Dragonflies in Worcestershire 2016.

Mike Averill

Dragonflies 2016 with the spotlight on the Common Club-tail.
Watching the weather towards the end of 2015 you might have thought that there was going to be no winter. November and December had the mildest temperatures in 107 years and some insects were still out on Christmas day. It couldn't last of course and although January was quite mild, February March and April were all quite cold. This continued into May and consequently most dragonflies were eventually a week to two weeks late to emerge. (Table 1)

Species	First Emergence Date 2007-2012	2013	2014	2015	2016
Large Red Damselfly	**09 April 2011**	01-May	14-Apr	16-Apr	19-Apr
Common Blue Damselfly	**23 April 2011**	25-May	30-Apr	04-May	08-May
Beautiful Demoiselle	26 April 2011	22 May	28-Apr	05-May	08-May
Club-tailed Dragonfly	03 May 2011	20 May	**01-May**	10-May	13-May
Blue-tailed Damselfly	**23 April 2011**	22 May	29-Apr	13-May	16-May
Red-eyed Damselfly	**26 April 2011**	22 May	05-May	19-May	16-May
Azure Damselfly	**24 April 2009**	25 May	05-May	13-May	13-May
Banded Demoiselle	**26 April 2011**	25 May	30-Apr	13-May	07-May
Four-spotted Chaser	**02 May 2011**	31 May	04-May	04-May	19-May
Broad-bodied Chaser	**26 April 2011**	01 Jun	03-May	04-May	16-May
White-legged Damselfly	**08 May 2009**	03-Jun	21-May	21-May	16-May
Black-tailed Skimmer	**08 May 2011**	04-Jun	21-May	27-May	29-May
Emperor Dragonfly	30 May 2008	08-Jun	**21-May**	23-May	30-May
Scarce Chaser	22 May 2011	09 Jun	**16-May**	02-June	24-May
Emerald Damselfly	15 June 2011	29 Jun	17-Jun	**14-Jun**	23 Jun
Southern Hawker	14 June 2012	29-Jun	**01-Jun**	05-Jun	25 Jun
Brown Hawker	**24 May 2009**	30-Jun	22-Jun	21-Jun	08 July
Common Darter	**30 May 2008**	30-Jun	17-Jun	15-Jun	06 Jul
Ruddy Darter	16 June 2010	09-Jul	**13-Jun**	21-Jun	22 Jun
Small Red-eyed Damselfly	11 July 2007	11-Jul	18-Jul	**04-Jul**	08 Jul
Golden-ringed Dragonfly	09 June 2012	12-Jul	**27-May**	23-Jun	12 Jun
Red-veined Darter	31 May 2009	17-Jun	23-Jun	-	-
Migrant hawker	22 July 2009	06 Aug	**16-Jul**	29 Jul	22 Jul
Hairy Dragonfly	05 June 2011				
Common Hawker	26 June 2010	-	12-Aug	-	15 Jun
Lesser Emperor	07 July 2007				
Black Darter	12 Sept 2009				29 Aug
Downy Emerald				27-May	

Table 1. First emergence dates of dragonflies in Worcestershire..

The only exception to that was the White-legged Damselfly *Platycnemis pennipes* which was seen very early this year and there may be a reason for that. The species is essentially a river damselfly but they can be found on pools and lakes in some locations and this may well mean that they emerge earlier than their river cousins as the water is likely to warm up more quickly.

In all 24 species were recorded including two that are only occasionally seen, the inappropriately named Common Hawker *Aeshna juncea* and the Black Darter *Sympetrum danae*. Common Hawkers can pop up most years, nearly anywhere, but most likely they will be seen in the Wyre Forest, while the Black Darter is much rarer and has not been seen since 2009. This time it was seen in Monkwood where just a single male stayed at the pool for about a week in August. The nearest permanent population is on the Clee Hill which is about 20 miles away. This is one of the smallest dragonflies in the UK and the male is almost completely black including the face (01).

01. Black Darter *Sympetrum danae* at Monkwood. Mike Averill

The Scarce Chaser *Libellula fulva* has now consolidated its position on the Rive Avon but it has also attempted to breed at Hillditch pool, Hartlebury Common since 2012. Since that first year there it has managed to hold on with up to 20 individuals being seen, but for the last two years only one was seen each year. This year the single male that held territory did show the characteristic rub marks (02) of having been mated and so we will wait with interest to see if it can continue at the site. The rub marks are where the blue pruinescence or colour is rubbed off the abdomen where the female clasps the male with her legs during copulation.

02. Scarce chaser *Libellula fulva* male at Hillditch Pool showing mating rub marks on sides of the abdomen. Mike Averill

Sometimes where you find a characteristic difference in a dragonfly species it is called a 'form' and we had a sighting of one of these at Grafton Wood where Four-spotted Chaser *Libellula quadrimaculata* form *praenubila* was seen (03). The difference is in the wings where apart from the usual dark spots at the nodes, there is a larger black mark and additional dark smudges near the wing tips. The fact that this has been observed shows that there is generally a larger population in the county at the moment.

03. Four-spotted chaser *Libellula quadrimaculata* form *praenubila* Grafton Wood. Gail Hampshire

Good news and bad news. The Small Red-eyed Damselfly *Erythromma viridulum* consolidated its position as a permanent addition to the dragonfly list by spreading to more pools in the Grimley area as well as being very prominent at Croome Court. The bad news is that while Hartlebury Common was amazing in 2014 with 16 species of dragonfly following years with surplus rainfall, in 2016 very few of the species were seen again. This was because in late 2015 both the Bog and Rush Pool had gone dry and dragonflies, like all aquatic invertebrates, cannot tolerate periods without water.

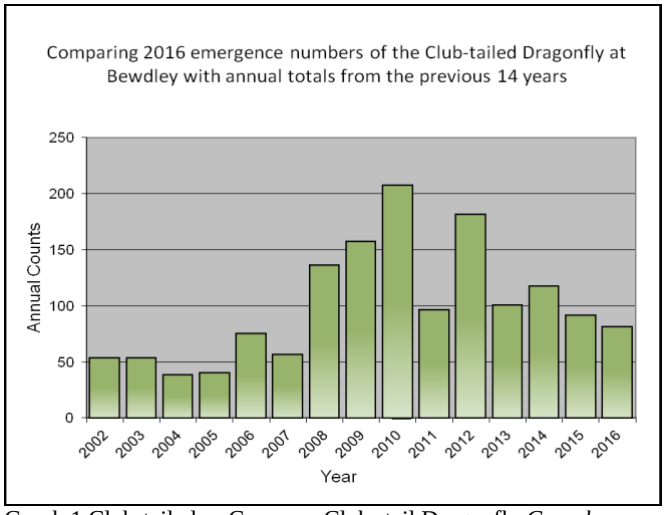
The Club-tailed or Common Club- tail Dragonfly *Gomphus vulgatissimus* (04)

This year it is useful to focus on one species to see what its status is compared to previous years, especially as there are concerns about its situation elsewhere in the country. The Common Club-tail Dragonfly is a nationally scarce dragonfly which has always done well on the main rivers of Worcestershire mainly because we have three large rivers all with long reaches of slow flowing water with silty beds. It can be argued that we may have the largest stronghold of the species in the country.

04. Male Club-tailed Dragonfly Club-tail Dragonfly *Gomphus vulgatissimus*. Mike Averill.

Recorded first in 1900, this species has probably had its ups and downs and it looks as if it is at a low point at the moment. Once quite common on the River Avon in the 1980's and 1990's it is now quite hard to find and there is no obvious reason for this decline. There are no real water quality concerns as the Scarce Chaser has moved in to this area and is doing quite well, but not enough to be a competitor. Not only that, the Common Club-tail Dragonfly had been seen up the River Teme as far as Tenbury Wells in the past but this year none were found farther upstream than Eardiston.

This dragonfly is very hard to survey in the conventional way of looking for adults as they very often disperse from the rivers after emergence so the only way to do a meaningful survey is to look for larval cases or exuviae. Fortunately there has been a long running count at Bewdley for 30 years now which helps understand the annual changes that take place if not the reasons why. Taking the last 14 years for instance, although emergence rates are not as low as in 2004, this year was the lowest for ten years (Graph 1) This may not be a cause for concern and may just be part of a cycle that could easily take an upturn soon. Poor water quality is unlikely as the Severn supplies drinking water to millions of people and any problem would have been detected; rather it may be a combination of weather conditions in the lead up to the emergence period in May. Only further counts will tell us what the trend is and analysis is planned on weather data to try to identify if there has been any changes in local climate conditions which may have impacted on the life-cycle.



Graph 1 Club-tailed or Common Club- tail Dragonfly *Gomphus vulgatissimus* emergence rates at Bewdley 2001-2016.

Images
01. Black Darter *Sympetrum danae* at Monkwood. Mike Averill.
02. Scarce chaser *Libellula fulva* male at Hillditch Pool showing mating rub marks on sides of the abdomen. Mike Averill.
03. Four-spotted chaser *Libellula quadrimaculata* form *praenubila* Grafton Wood. Gail Hampshire.
04. Male Club-tailed Dragonfly Club-tail Dragonfly *Gomphus vulgatissimus*. Mike Averill.