

Buxton Butterfly Surveys 2021

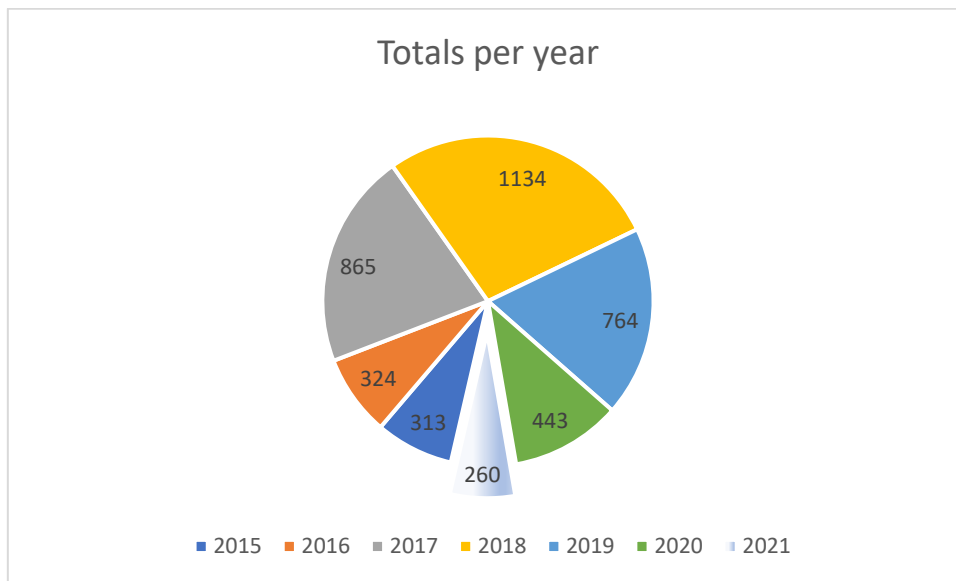
First of all, a big thank you to everyone who volunteered for the 2021 surveys. We had a good number of volunteers and it enabled us to survey six separate sites around Buxton. Some for the first time.

Compared to previous years 2021 was one of the worst in terms of numbers recorded. There are probably lots of reasons for this, but the weather certainly played its part. We started with the coldest January since 2010 and winter was colder and wetter than usual. Although April was a warm one, May was the fifth wettest. The high temperatures in July meant the flowering season finished early and subsequently less nectar sources for our butterfly population. However, we still recorded 25 species across all six sites

We will start with

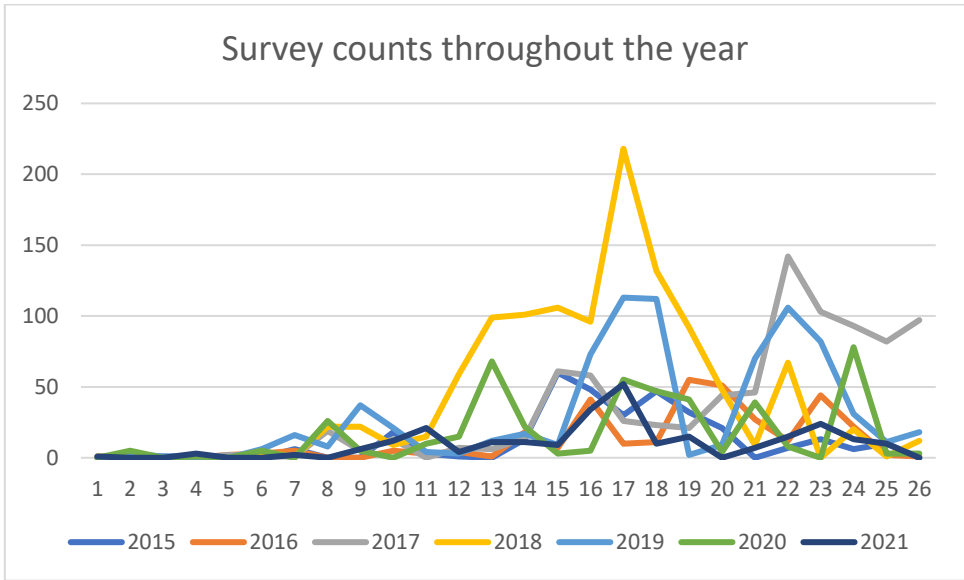
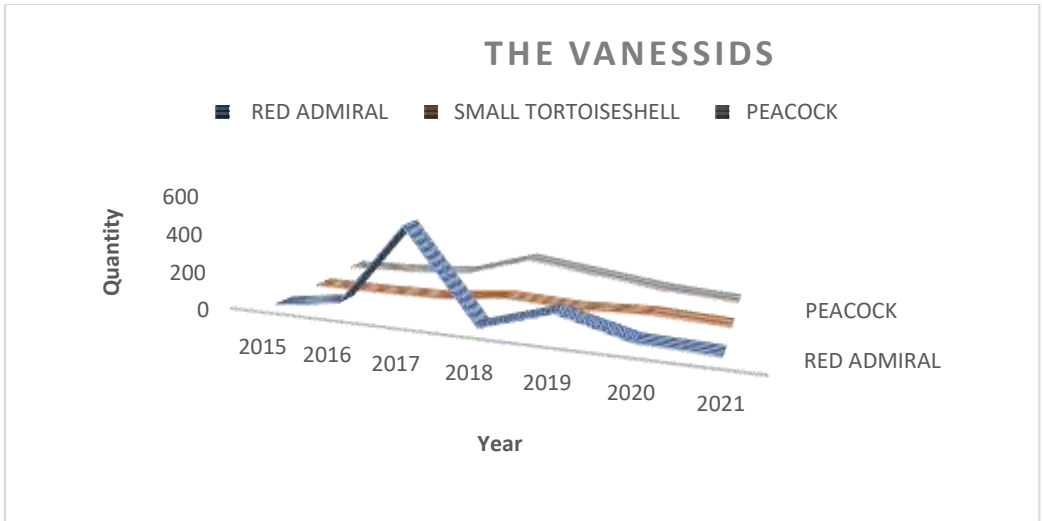
Grinlow,

which we have been surveying since 2015 and with most of the original survey team. It was a late start in 2021 with the first butterflies not being recorded until week 7, May 18th and Bob's comments were "Still & cool airflow & frequent clouding over, though warm in the sun. Few nectaring plants available - a few dandelions and coltsfoot".



As can be seen from the above pie chart, 2021 stands out numerically and figuratively as our poorest year in terms of numbers. Over the last 7 years, we have recorded 4103 butterflies of 23 species in Grinlow - including the unidentified butterflies (the browns, whites and skippers can be difficult to separate in flight). The glades have an abundance of Devil's-bit Scabious which flower late in the year. So, the low numbers of butterflies throughout the season are boosted by the visiting Red Admiral, Small Tortoiseshell and Peacock as below.

	2015	2016	2017	2018	2019	2020	2021	Total
RED ADMIRAL	4	55	483	10	125	26	12	715
SMALL TORTOISESHELL	6	4	8	47	28	42	21	156
PEACOCK	18	29	51	163	112	61	34	468



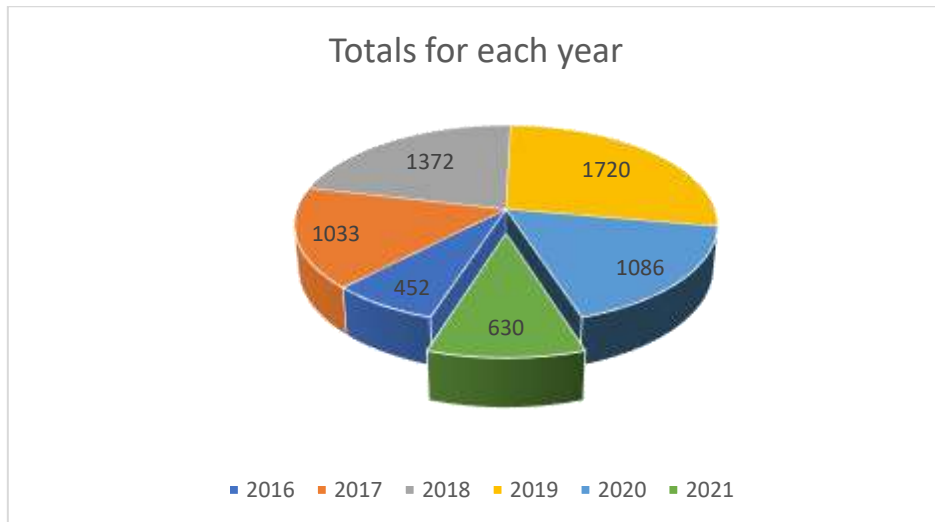
Looking at the pie chart and the above graph 2018 has been the best year so far



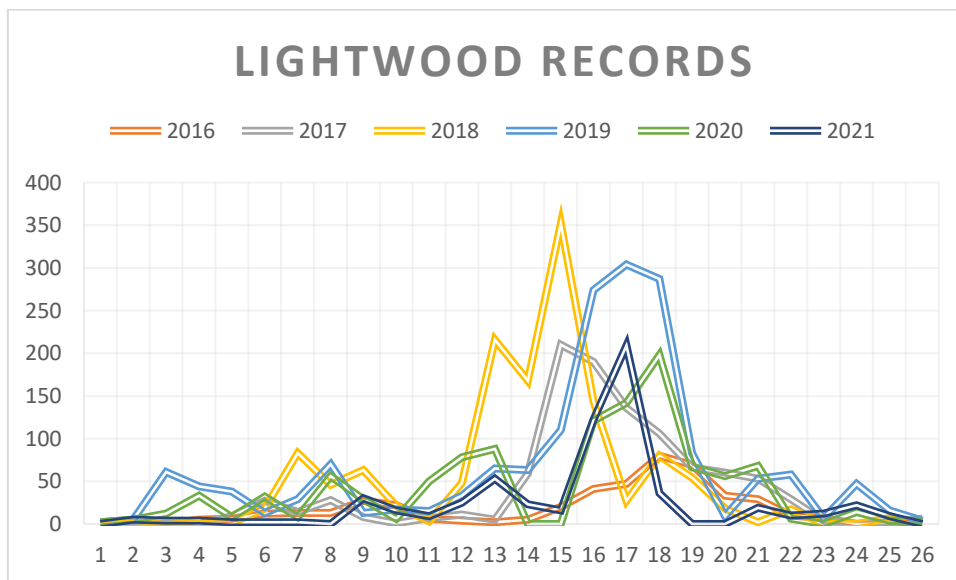
A female Common Blue in Grinlow

Lightwood

We began surveying Lightwood in 2016 (452 butterflies of 19 species) and 2021 was the second worst year with only 630 butterflies of 17 species (see pie chart below). Again, the weather played its part in the decline. Over the last few years, the willows have taken over a lot of the “meadow”, reducing the open grasslands. Hopefully the removal of some of the willow by the winter volunteers will have helped to encourage the butterflies to return.



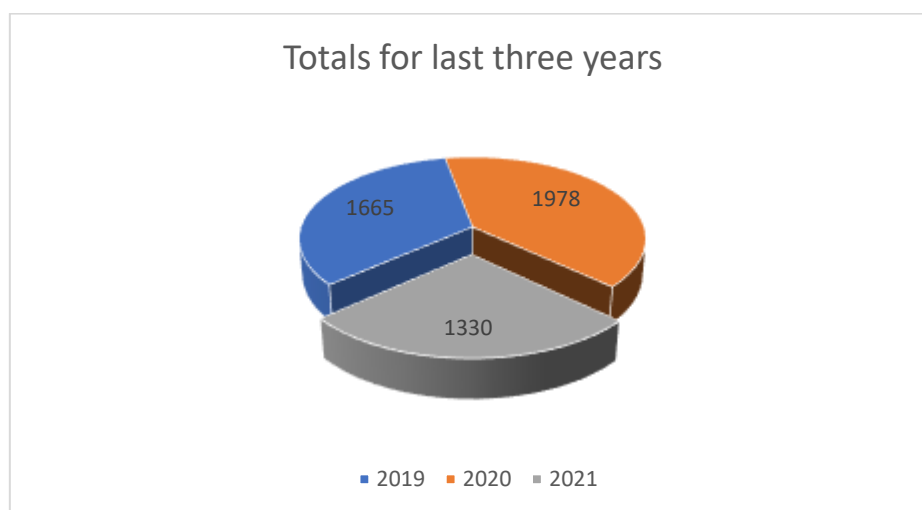
And the chart below shows the numbers throughout the seasons for each year



To clarify, 2021 is represented by the dark blue line and it peaks in week 17 with 209 butterflies, the majority of these being the skippers (Large and Small) and the browns. For the moment, Lightwood is the only place where we have recorded White-letter Hairstreak on our surveys. But Dingy Skipper, Common Blue and Wall Brown were not recorded in 2021 bringing our species list down to 17.

Cunning Dale

We began surveying in Cunning Dale in 2019 and in our first year we recorded 1563 butterflies of 24 species. Cunning Dale is an excellent home for butterflies. Two weeks before the start of the season our survey team met to walk and confirm the route. We recorded 24 butterflies of 4 species. This was exceptional as we normally see very few butterflies in March.



I thought it would be interesting to look at our top ten butterflies recorded in Cunning Dale over the last three years. The Ringlet comes out on top. This is remarkable because in the first 10 years of this century there were less than 10 records around Buxton.

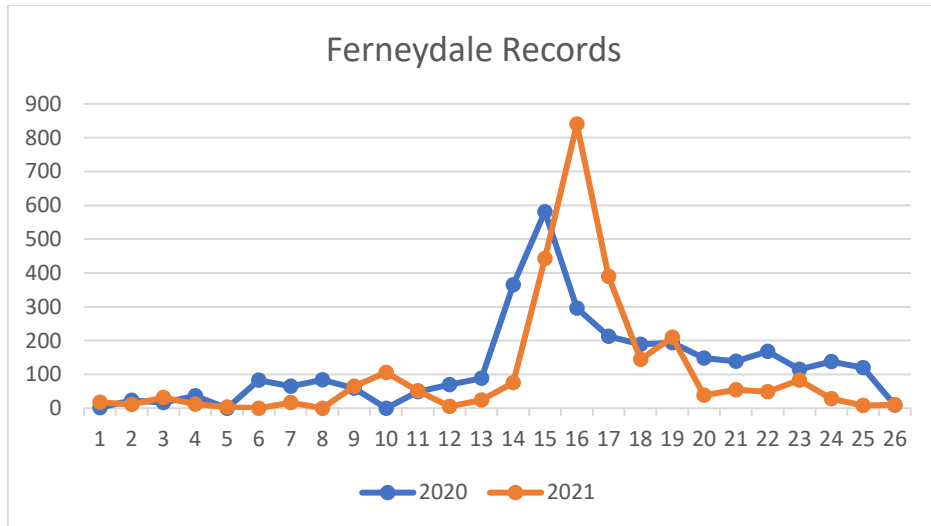
2019		2020		2021	
RINGLET	557	RINGLET	369	RINGLET	331
MEADOW BROWN	229	MEADOW BROWN	293	SMALL HEATH	146
SMALL HEATH	118	SMALL TORTOISESHELL	228	MEADOW BROWN	100
SMALL SKIPPER	98	SMALL HEATH	194	UNIDENTIFIED WHITE	96
UNIDENTIFIED WHITE	91	UNIDENTIFIED WHITE	189	SMALL TORTOISESHELL	92
ORANGE TIP	80	ORANGE TIP	107	SMALL SKIPPER	90
PEACOCK	60	LARGE SKIPPER	88	DARK GREEN FRITILLARY	77
DARK GREEN FRITILLARY	56	SMALL SKIPPER	75	SMALL WHITE	56
GREEN VEINED WHITE	46	DARK GREEN FRITILLARY	67	LARGE SKIPPER	47
LARGE SKIPPER	42	GREEN HAIRSTREAK	46	COMMON BLUE	42

The “unidentified white” could be one of four species, Large White, Small White, Green-veined White or Orange Tip. They can be difficult to identify when they are flying past at speed so they are often grouped together. The Small Heath is a high priority BAP species but is doing well here. Cunning Dale is also a good place to see Brown Argus and we have recorded 82 individuals during our surveys over the last three years.

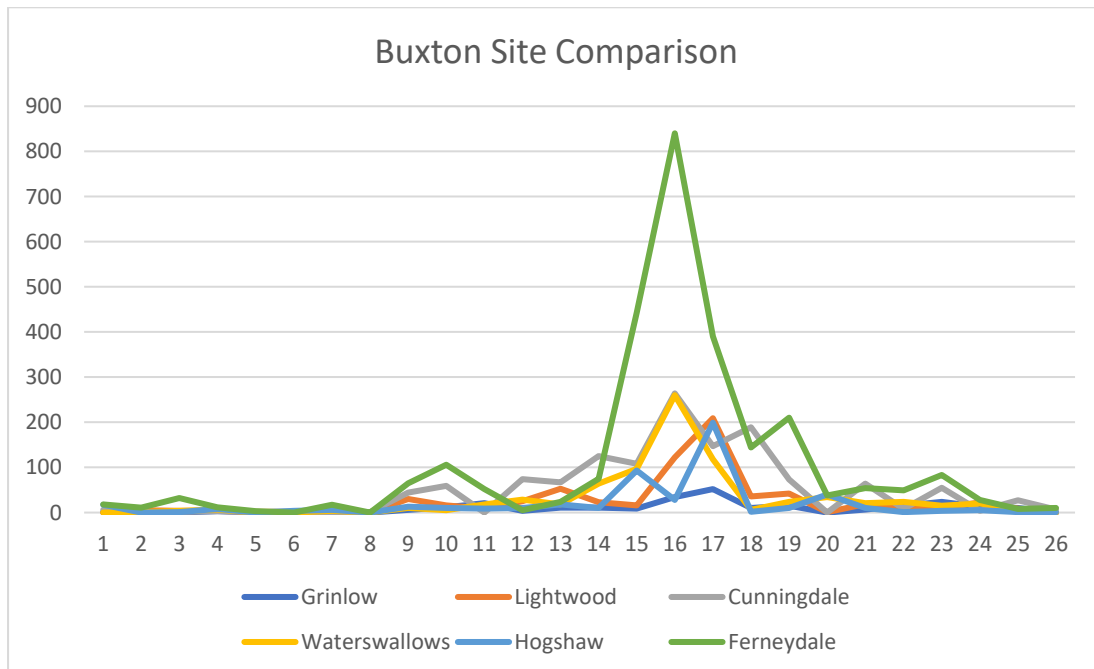
Ferneydale

Ferneydale is a late comer to the survey sites but has to be the top butterfly site in Buxton in terms of numbers and was ranked second in Derbyshire in 2021. We have recorded 23 species here so far but expect to see more over the coming years.

Although 2021 was a poor year around Buxton. Here are the last two years in Ferneydale



And if we compare 2021 with the other sites around Buxton the differences are significant



The 557 Ringlets and 184 Small Skipper in week 16 certainly boosted the numbers. With a total of 840 butterflies in this one week it was higher than the sum total for the year, for our oldest (Grinlow) and newest (Hogshaw) survey sites. What are the reasons for its success in attracting butterflies? It is rich in flower species and with a long flowering period there is a good nectar source throughout the season. The long damp grass is also great habitat for the Ringlelet (over 1000 per year)

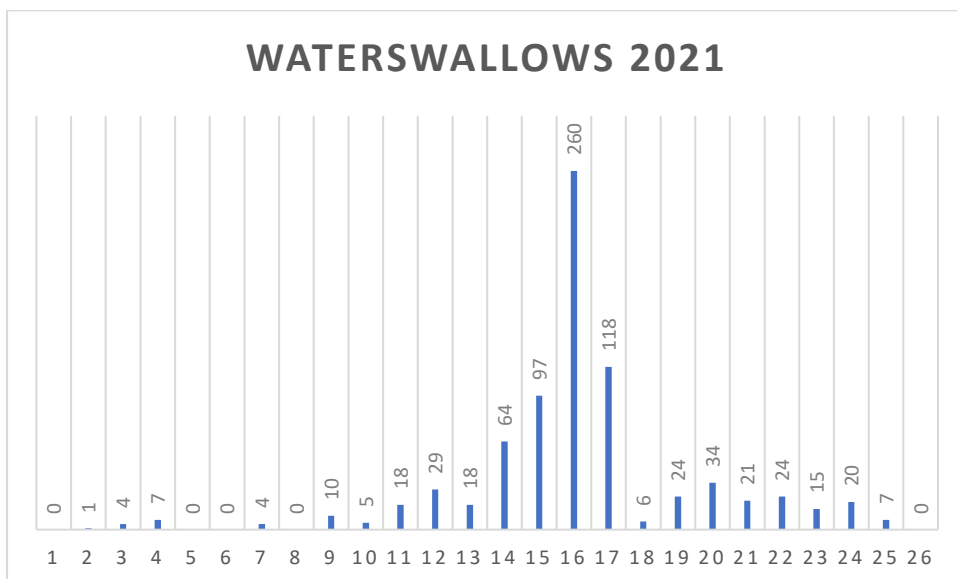
Waterswallows

We had intended to start recording here in 2020. The route was planned and volunteers were ready to go. Unfortunately, by week 4, work had begun laying the new pipe line from Rockhead Spring to the Nestlé bottling plant and some of the survey route was closed. The surveys had to stop and the survey began again in 2021. It is an interesting area and with 23 species recorded in our first year it has great potential.

The top ten were as follows

RINGLET	245
MEADOW BROWN	112
SMALL HEATH	91
SMALL TORTOISESHELL	69
COMMON BLUE	45
SMALL WHITE	24
GREEN VEINED WHITE	22
LARGE SKIPPER	21
SMALL SKIPPER	18
PEACOCK	16

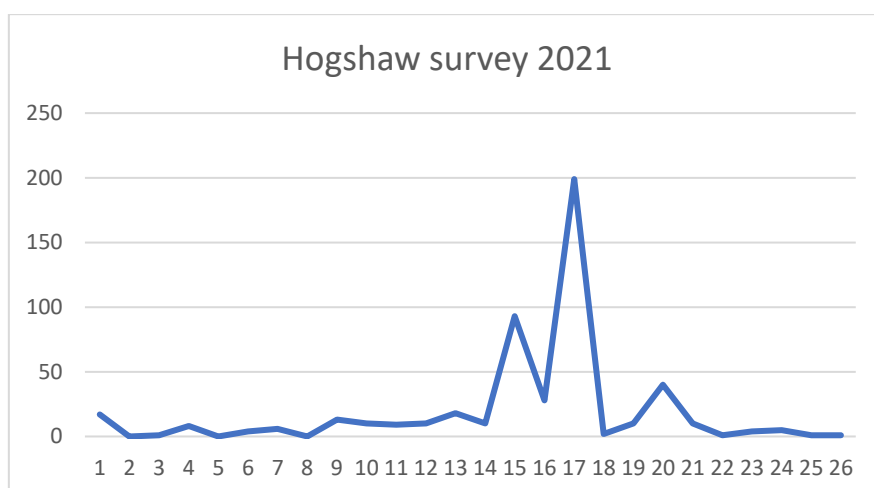
Waterswallows is one of three sites in Buxton where we have recorded Brown Argus (the others being Cuningdale and Ferneydale). It is also rich in many species of plant and invertebrates. On one of our surveys a Hobby flew over and on another, we were mobbed by an Emperor moth. In 2014 we recorded a Clouded Yellow, nearby in Longsidings quarry, which isn't too far away as the butterfly flies. After all it is a migrant. So, it is always worth keeping an eye out for one.



Hogshaw.

As most people know the site is destined to be developed for housing. It is a brown field site so has been allowed to naturalise at its own pace. Unfortunately, it has had no independent surveys so we were grateful when several people volunteered to run a butterfly survey. Despite the poor weather 500 butterflies of 17 species were recorded in 2021. In section 5 of the survey route approximately 30 Bilberry Bumblebee were recorded which makes it an important site for this iconic Bumblebee. Hogshaw is situated within SK0674 which is also the same OS grid square for my own garden. If we add the moths recorded over the years, the species count for Hogshaw is over 780.

Below we have a graph showing numbers of butterflies in 2021. It shows some interesting details. In week 1, 17 butterflies were recorded - all of the same species. This early in the season we would expect to be recording over-wintering butterflies. What makes this more interesting is all the butterflies are one species, Small Tortoiseshell. Where have they spent the winter and what makes Hogshaw so special?



And below we have the top ten. Note item 10 are Unidentified Browns so they could be one of five species - Ringlet, Meadow Brown, Wall Brown, Speckled Wood or Small Heath.

RINGLET	128
SMALL WHITE	101
SMALL TORTOISESHELL	38
SMALL SKIPPER	34
MEADOW BROWN	31
SMALL HEATH	31
UNIDENTIFIED WHITE	29
GATEKEEPER	25
ORANGE TIP	24
UNIDENTIFIED BROWN	22

We have a range of data from seven years to one year for our survey sites around Buxton and none of this would be possible without the dedication from all our volunteers. With many thanks to :-

Gil and John Boardman
 Robert Billing
 Claire Chable
 Susan Cross
 Anne Downey
 Debbie and Julian Fox
 Simon Fussell
 Carole Garner
 Andy Gregory and Janet
 Smith
 Shirley Johnson
 Graham Jowett
 Jax Palmer
 David and Rachel Purchase
 Cathy Riddington
 Liz Speed
 Sheila Stubbs
 Harry Taylor
 Jane Tyler
 Lindsey and Rowan
 Wakefield
 Gill Williamson

I have had a few people advise that they will not be able to take part this year. We are sad to see you leave but hope to keep in touch. In the meantime, if any volunteers have friends who would like to have a go, we are always willing to give them as much training and any other help they may need.

I have tried to make this report interesting and if there are any errors, they are all mine. If there is anything you would like to see in the next report, I would be happy to include them

Just one last bit to add. Over the last seven years we have surveyed over 500 days and counted 16,285 butterflies (not worked out yet how many miles that is, but around 1000! 😊)

	Grinlow	Lightwood	Cunningdale	Ferneydale	Waterswallows	Hogshaw
No of Yrs	7	6	3	2	1	1
	Totals					
	4109	6293	4973	5968	786	500
2021	260	630	1330	2717	786	500
2020	443	1086	1978	3251		
2019	764	1720	1665			
2018	1134	1372				
2017	865	1033				
2016	324	452				
2015	313					

Steve & Lin Orridge March 2022

Appendix

For those who have yet to experience the excitement of going out to survey butterflies I thought it might be of help to see how the week numbers relate to the dates. Week 1 always starts on April 1st (no matter which day it is). This year week 1 starts on a Friday. See the table below for all dates

1st April 2022 is a Friday

WEEK NO.	DAYS							MONTH	SURVEYOR
	Fri	Sat	Sun	Mon	Tues	Wed	Thur		
1	1	2	3	4	5	6	7	Apr	
2	8	9	10	11	12	13	14	May	
3	15	16	17	18	19	20	21		
4	22	23	24	25	26	27	28		
5	29	30	1	2	3	4	5		
6	6	7	8	9	10	11	12		
7	13	14	15	16	17	18	19		
8	20	21	22	23	24	25	26		
9	27	28	29	30	31	1	2	June	
10	3	4	5	6	7	8	9		
11	10	11	12	13	14	15	16		
12	17	18	19	20	21	22	23		
13	24	25	26	27	28	29	30		
14	1	2	3	4	5	6	7	July	
15	8	9	10	11	12	13	14		
16	15	16	17	18	19	20	21		
17	22	23	24	25	26	27	28		
18	29	30	31	1	2	3	4	Aug	
19	5	6	7	8	9	10	11		
20	12	13	14	15	16	17	18		
21	19	20	21	22	23	24	25		
22	26	27	28	29	30	31	1	Sept	
23	2	3	4	5	6	7	8		
24	9	10	11	12	13	14	15		
25	16	17	18	19	20	21	22		
26	23	24	25	26	27	28	29		

So, one of the busiest week (week 16) would be the third week of July.