

# FAUNA Odonata Report, 2020

## Phil Hendry

I was pleased to be asked to undertake surveys of the Odonata in the FAUNA/FLORA nature reserve this year; I have been observing them around the reserve for a few years, but only from the paths and I really wanted to be able to get 'up close and personal'.

I was only asked to begin the surveys in May, the first survey taking place on the 29th. Ideally, I would have started earlier - in April, so as to catch the beginning of the season. As things stood, we had had a fairly severe drought during the spring, and most of the ponds were either much reduced in size, or completely dry. This is not good for Odonata - the nymphs are aquatic, and die off if their habitat dries out. So, the first thing to say is that this year is probably not typical - though I note that the summer of 2018 was also very dry. This means that Odonata numbers on the reserve will have been significantly down on a 'typical' year. I don't have numbers for this, but based on 'anecdotal evidence' from previous years, the numbers of (for example) Common Darter dragonflies (*Sympetrum striolatum*) perching on the fences and on trees in the Millennium Orchard were significantly reduced when compared to a 'normal' year. A walk from my house to Cromwell Road, via the Orchard and the path through the reserve would probably only have resulted in my seeing two or three individuals where, in a normal year, I would have expected more like twenty. So the figures in this report should be viewed in light of that.

It is, of course, worth bearing in mind that the reserve is close to a 'large' body of permanent water - namely the canal - so there is a good chance of fairly rapid 'recolonisation' by species for which both environments are suitable.

Surveys have been carried out by walking a specific route through the reserve, stopping at each pond for ten minutes. Having started the surveys during the drought, I had to modify the route slightly once the weather turned wet, because some parts of the route proved impassable once the site was back to 'normal'! The route had to be varied sometimes too, by missing out some fields so as to avoid the cattle.

The following species have been observed on the reserve between May and October this year (species marked \* are believed to have bred - mating and/or ovipositing was observed within the reserve). Not all of these have been observed during the formal surveys. Species marked ^ were observed, but not during formal surveys. In general, males are bolder than females, and tend to 'hang about' near water more of the time; whilst females are shyer and tend to stay away from water unless looking to mate - they were therefore observed less often during the survey because they tend to be much more scattered (as well as, in most species, being much duller in appearance, which again makes them harder to spot).

### Damselflies (Zygoptera)

Azure Damselfly (*Coenagrion puella*)\*  
Blue-tailed Damselfly (*Ischnura elegans*)\*  
Common Blue Damselfly (*Enallagma cyathigerum*)

### Dragonflies (Anisoptera)

Black Darter (*Sympetrum danae*)  
Common Darter (*Sympetrum striolatum*)\*  
Brown Hawker (*Aeshna grandis*)  
Emperor Dragonfly (*Anax imperator*)  
Migrant Hawker (*Aeshna mix*)\*^  
Southern Hawker (*Aeshna cyanea*)^

## **Damselflies (Zygoptera)**

### **Azure Damselfly**

Azure damselflies are a species of the spring and early summer, numbers typically peaking in June. On the reserve they were observed until the middle of July, after which no more were seen. Peak numbers were 29 males, 6 females 3 copulating pairs and one ovipositing pair. They are easily confused with Common Blue damselflies - particularly the males, which are almost indistinguishable unless you can get close enough to observe the markings on the second segment of the abdomen.

### **Blue-tailed Damselfly**

Blue-tailed damselflies have one of the longest seasons of any species, numbers being high between the end of May and the end of August. This is largely borne out by observations on the reserve, though a lone male was spotted on 14/09/2020. Peak numbers were 8 male, 3 female and two copulating pairs.

### **Common Blue Damselfly**

Common Blue damselflies are another species with a long season, numbers being high between mid-May and mid September. For a species with such a wide range and which is very common (the name gives that away!) there seem to be surprisingly few in the Lancaster area. I only positively identified 6 males on the reserve, all on the same day - 29/5/2020. In general, compared to Azure damselflies, they prefer larger areas of open water - in some ways, the bigger the better. That might explain why there are few on the reserve, but still leaves a question mark over why there are so few on the canal.

## **Dragonflies (Anisoptera)**

### **Black Darter Dragonfly**

Black Darters are creatures, typically, of acidic bogs, mainly in upland areas. Personally, I've seen them breeding in the bog near the Rigg Lane carpark, though BDS records for the county also show them breeding in the Heysham area. The males are known for 'wandering', which probably accounts for my having seen 3 on the reserve this year.

### **Common Darter Dragonfly**

Common Darters really are (both common and darting)! This species is another with a long flight season - the first two males I saw on the reserve on 1/7/2020, and the last, a very geriatric-looking female, perched on the fence near Loxam's Pond in the middle of October, trying to soak up some warmth from the sun (though in better years I have occasionally seen odd ones into November). They occur all over the reserve, from Pony Wood to the Orchard, and as far as the gate leading to Cromwell Road. They're easy to observe too - the males sunning themselves on fenceposts and pathways, the females tending to sit, slightly less conspicuously, in the trees - the orchard on sunny afternoons is a good place to see them. With care, moving slowly, you can get within a few inches, and observe them closely. This hasn't been a good year for them, numbers-wise. The largest number I saw in a single survey was 15 males, 3 females, 2 copulating pairs, and 1 pair ovipositing, on 14/9/2020.

## **Brown Hawker**

These large, distinctive, hawker dragonflies are easy to identify, because their wings are a strong yellow-gold colour. The largest number I saw on any one survey was 4 males (one carrying a bumblebee it had caught) and 2 females.

## **Emperor Dragonfly**

I didn't see many of these in the reserve this year. They are not common around here, having only begun to colonise the Lancaster area in the last ten years or so, though they do occur, and breed, on the canal. I saw three on the reserve this year - one of indeterminate sex (but species was clear from the silhouette) on 29/5/2020, and 1 male and 1 female on 19/7/2020.

## **Migrant Hawker**

I have to confess that I didn't see any of these on my surveys, but did observe several individuals on my frequent walks, and 1 pair copulating in the hedge by the path overlooking the Hay Meadow, not far from Lucy's Pool on 5/10/2020.

## **Southern Hawker**

I've seen 3 males this year around the reserve, including two whilst surveying.

## **Random Thoughts**

I am surprised that I haven't seen any Large Red damselflies - but that seems to be peculiar to this part of Lancaster - I've only seen one on the canal near here in the past few years, though they're common enough quite nearby. For some reason they just don't seem to like it here.

Both sexes of Black-tailed skimmers are occasionally seen on the canal, and the reserve might suit them - though perhaps a few more flat rocks near the pools might help - they seem to prefer to bask in open areas near water (the tarmac on the canal tow-path is a favourite spot).

I haven't seen any this year, but Broad-bodied Chasers (*Libellula depressa*) commonly occur on the reserve - frequently breeding on Alder Pond - though Alder Pond having been dry for two summers in the past three might have something to do with their absence. There is hope though - having been here before, they're likely to come back, because they are 'adventurous' and quick to colonise new areas and recolonise areas from which they've disappeared.

I hope that the proposal to deepen some of the ponds bears fruit - ponds which don't dry out are much more successful at maintaining populations of Odonata.

## Tabulated Data

| Peak Numbers                   |       |         |             |               |
|--------------------------------|-------|---------|-------------|---------------|
|                                | Males | Females | Copulating* | Ovipositing** |
| <b>Damselflies (Zygoptera)</b> |       |         |             |               |
| Azure Damselfly                | 29    | 6       | 3           | 1             |
| Blue-tailed Damselfly          | 8     | 3       | 2           |               |
| Common Blue Damselfly          | 6     |         |             |               |
| <b>Dragonflies (Zygoptera)</b> |       |         |             |               |
| Black Darter                   | 2     |         |             |               |
| Common Darter                  | 15    | 3       | 2           | 1             |
| Brown Hawker                   | 4     | 2       |             |               |
| Emperor Dragonfly              | 1     | 1       |             |               |
| Migrant Hawker                 | 1     |         | 1           |               |
| Southern Hawker                | 2     |         |             |               |

\* Copulating: one pair (i.e. male + female) = a count of 1.

\*\* Ovipositing: in most species, oviposition is performed 'in tandem' - i.e. with the male still clasping the back of the female's head with the claspers on the tip of his abdomen, so one pair (i.e. male + female) = a count of 1.



*Male Migrant Hawker (Aeshna mixta) in the hedge near Little Wood.*