

# Warwickshire Dragonfly Group

## Species List Monitoring for Dragonflies and Damselflies



A PDF copy of this document can be downloaded from:  
[www.warwickshire-dragonflies.org.uk/wdg/recording\\_info.php](http://www.warwickshire-dragonflies.org.uk/wdg/recording_info.php).

# Species List Monitoring

## Introduction

Species List Monitoring is an entry level “scientific” monitoring protocol. It is most effective if the submission made lists **all species** seen on a visit to a site. However, for the less experienced observer partial lists are still of great value, particularly for tracking of distribution and phenology of species.

## Protocol

For Species List Monitoring the key requirements that apply when monitoring adult dragonflies as opposed to simply recording them are:

- a) Monitoring to take place at water bodies: pond, lake, river or canal. Sites away from water bodies, e.g. woodland, are not suitable for population monitoring (though these areas are still valuable for distribution and phenology). The reason is that adult dragonflies disperse widely when away from breeding sites. But they must return to water to breed and in suitable conditions a representative record of the species present at a site (and likely to breeding there) is possible.
- b) Monitor along a transect(s) around or along the bank at a number of points. In some cases it may only be possible to monitor at one or two points.
- c) Make periodic visits through the year and year to year if possible. Species fly at different times of year.
- d) Monitoring must take place in suitable weather conditions of temperature, percentage sun and wind.
- e) By default, monitoring of adult dragonflies will take place in the flight season.

The ideal monitoring requirements are:

1. Select a suitable water body	<ul style="list-style-type: none"><li>• Decide on the monitoring points along the transect, usually less than ten, with good sight lines over the water.</li></ul>
2. Timing of visits	<ul style="list-style-type: none"><li>• Ideally, make at least four visits a year - late May, mid June, mid July &amp; late August/early September.</li></ul>
3. Time of day to record.	<ul style="list-style-type: none"><li>• Between 10.00 and 16:00.</li><li>• On hot days (above 22°C), counts between 09:30 and 16:30 are permissible.</li></ul>
4. Weather conditions to meet these conditions:	<ul style="list-style-type: none"><li>• Sunny conditions required (&gt;60% sun, see below).</li><li>• Do not count if the wind is stronger than force 4 on the Beaufort scale (see below).</li><li>• The temperature should be at least 17°C in the shade. On sunny, calm days, counts may be made at a slightly lower temperature, but never less than 15°C.</li><li>• Do not count during rain, or when the temperature exceeds 30°C.</li></ul>

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### Species List Odonata Recording Form

Site name:	Brandon Marsh		
Site OS grid reference (6 or more figures) :	SP386755		
Water body name:	Swallow Pool		
Water body OS grid reference (6 or more figures):	SP38917547		
Date (dd/mm/yyyy)	06/06/2015	Start time (hh:mm):	10:30
		Finish time(hh:mm):	16:00
Name of recorder(s):	Kay & Peter Reeve		
Email:	peter@reeve60.org.uk		
Temp°C:	20	% Sun (see below):	100
		Wind speed(see below):	1

Record all species seen even common ones.

When monitoring it may be more practical to estimate the number of each species present rather than counting to absolute numbers. Use the following estimate codes:

- B=2-5
- C=6-20
- D=21-100,
- E=101-500
- F=500+.
- + or y=Present no count made

Use blanks columns for any additional species.

Common name	Count
<b>Have all damselflies been recorded? (y/n)</b>	<b>y</b>
Beautiful Demoiselle	
Banded Demoiselle	
Emerald Damselfly	F
White-legged Damselfly	3
Large Red Damselfly	5
Red-eyed Damselfly	3
Small Red-eyed Damselfly	
Azure Damselfly	2
Common-Blue Damselfly	7
Blue-tailed Damselfly	D

Common name	Count
<b>Have all dragonflies been recorded? (y/n)</b>	<b>y</b>
Migrant Hawker	
Southern Hawker	
Brown Hawker	
Emperor Dragonfly	1
Hairy Dragonfly	2
Four-spotted Chaser	4
Broad-bodied Chaser	3
Black-tailed Skimmer	y
Common Darter	
Ruddy Darter	

Percentage sun is estimated from the amount of sunshine experienced during the surveying. For example if it was sunny during three quarters of the survey then the percentage cover of sun would be 75%. It is officially sunny when an object can cast a shadow.

#### Beaufort wind scale

0. Calm. Smoke rises vertically.

1 Smoke drift indicates wind direction.

2. Wind felt on skin. Leaves rustle.

3. Leaves and small twigs move.

4. Dust raised small branches move.

5. Moderate sized Branches move. Small Trees sway.

6. Large branches move. Larger trees start to move.

Example: Species List Odonata Recording Form

## Recording procedure

On page 4 there is an example recording form showing how it might be filled in. Below are notes to help recording and filling in the recording form:

- **The site and water body** are identified by name(s) and located by OS grid references. The grid references are best taken use a GPS but paper or online maps can be used to determine them. Sometimes a water body may not have a name, just leave the field unfilled.
- **For large water bodies** you may decide to record along more than one transect, particularly if there are differences in habitat in different parts. Use a separate record form for each transect. The transects should be 50-100 metres in length.
- **Start and finish times** - on one transect observe for at least 15 minutes but probably no more than 45 minutes.
- **Air temperature** - record an estimate (e.g. use the car thermometer). Only an estimate is required.
- **Percentage sun** is estimated from the amount of sunshine experienced during the surveying. For example if it was sunny during three quarters of the survey then the percentage cover of sun would be 75%. It is officially sunny when an object can cast a shadow. Remember, only an estimate is required.
- **Wind speed** is noted by the Beaufort number: 0 – Smoke rises vertically, 1 – Slight smoke drift, 2 – Wind felt on face, leaves rustle, 3 – Leaves and twigs in slight movement, 4 - Dust raised and small branches move, 5 – Small trees in leaf begin to sway & 6 – Large branches sway. Remember, only an estimate is required.
- **In the first row of the damselfly and dragonfly recording table note if you have (y) or have not (n) recorded all of them.** If in doubt, do not record a species. Lack of data is much better than 'wrong' data. Just enter 'n'.
- **Visit each point at on transect in turn.** Spend sufficient time at each point to make sure you observe every species. Some species will come in to the water for only short periods.
- **Between points look in the bank side and emergent vegetation.** Often you will find damselflies and newly emerged dragonflies there not seen on the water.
- **Each species seen is recorded** at least by simple presence. That is all that is necessary but you can add value to the monitoring by estimating the numbers of individuals and recording them in one of the following ways:
  - i. Simple presence (y)
  - ii. Estimated numbers, indicated by a code: A=1, B=2-5, C=6-20, D=21-100, E=101-500, F=500+.
  - iii. A count of individuals seen.
- **If a species not on the list is seen**, enter it into one of the blank rows.
- **A large scale map showing the transect** is useful but not necessary. Unless some change is made it only needs made once.

- **Completed recording forms** should be sent to the Warwickshire Dragonfly Recorder by email to: [peter@reeve60.org.uk](mailto:peter@reeve60.org.uk). A blank Word copy of the recording form that can be filled in can be down loaded from:

[www.warwickshire-dragonflies.org.uk/wdg/recording\\_info.php](http://www.warwickshire-dragonflies.org.uk/wdg/recording_info.php).

A PDF version of the recording form is available there too. This is suitable for printing to make a paper copy that can be sent to:

Peter Reeve, WDG co-ordinator, The Outspan, Leamington Hastings, Near Rugby, Warwickshire CV23 8DZ.

- **Please return your survey results each time you complete a survey** in order to prevent a data back log.

### Monitoring Hints and Tips

- If you can, survey with someone else, not only is it safer and more fun, it often helps to have someone to discuss the finer identification details with.
- Equipment to take:
  - i. Note book or Record Sheet
  - ii. Reserve Map
  - iii. Clipboard
  - iv. ID book
  - v. Binoculars
  - vi. Pen/pencil
- Always make sure once you have decided what species you think is check out the following:
  - i. Habitat – does the species live in the habitat you have found it in?
  - ii. Distribution – does the species occur in Warwickshire?
  - iii. Time – does the species fly at the time of year you are surveying?

All the above information for Warwickshire species can be found on the Warwickshire Dragonfly Website: [www.warwickshire-dragonflies.org.uk](http://www.warwickshire-dragonflies.org.uk). Your ID book will have country wide information too.

- Photos of unknown species can always be sent in to the County Dragonfly Recorder.
- Reading through ID books before going out in the field can help familiarise yourself with where families etc are located in the book.
- Finally don't spend hours agonising over identification of a single species. Surveying is supposed to be fun!

### Recommended Identification Books

Brooks, S., Cham S. and Lewington R. *Field Guide to Dragonflies and Damselflies of Great Britain and Ireland*. British Wildlife Publishing, Edition 5, 2014

Smallshire S. & Swash A.. *Britain's Dragonflies*. WildGuides Edition 3. 2014.

Dijkstra K. B. & Lewington R. *Field Guide to the Dragonflies of Britain and Europe*. British Wildlife Publishing. 2006.