian & Elaine Burnell
15	Female Banded Demoiselle	Ian & Elaine Burnell
17	Immature Black Darters	Joe Finlay
17	Mature Black Darters	Mal Wilkinson
18	Female Black Tailed Skimmer	Christopher Bill
18	Male Black Tailed Skimmer	Joe Finlay
19	Black Tailed Skimmers	Michael Coates
19	Immature Male Black Tailed Skimmer	Keith Walton
20	Blue Tailed Damselfly	Joe Finlay
21	Female Broad Bodied Chaser	Christopher Bill
22	Male Brown Hawker	Malcolm Short
23	Female Brown Hawker	Malcolm Short
23	Male Common Blue Damselfly	Michael Coates
24	Female Common Blue Damselfly	Ian & Elaine Burnell
24	Male Common Darter	Joe Finlay
25	Common Darters	Christopher Bill
25	Common Darters resting	Michael Coates
26	Common Hawker	Christopher Bill
27	Male Emerald Damselfly	Joe Finlay
27	Female Emerald Damselfly	Joe Finlay
28	Male Emerald Damselfly	Ian & Elaine Burnell
28	Male Emperor Dragonfly	Joe Finlay
29	Female Emperor Dragonfly	Michael Coates
30	Female Four Spotted Chaser	Christopher Bill
31	Golden Ringed Dragonfly	Christopher Bill
32	Keeled Skimmer	Carol Spencer
32	Male Large Red Damselfly	Vivien Kent
33	Female Migrant Hawker	Christopher Bill
34	Male ruddy Darter	Joe Finlay
35	Ruddy Darters	Unknown
36	Small Red Eyed Damselflies	Michael Coates
36	Female Southern Hawker	Christopher Bill
37	Female Southern Hawker	Joe Finlay
38	Male Southern Migrant Hawker	Mark Stokeld
38	Male Migrant Hawker	Christopher Bill
39	Male & Female Common Hawkers, Female Four Spotted Chaser and Female Broad Bodied Chaser	Keith Walton
40	Willow Emerald Damselflies and Scarring	BDS website

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State of Dragonflies 2021

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