

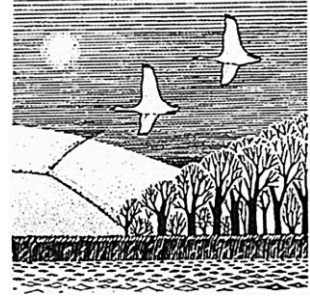
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DUNDRY SLOPES

BUTTERFLY MONITORING

SUMMER 2023

FOR

AVON WILDLIFE TRUST

DUNDRY SLOPES

BUTTERFLY MONITORING

1 INTRODUCTION

The aim of this project was to establish a methodology for butterfly monitoring at the Dundry Slopes Reserve. This report summarises the findings of initial surveys and makes recommendations for further monitoring.

2 METHODS

The survey was based on the Pollard Butterfly Monitoring Transect Methodology, as used in the UK Butterfly Monitoring Scheme (ukbms.org). Walks should be carried out in suitable weather conditions, as this is vital to ensure butterfly activity: in summary, a minimum temperature of 13°C without rain or strong wind and with a minimum of 60% sunshine. Weather conditions should be recorded for each walk, and any significant changes that occur during the course of the walk should be recorded.

The same route should be walked during each visit and butterflies seen within a zone 2.5 metres to either side of the recorder and 5 metres ahead should be counted. Waiting at activity hotspots (however tempting) should be avoided. A separate count should be made for each compartment.

The map below shows the route walked and the compartment numbers used. The walk was planned to cover a representative range of habitats and follows paths that were relatively accessible in 2023, and should be in the future. The UK Monitoring Scheme recommends weekly visits between April 1st and September 30th. Resources did not allow this level of survey effort and the intention was to make four visits. However, prolonged poor weather in July 2023 meant that this was not possible and only two visits were made. In addition to counting butterflies, numbers of moths, dragonflies, damselflies and bumblebees were recorded. A list of other insect species seen, without numbers, was also made.

3 MONITORING RECOMMENDATIONS

The aim of the 2023 project was to establish a methodology that can be used in future monitoring schemes. Monitoring of wildlife on nature reserves is important as it enables the effectiveness of management to be evaluated, and beneficial changes to management to be made. Any reserve will support a huge number of invertebrate species and butterflies are the most visible and most easily identifiable group of invertebrates, and also the species whose ecology is best understood, making them ideal subjects for monitoring.

Monitoring wildlife is a very good way to get to know a site intimately and to get in touch with the subtle changes of the seasons and, importantly, should be enjoyable. The key to monitoring is to keep a full and clear record of survey effort, which should be stored so that it can be accessed in future years and can be interpreted with ease.

Any survey or monitoring scheme involves compromise between what is ideal and what can be achieved, and potential participants should not be deterred because they

cannot commit fully to the optimal requirements. As noted above, the standard Pollard methodology involves making weekly visits over a six month period and this is the ideal for insect monitoring as weekly visits capture fluctuations in insect numbers as the weather changes. However, this is a significant commitment and it is recognised that few surveyors will be able to dedicate this amount of time to monitoring. The minimum number of visits for a survey to produce meaningful results is probably four. The monitoring can be shared between more than one person, but it is recommended that the route is walked jointly at least once so that a common approach can be agreed. The route takes over an hour to complete; if this is too long then part of the walk could be used, as long as this is recorded.

During the 2023 visits groups of insects in addition to butterflies were counted, selected as they are visible and relatively easy to identify, and therefore to count. However, this is entirely optional and butterfly monitoring is the central aim. I would encourage surveyors to record any group that they are happy to identify. Counts of individuals can be useful even if they cannot be identified to species level – for example, recording numbers of bumblebees as a whole could reveal useful information. Likewise, some butterflies can be difficult to identify if not seen well, so entries such as green-veined/small white or small/Essex skipper may be necessary in some circumstances.

4 SURVEY RESULTS

22nd June 2023

11:20 to 13:10

23°C

Wind E 2

Cloud cover 1/8

	Compartment													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Butterflies														
Meadow brown	4		1	2	2	1	2	6	1		2		5	
Marbled white														
Speckled wood					1		4		1	2		1		
Comma			1											
Small copper														
Red admiral									1	1	1			1
Ringlet			2			1	1	6	1			1		
Large skipper	1							1	2					1
Large white						1								
Small skipper								1						
Moths														
Narrow-bordered five spot burnet								2						
Straw dot						1								
Burnet companion														
Silver Y	1		1		1	1			1				6	
Bumblebees														
Buff-tailed	1	1	1			1			2	2		1		1
Common carder	1					1		3						
Early														
Dragonflies														
Emperor			1											
Southern hawkker										1				
Damselflies														
Azure					1	3		3	3					

19th July 2023

12:15 to 14:10

21°C

Wind SW 2

Cloud cover 3/8

	Compartment													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Butterflies														
Meadow brown				2		1		5					1	
Gatekeeper	3	1				1			2		1			
Speckled wood	4				2				1	1		1		2
Comma	2					1		1	1	1	2		1	
Small copper								1						
Red admiral			1	1		2			1	10		1	1	3
Ringlet			1	1				2						
Brimstone								1						
Large white	1								1					
Small skipper	1		1			2		2					1	
Peacock	2		1			1				3				1
Small white	2	1				2		3			2		3	2
Common blue	1													
Small tortoiseshell						2								
Green-veined white													1	
Holly blue														1
Moths														
Snout												1		
Straw dot						3								
Yellow shell			1											
Magpie														1
Silver Y		1		2		1	3	5						
Bumblebees														
Buff-tailed	3							6		1	1	1	1	2
Common carder								1	2				2	1
Early								1						
Red-tailed						1		4					4	
Dragonflies														
Emperor														
Southern hawker							1	1						
Damselflies														
Azure				1										

Other species (both visits):

Hoverflies – *Merodon equestris*, *Eristalis tenax*, *Eristalis pertinax*, *Eristalis intricarius*, *Episyrphus balteatus*, *Syrphus ribesii*, *Volucella bombylans*, *Volucella pellucens*, *Volucella zonaria*, *Myathropea florea*, *Leucozona lucorum*, *Syrirta pipiens*;

Other flies – *Chloromyia formosa*, *Eriothrix rufomaculata*, *Phasia hemiptera*

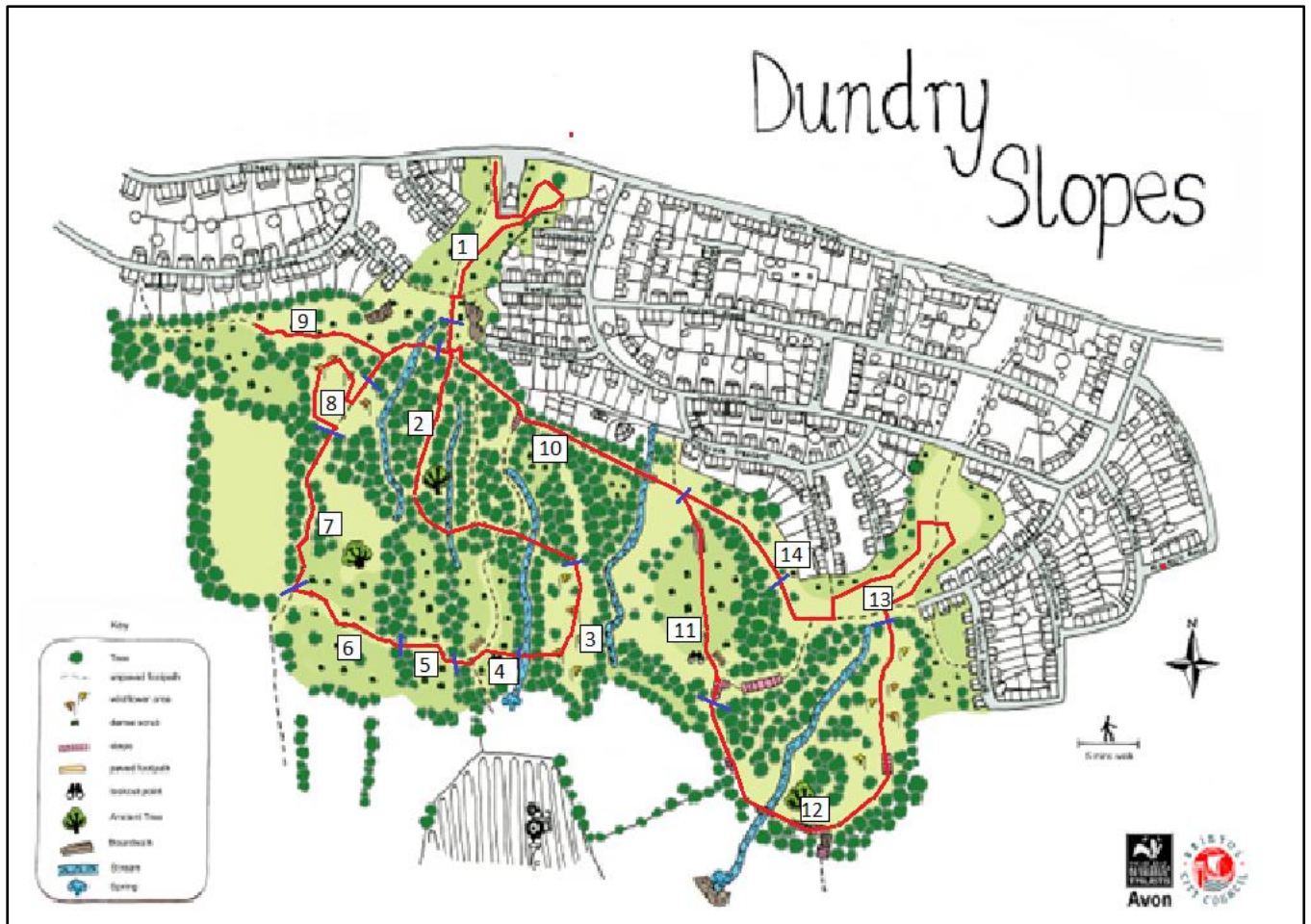
Solitary bees – *Lasioglossum calceatum*, *Lasioglossum morio*, *Hylaeus communis*

Bugs – *Eurydema oleracea*, *Campyloneura virgata*, *Deraeocoris ruber*, *Dolycoris baccarum*, *Elasmotherus interstinctus*

Beetles – Seven-spot ladybird, 16-spot ladybird, *Phyllopertha horticola*, *Rutpela maculata*, *Oedemera nobilis*, *Rhangonycha fulva*,

Micro-moths – mother-of-pearl, *Chryosteuchia culmella*, *Anthophila fabriciana*, *Celypha lacunana*, *Agriphila straminella*;

Orthoptera – meadow grasshopper, dark bush-cricket, roesel's bush-cricket, speckled bush-cricket



Transect route (red line) with compartment numbers (1-14), boundaries between compartments marked with blue lines.