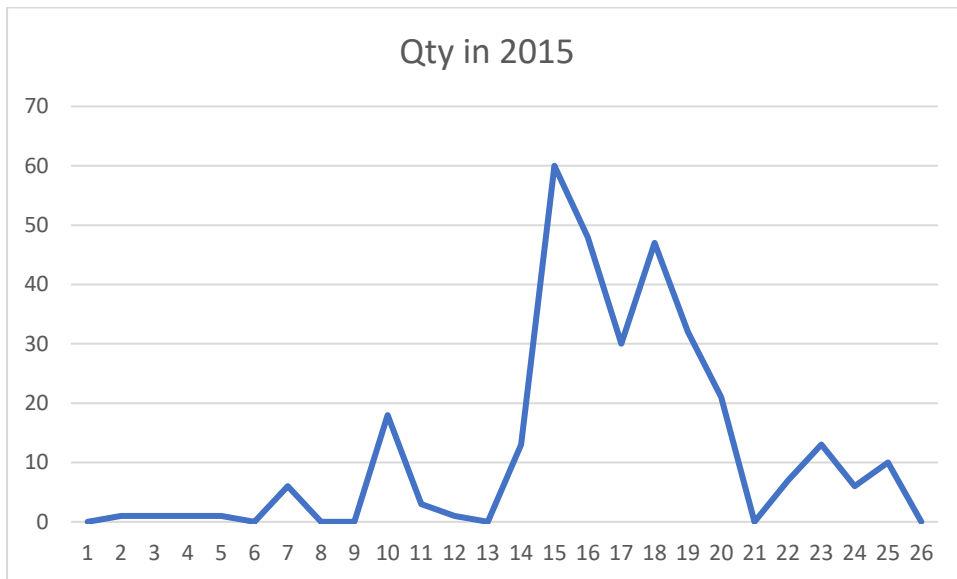


Buxton Butterfly Surveys 2015 to Present

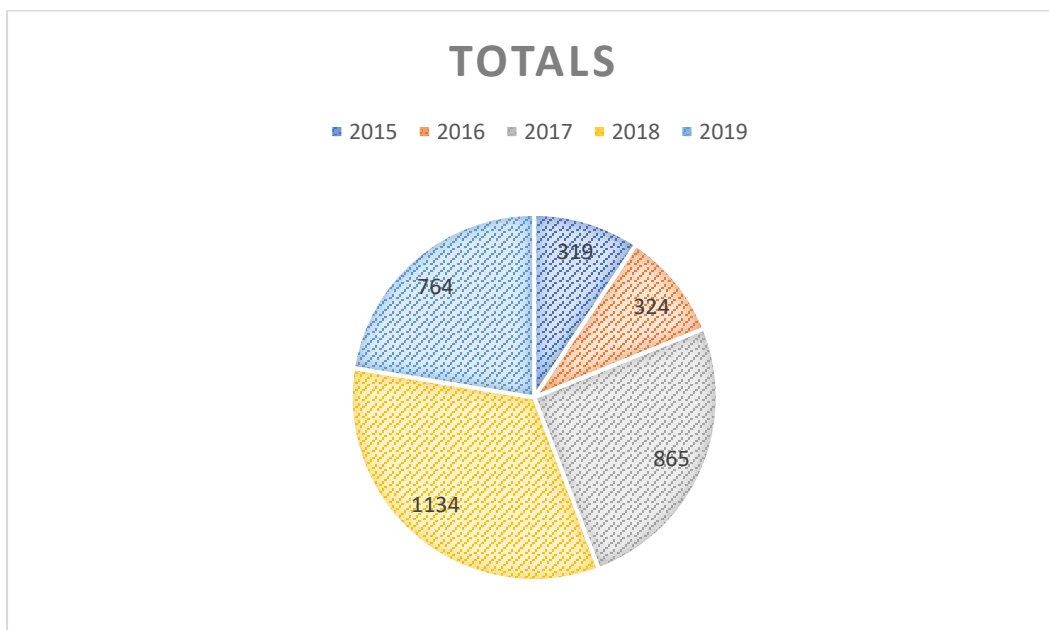
We have been recording the butterflies of Buxton now for five years and I thought it was time to prepare some information so we can all see how the records have changed over time. This is more for fun than a scientific treatise but I hope you find it interesting.

Grinlow 2015 to 2019

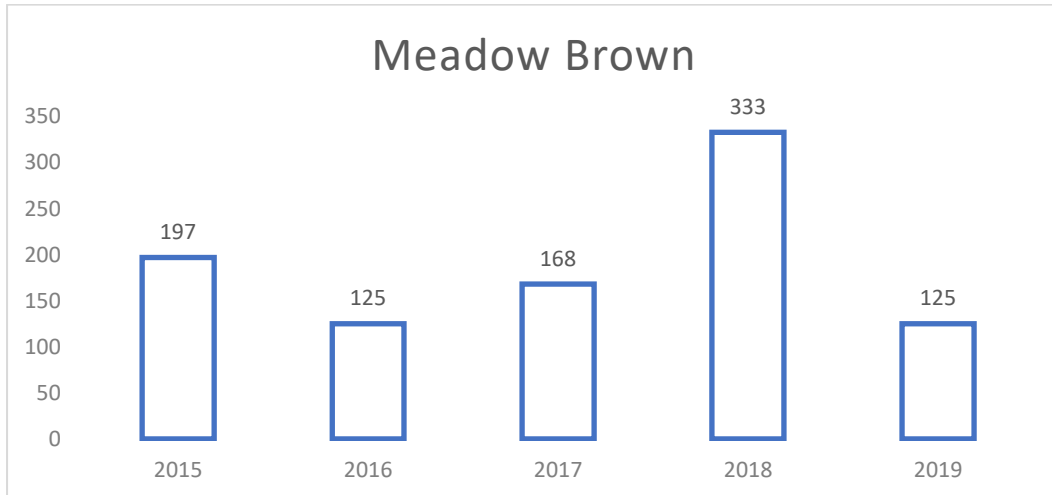
We began our first Buxton Survey in Grinlow in 2015.



It was a slow start to the season but thanks to the Meadow Browns we finished with 316 butterflies of 17 species. The following years improved and, due to the Devil's-bit Scabious in the glades, the numbers did not drop drastically as the recording season came to an end.



As the Pie Chart shows, we reached a peak in 2018 with a total of 1134 butterflies of 21 species. This was probably one of our best summers for butterflies but conversely, one of our worst summers for Red Admiral. Was it too dry for this species that year? Below, a graph of our most abundant butterfly.



The next table show which weeks were the best (in terms of the highest numbers) for their year and which butterfly species was the most abundant.

Year	Max	Week no.	Species
2015	60	15	Meadow Brown (38)
2016	55	19	Meadow Brown (49)
2017	142	22	Red Admiral (100)
2018	218	17	Meadow Brown (72)
2019	113	17	Meadow Brown (73)

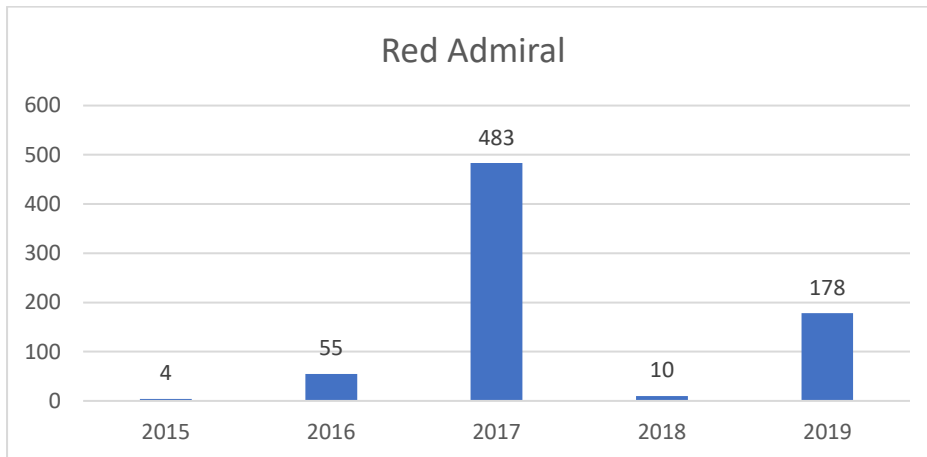
As you can see 2017 was a very good year for Red Admiral and as they visit Grinlow for the Devil's-bit Scabious, which flowers later in the year, they peaked towards the end of the season (week 22)..



Red Admirals on Devil's-bit Scabious in 2017— a record year

However, in 2018 the Red Admiral did not make it into the top twelve.

Why was 2018 a disastrous year for Red Admiral. Was it too hot? Were too many caterpillars parasitized?

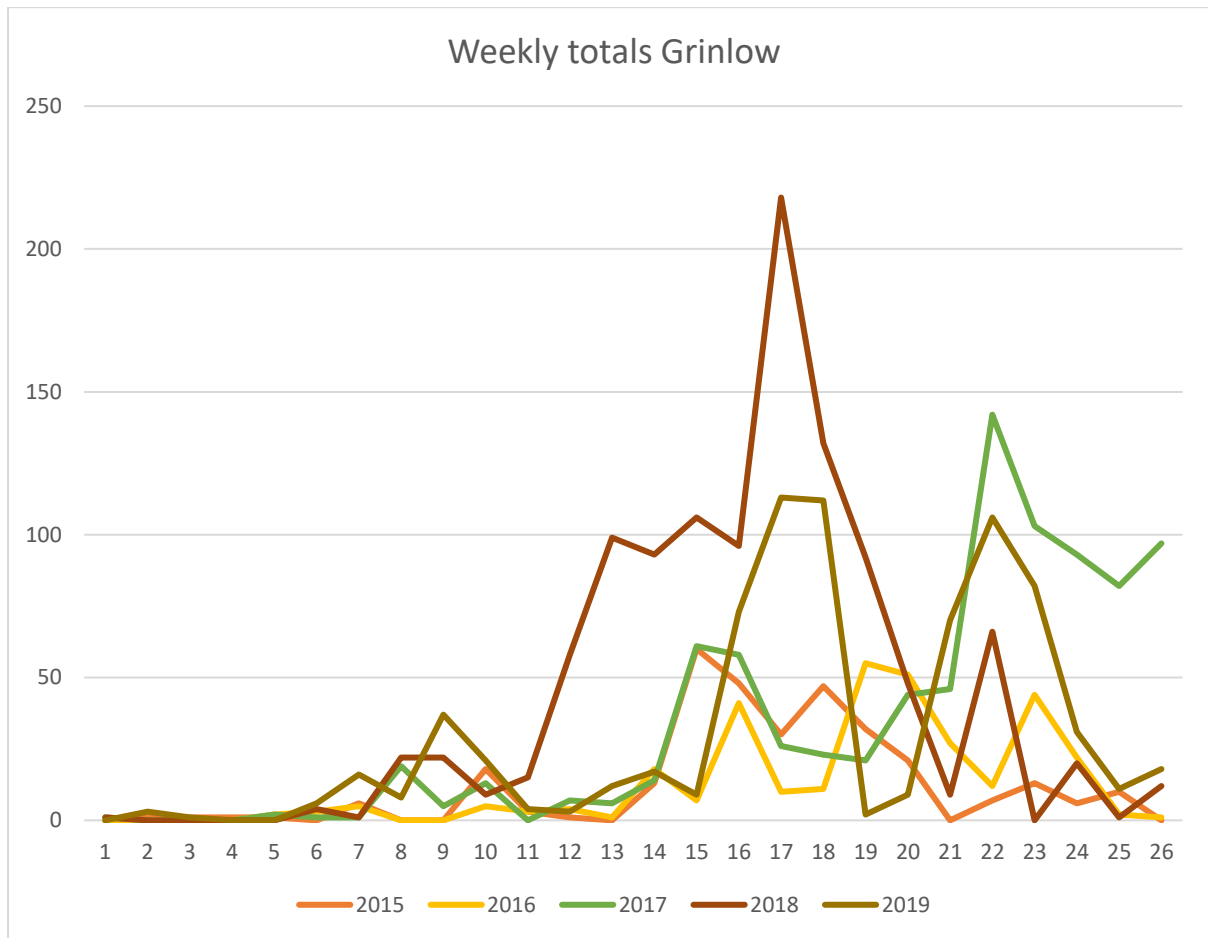


I thought it would be interesting to look how the abundance changes throughout the years. Common Blue did exceptionally well in 2018 with the season lasting from week 10 all the way through to week 19 with week 13 proving to be the most abundant.

No.	2015	Qty	2016	Qty	2017	Qty
1	MEADOW BROWN	197	MEADOW BROWN	125	RED ADMIRAL	483
2	COMMON BLUE	24	RED ADMIRAL	55	MEADOW BROWN	168
3	GREEN VEINED WHITE	22	PEACOCK	29	GREEN VEINED WHITE	61
4	PEACOCK	18	GREEN VEINED WHITE	18	PEACOCK	51
5	SMALL HEATH	11	COMMON BLUE	16	COMMON BLUE	30
6	RINGLET	9	SMALL HEATH	15	COMMA	10
7	SMALL TORTOISESHELL	6	RINGLET	12	SMALL WHITE	10
8	COMMA	6	SPECKLED WOOD	11	RINGLET	9
9	RED ADMIRAL	4	GATEKEEPER	10	SMALL TORTOISESHELL	8
10	SPECKLED WOOD	3	ORANGE TIP	5	ORANGE TIP	7
11	SMALL SKIPPER	2	LARGE WHITE	5	SMALL HEATH	5
12	DINGY SKIPPER	2	SMALL TORTOISESHELL	4	GATEKEEPER	4

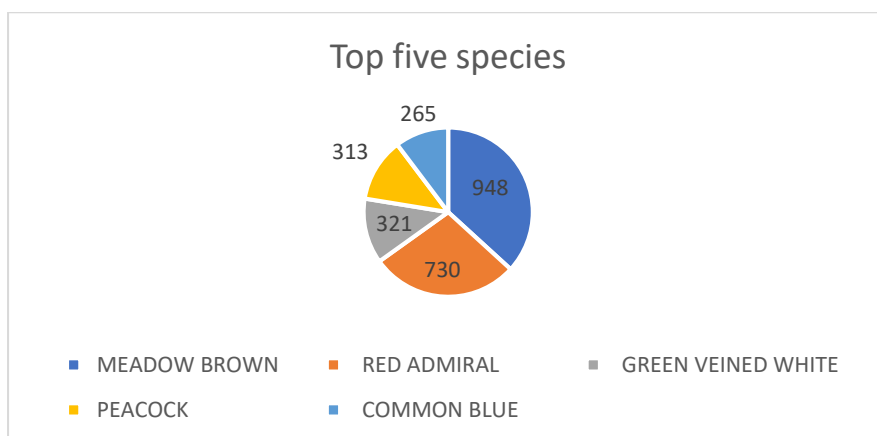
No.	2018	Qty	2019	Qty
28	MEADOW BROWN	333	MEADOW BROWN	178
16	COMMON BLUE	185	RED ADMIRAL	125
21	PEACOCK	163	PEACOCK	112
9	GREEN VEINED WHITE	108	RINGLET	74
29	RINGLET	58	GREEN VEINED WHITE	52
8	SMALL WHITE	54	ORANGE TIP	33
20	SMALL TORTOISESHELL	47	PAINTED LADY	28
7	LARGE WHITE	31	SMALL TORTOISESHELL	28
24	SPECKLED WOOD	27	LARGE WHITE	23
27	GATEKEEPER	27	SPECKLED WOOD	22
30	SMALL HEATH	23	SMALL HEATH	16
22	COMMA	22	COMMA	13

And here is a graph showing the results over the last five years. Notice how 2017 ended up on a high. We had 90 Red Admiral in the last week of our survey with the other Vanessids taking it to a total of 97 butterflies of four species.



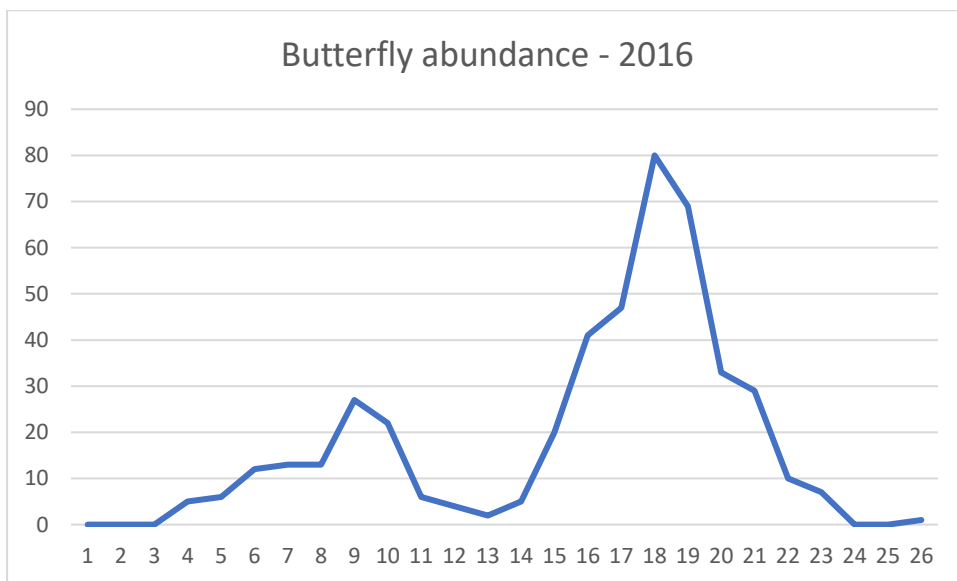
The graph also highlights how late the butterfly seasons starts in Grinlow. Do we need some more spring flowering plants to entice the butterflies to visit?

And finally what has been the most abundant butterfly species been in the last five years and how different would the figures be without the Devil's-bit Scabious?



Lightwood 2016 to 2019

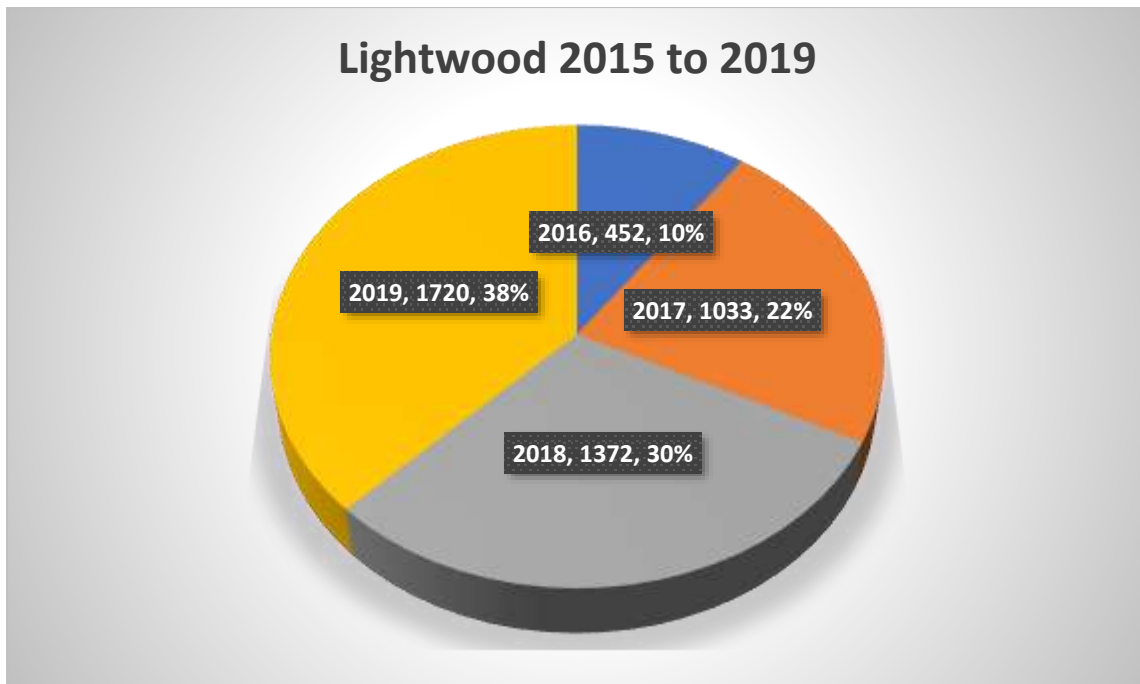
We started surveying Lightwood in 2016. The main motivator being the site being put on the market by Severn Trent and the ultimate purchase of Lightwood by Nestlé. We thought it important to monitor the site for any changes to the local wildlife once it became part of their global empire. 😊 Up to the end of 2019 there has been no detrimental effects observed. Lightwood is a richer site, in terms of species abundance, than Grinlow and this is mainly due to the higher variety of habitats. I am going to follow the same format so we will start off with our first year.



The Lightwood season starts earlier than Grinlow and this is mainly due to the emergence of the over-wintering butterflies such as the Small Tortoiseshell and Peacock. We also seem to have more of the "White" butterflies which began to emerge in week 9; the Orange-tip visiting in good numbers to lay their eggs on the Lady's Smock, *Cardamine pratensis*.



Next, we go to a year by year comparison. As can be see on the Pie Chart, there has been a steady increase in abundance with 2019 being our best year. Will this trend continue?

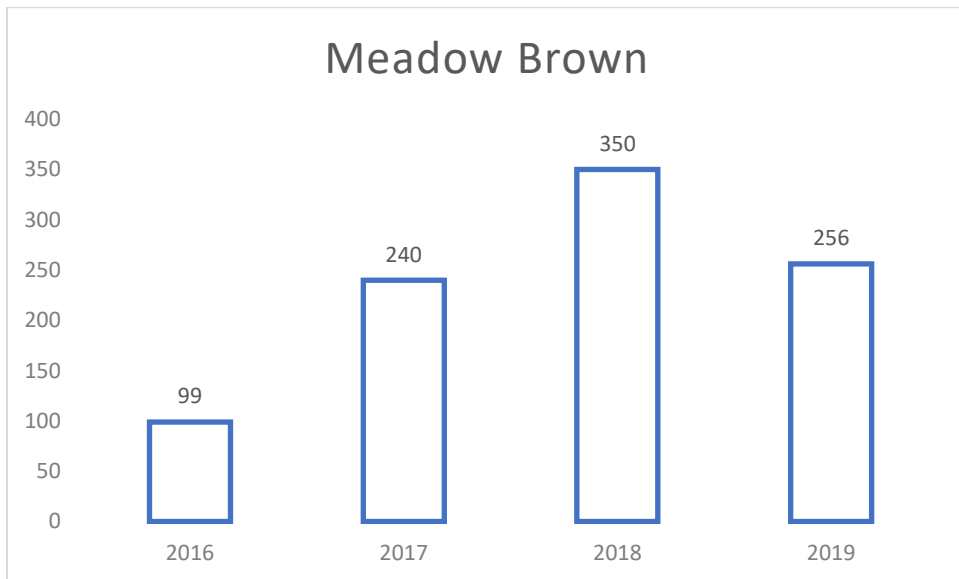


Check out our league table showing the top twelve species for each year

	2016		2017		2018		2019	
		Qty		Qty		Qty		Qty
1	GATEKEEPER	119	MEADOW BROWN	240	MEADOW BROWN	350	RINGLET	271
2	MEADOW BROWN	99	RINGLET	168	GREEN VEINED WHITE	199	MEADOW BROWN	256
3	ORANGE TIP	37	GATEKEEPER	144	SMALL HEATH	177	SMALL SKIPPER	247
4	GREEN VEINED WHITE	29	SMALL SKIPPER	141	SMALL SKIPPER	120	GATEKEEPER	193
5	SMALL SKIPPER	26	GREEN VEINED WHITE	105	GATEKEEPER	99	SMALL HEATH	172
6	SMALL HEATH	26	SMALL HEATH	48	ORANGE TIP	96	ORANGE TIP	110
7	SMALL TORTOISESHELL	20	RED ADMIRAL	44	RINGLET	89	GREEN VEINED WHITE	93
8	RINGLET	17	LARGE SKIPPER	42	LARGE WHITE	31	LARGE SKIPPER	65
9	GREEN HAIRSTREAK	14	ORANGE TIP	22	GREEN HAIRSTREAK	30	PEACOCK	51
10	LARGE WHITE	12	DARK GREEN FRITILLARY	13	LARGE SKIPPER	28	GREEN HAIRSTREAK	49
11	DINGY SKIPPER	7	GREEN HAIRSTREAK	8	SMALL WHITE	21	SMALL COPPER	45
12	LARGE SKIPPER	6	LARGE WHITE	6	SMALL COPPER	20	LARGE WHITE	25

Once again Meadow Brown dominates but notice how well Small Heath, a BAP species, is surviving in Lightwood. In fact, Lightwood is home to four species on the Biodiversity Action Plan list – Small Heath, Wall, Dingy Skipper and our most recent arrival White Letter Hairstreak

How does Meadow Brown compare in numbers to Grinlow records? In the following graph we see that the numbers are higher in Lightwood and this may be because there are more suitable habitats here



In this table the Meadow Browns do not dominate the top spot but overall they are the most abundant butterfly in Lightwood

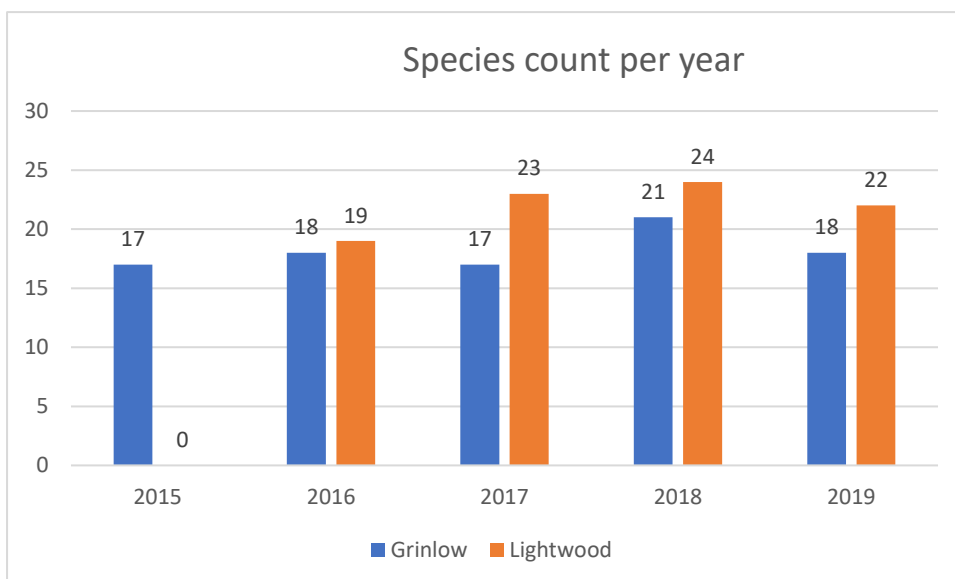
Year	Max	week no.	Species
2016	80	18	Gatekeeper (46)
2017	210	15	Meadow Brown (108)
2018	352	15	Meadow Brown (105)
2019	304	17	Small Skipper (93)





The numbers in brackets are the total number of the species seen in the last four years of recording. This excludes the numbers that have flown away too fast and therefore cannot be identified. We record these as Unidentified White or Unidentified Brown, etc.

As you know we have a list of 30 butterflies to record on the survey sheet. Which site is leading? Let's have a look.



Lightwood again comes out on top with species seen each year. We have recorded 24 species in Lightwood and 23 species in Grinlow so far.

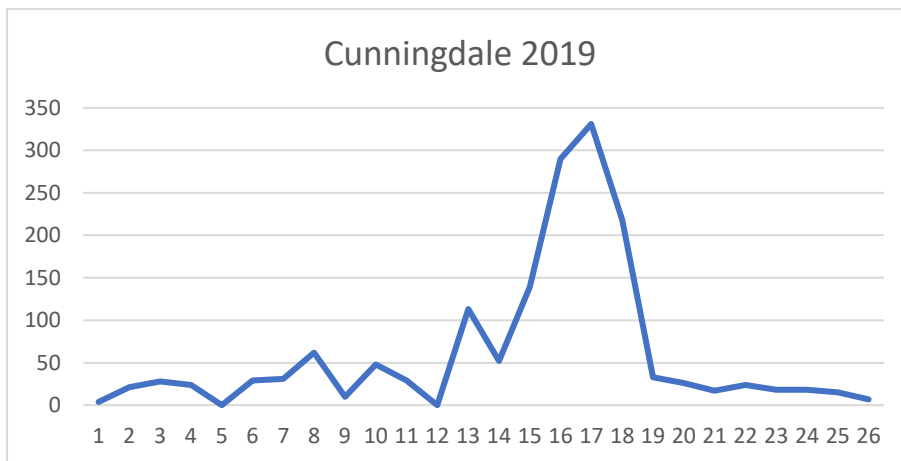
Cunningdale 2019

I think a few of us had considered surveying Cunningdale over the last year or so but 2019 was the year we were going to start. Accordingly, we had a trial survey in the third week of March and, although the presence of a shooter in full camouflage made us pause, we got off to a good start with a total of twenty four butterflies of four species as below.

Species	Qty
Brimstone	12
Small Tortoiseshell	5
Peacock	5
Comma	2

Total	24
--------------	-----------

The season started off well and we recorded butterflies every week, apart from week 12 when the weather was just too bad. By the end of the season we had counted (discounting the unidentified ones) 1563 butterflies of 24 species with Brown Argus being new for the official Buxton surveys.



The Brown Argus brings the Buxton count to 25 species



What was the top butterfly of Cuningdale? Surprisingly it was wasn't Meadow Brown and I present the whole list below.

No.	2019	Qty
1	RINGLET	557
2	MEADOW BROWN	229
3	SMALL HEATH	118
4	SMALL SKIPPER	98
5	ORANGE TIP	80
6	PEACOCK	60
7	DARK GREEN FRITILLARY	56
8	GREEN VEINED WHITE	46
9	LARGE SKIPPER	42
10	PAINTED LADY	36
11	SMALL TORTOISESHELL	35
12	COMMON BLUE	34
13	SMALL WHITE	32
14	SPECKLED WOOD	31
15	BRIMSTONE	28
16	RED ADMIRAL	17
17	SMALL COPPER	13
18	BROWN ARGUS	13
19	LARGE WHITE	11
20	GREEN HAIRSTREAK	9
21	GATEKEEPER	8
22	DINGY SKIPPER	4
23	WALL BROWN	4
24	COMMA	2

Our busiest week was week 17 when we recorded 331 butterflies of 14 species with Ringlet being the most abundant (179) and Meadow Brown coming third (28) after Small Skipper (51).



So, what can we expect to find next year? Essex Skipper is slowly making its way north (and west) and it is only a matter of time before we find it on our patch. It is also possible that Silver-washed Fritillary may be making its way over. So, interesting times are ahead. 😊 It is not that many years ago when Ringlet and Speckled Wood were infrequent visitors. These days, they are very common – especially in Cuningdale!. And that is the whole point of our recording scheme – to monitor the ongoing changes. As you know I hold all the Buxton survey records. If anyone wants to see any more reports on any particular species please do not hesitate to contact me

Thank you so much to everyone who has contributed to the surveys and made this report possible. All our records are forwarded to Butterfly Conservation who add them to their national database.

List of Recorders (in alphabetical order) who have contributed to our surveys since we began

Bob Billings

Jenny Conway

Susan Cross

Eleanor Goldney

Andy Gregory & Janet Smith

Shirley Johnson

Janine Morris

Steve & Lin Orridge

Dave & Rachel Purchase

Tony Pioli

Sheila Stubbs

Harry Taylor

I look forward to seeing you again next season.