



FRIENDS OF MARKSTAKES COMMON

12th ANNUAL REPORT 2020 - 21

Twelfth Annual Report





Chair – Rupert Hall

Treasurer/Membership – William Coleman

Secretary – Jacqui Hutson

Specialist Advisor (Downland and Nature Reserves) - Thyone Outram

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Chair's Summary

The lockdowns introduced in response to the COVID 19 pandemic drastically reduced the activities on the Common and regular visitors will be aware of the return of invasive Birch, Bracken and Brambles over the year. We were able to recommence operations briefly in the autumn before a further lockdown prevented us from operating until spring 2021.

We are grateful to Ian Seccombe who managed to complete a full calendar of butterfly surveys on the site although the results continue to show disappointing declines. He has also provided a report.

I am very sorry to report that Ian Woolsey passed away this year. He had done invaluable work surveying birds on the Common over nearly ten years and had initiated butterfly surveys which in later years he undertook as part of a shared effort with Ian Seccombe. People have fond memories of his talks at the annual general meeting where he set out his maps of likely nest sites based on his interpretation of sightings and calls.

I also have to report that Thyone Outram has left the Lewes District Council which was a great loss. Happily, she immediately joined the Friends as a member and has acted as group leader for the Monday morning conservation work on more than one occasion when I have been away.

In summary it has been a difficult year but we have hopes that this year will see us get back on track.

Rupert Hall

Treasurer's Summary

During 2020 our team of volunteer members have been impacted by the restrictions resulting from the COVID – 19 Pandemic which meant our activities had to be curtailed in accordance with Government Regulations. Apart from a short period in the autumn we had to suspend our work.

The very modest membership amount is still £2 and thank you for sending in a cheque or paying by bank transfer. Donations are always most useful so thank you if you have done this. We are most grateful to the Plumpton Plant Stall Group for their generous support of a donation of £150 to our funds. Thank you to the Lewes DC for their support with the bigger items too.

The accounts are set out below and we have used a little of our funds as necessary.

William Coleman

FRIENDS OF MARKSTAKES COMMON

Year 01/03/20 to 28/02/21

<u>INCOME & EXPENDITURE</u>			
<u>INCOME</u>		<u>EXPENDITURE</u>	
Subscriptions	10.00	TOOLS	0.00
Donations	153.00	PRINTING	28.53
Grants	0.00	POSTAGES	0.00
Other	0.00	Other	0.00
Total	163.00	Total	28.53
		Income over Expenditure	134.47

<u>BANK RECONCILIATION</u>			
Opening Bank Balance 01.03.20	121.98	Income over Expenditure	134.47
	<u>121.98</u>	Closing Balance 28.02.21	<u>256.45</u>

<u>BALANCE SHEET</u>		
ASSETS		
BANK BALANCES		256.45
OTHER ASSETS		
TOTAL ASSETS		256.45
LIABILITIES		
CREDITORS		
OTHER LIABILITIES		
TOTAL LIABILITIES		0.00
NET ASSETS(LIABILITIES)		256.45

Survey Reports and Results

Dragonflies and Damselflies

Markstakes Common dragonfly and damselfly survey 2020



The warm Spring of 2020 led dragonflies and damselflies to emerge two to three weeks earlier than in 2019 with six species on the wing in May. My first record this year was of Large Red and Azure damselflies on the High Pond from the 7th May and a Hairy Dragonfly in the 'Butterfly Glades' on the same date. These were followed by sightings of Broad-bodied Chasers and Beautiful Demoiselles on 12th May and a Keeled Skimmer (in the Mire) on 29th May. Two more species appeared in June. First the Southern Hawkers, the most frequently observed dragonfly, first seen on 7th June, followed by the first Emperor on 24th June. The best place to see both these species is the 'Heather Glade'. On 5th July I recorded a White-legged damselfly. This uncommon species is usually associated with slow flowing streams so is an unusual find for Markstakes though it may have come in from the flooded brick work pits. It's the first time I've recorded it here. Migrant Hawkers and Common Darters started in early July and the latter went right through to the beginning of October. I also recorded a single Brown Hawker at the end of July.

Species	First Sighting in 2019	First Sighting in 2020
Broad-bodied Chaser	01/06/19	12/05/20
Four-spotted Chaser	-	-
Beautiful Demoiselle	01/06/19	12/05/20
Hairy Dragonfly	01/06/19	07/05/20
Large Red Damselfly	01/06/19	07/05/20
Azure Damselfly	01/06/19	09/05/20
Keeled Skimmer	-	29/05/20
Emperor	10/07/19	24/06/20
Southern Hawker	10/07/19	07/06/20
Migrant Hawker	29/07/19	13/07/20
Common Darter	04/08/19	13.07/20
Brown Hawker	08/08/19	30/07/20
Common Blue damselfly	08/08/19	-
White-legged damselfly	-	05/07/20

In total twelve species were recorded and approximately 250 individuals, the vast majority being Large Red damselflies. Two species missing this year were the Common Blue damselfly and the Four-spotted Chaser.

Ian Seccombe, February 2021

Markstakes Common Butterfly Transect Survey 2020: Summary Report



Introduction and summary

This is the ninth consecutive year of recording butterflies at Markstakes using the United Kingdom Butterfly Monitoring Scheme (UKBMS) transect method. This year the transect was walked on all 26 of the weeks specified by the UKBMS between the beginning of April and the end of September 2020. The UKBMS suspended recording on transects in England from 23 March until 15 May during the first national Covid-19 lockdown. However, I was able to complete the scheduled walks as part of the permitted daily exercise. During this period, we experienced the driest spring for 124 years and the sunniest spring since records began. These conditions led, nationally, to many butterfly species appearing early. In June Butterfly Conservation reported 53 (of 59 resident and regular migrant) species had been recorded by the end of May¹ while Patrick Barkham writing in The Guardian commented on the 'best summer for butterflies in nearly 25 years'².

¹ "Butterflies emerge early thanks to the sunniest May on record", Butterfly Conservation 9 June 2020

² "UK butterfly season off to unusually early start after sunniest of springs"

The Guardian 6 June 2020

In Markstakes nothing could be further from the truth. While sightings of butterflies occurred on 25 of the 26 transect walks only 375 butterflies were recorded. This is the lowest total since 2014 (346) and the second lowest total ever. It represents a drop of 42% on 2019. Only 19 species were recorded, the smallest number ever and with no sightings of seven species that have previously been present. For the first time ever the iconic Silver-Washed Fritillary was absent from Markstakes. Several other species were recorded in very low numbers: Red Admiral (6), Comma (6), Brimstone (4) Green-veined White (1), Small White (2), Ringlet (5) and White Admiral (3).

The Big Butterfly Count (which ran from 17th July to 9th August) reported the lowest average number of butterflies logged in its eleven-year history and a 34% drop compared with 2019³. This is in part due to the huge numbers of Painted Lady reported in the Big Butterfly Count 2019 as well as the unusually warm spring leading many species to peak before the Big Butterfly Count took place. Nevertheless, if we take the same period (weeks 17-20) of the UKBMS survey we find a 51% drop in the number of butterflies recorded at Markstakes compared with 2019. In other words, the pattern seems to be the same although the scale of reduction is greater, suggesting that additional factors may be affecting butterfly numbers at Markstakes.

Four broad trends are apparent from the nine years of recording:

- **many species are found in very small numbers, these numbers fluctuate year to year but are generally falling:** in 2020 two-thirds of species had fewer than 10 records.
- **year on year we are seeing fewer spring butterflies:** in 2020 only 17 butterflies were recorded in the first six weeks of the season.
- **sightings are increasingly dominated by a few species notably Meadow Brown and Gatekeeper:** in 2020 these two accounted for over half (56%) of all sightings.
- **the distribution of butterflies is concentrated in fewer areas:** in 2020 two of the 12 transect sections accounted for over half (52%) of all records.

The marked decline in butterfly numbers at Markstakes in 2020 is probably due to a combination of factors. These include:

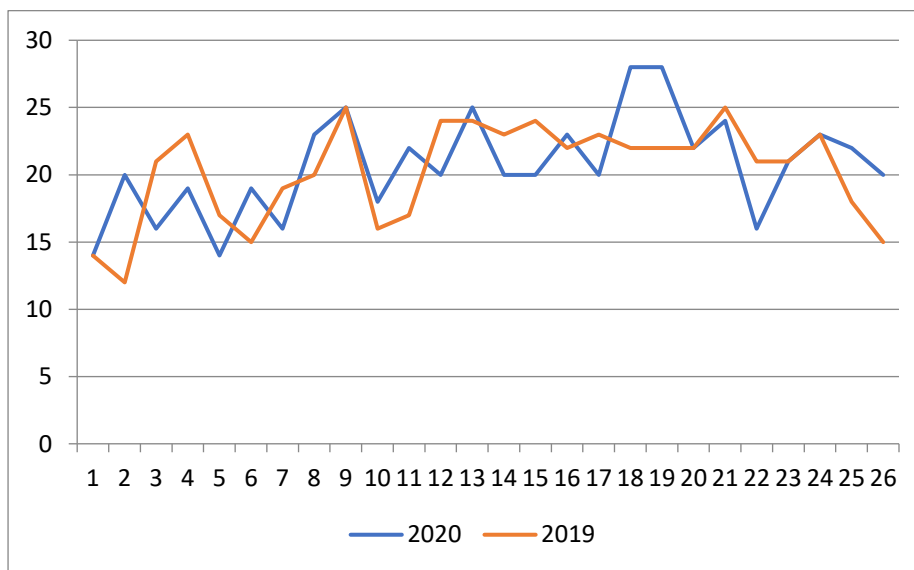
- the low number of butterflies in 2019 meant that fewer eggs were laid
- the winter of 2019/20, especially February, was the wettest on record, meaning that fewer eggs and larvae would survive.
- the warm dry spring meant that some larvae would emerge before their larval food plants were available.
- the expansion of the tree canopy cover and deterioration of habitat in some parts of Markstakes meaning fewer sources of nectar for adult butterflies.

³ Big Butterfly Count 2020: the results, www.butterfly-conservation.org 28/09/2020

Weather conditions

At the start of each walk some simple weather observations (temperature, wind speed, wind direction and cloud cover) are made. Chart 1 compares the temperature records for Markstakes in 2019 and 2020 which are broadly similar. However, the average percent sunshine on the days when the transect was walked was 85% in 2020 compared with 61% in 2019. In other words, warm and sunny conditions prevailed across the transect walks and should have been ideal for butterflies.

Chart 1 Temperature profile for Markstakes, 2019 and 2020



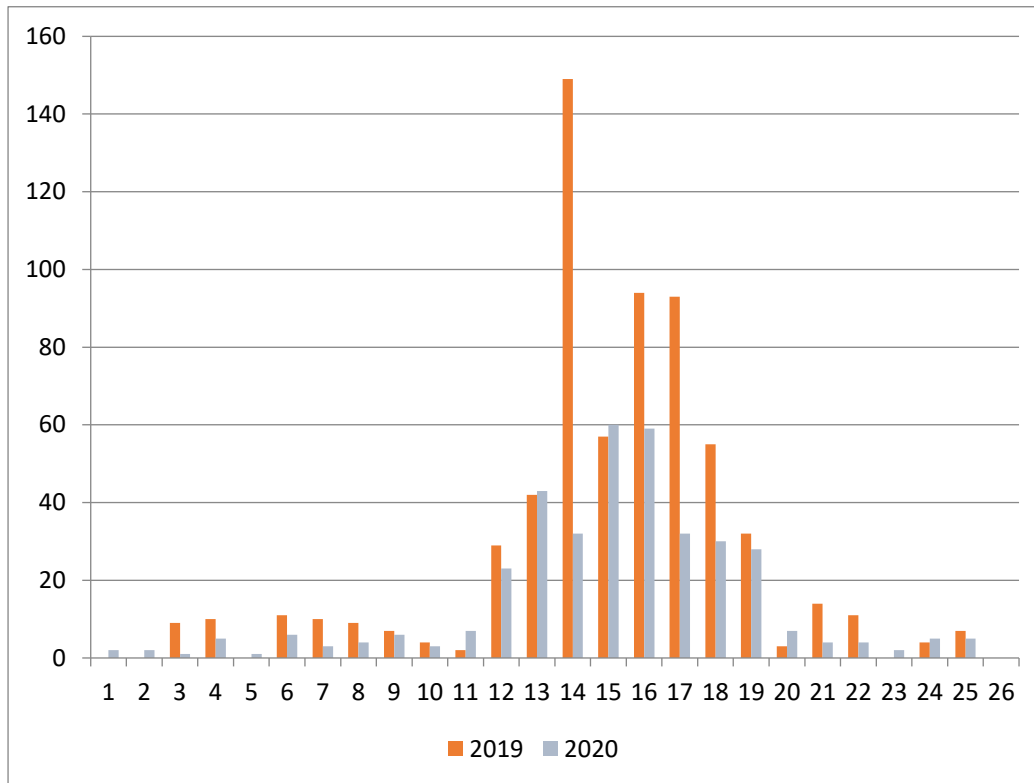
Abundance

Chart 2 below compares the number of butterflies recorded each week in 2019 and 2020. It shows that the numbers recorded were lower in almost every week of 2020 compared with 2019.

Only 17 butterflies were recorded over the first six weeks of the survey period, half the level of 2019 which was itself a comparatively low spring number. The decline in springtime butterflies has now continued unchecked year-on-year for six consecutive years (see chart 3 below). To confirm that this trend is real and not an artefact arising from the frequency of the transect survey I decided to walk the route four times a week in the first six weeks and to vary the timing of those walks. On 10 of these additional 18 walks I recorded no butterflies at all. On the eight additional

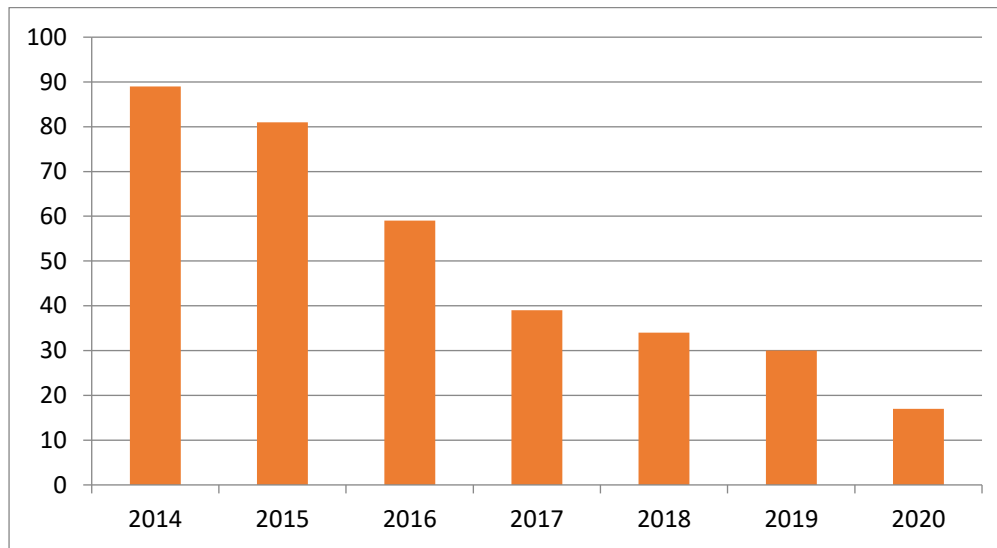
walks when butterflies were recorded the numbers ranged from one to six. This strongly suggests that the pattern is real.

Chart 2 Markstakes: Number of butterflies by week, 2019 and 2020



Butterfly numbers began to increase from week 12 (17th June), rising to a peak a month later (13th July) and tailing off rapidly thereafter. This pattern is broadly similar to 2019 and 2018. Compared with earlier years butterfly numbers appear to be peaking two to three weeks earlier in the season. In 2020 the peak was however much smaller, at only 60, considerably fewer than the 149 in 2019. More than half the butterflies recorded at the peak in 2020 were Meadow Browns. Butterfly numbers fell very rapidly after this peak: only 29 were recorded in the final seven weeks.

Chart 3 Markstakes: decline of Springtime* butterflies, 2014 to 2020



* For the purposes of this report Springtime is defined as the first six weeks of the recording season

Fifteen of the 19 species recorded in 2020 declined in number with many falling by 50% or more. Numerically the largest declines were among the grassland species: Meadow Brown (-107), Gatekeeper (-64) and Small Heath (-21). Several species disappeared altogether. No Silver washed fritillary were recorded for the first year ever (declining from 15 in 2019). No Purple Hairstreak, Orange Tip, Common Blue, Purple Emperor or Small Tortoiseshell were recorded. The latter have not been recorded at Markstakes in any of the last four years while Purple Emperor have not been recorded for the last three years⁴. Of the three large iconic woodland butterflies that we hope to see at Markstakes - Silver-Washed Fritillary, Purple Emperor and White Admiral - only the latter was recorded in 2020 and it had declined to just three.

In 2020 Meadow Brown were first recorded at Markstakes on 2nd June (week 9) peaking (at 34) six weeks later. The last sighting was in week 19 (6th August). Overall, the flight period started a week earlier than in 2019, peaked a couple of weeks later and ended at the same time. However, the overall number recorded was down by fifty per cent.

Gatekeeper had the same flight period as in 2019, starting in week 14 (5th July), peaking in week 17 and ending in week 20 (14th August) but the number was down by 39% compared with 2019.

Alongside these falling numbers are a few notable increases. Large Skippers had their best year with 31 records (in contrast only six Small Skipper were seen). Holly Blue also had comparatively good year, reaching double figures for the first time with all of these records coming from the second brood in July. Similarly, Small Copper had their best year on record, rising from a single sighting in 2019 to nine in 2020. In

⁴ I did see one Purple Emperor in Markstakes (26/06/20) but it was not seen during a transect walk.

2019 Speckled Wood had their worst year on record but in 2020 recovered somewhat, rising from 18 to 27, although still well down on several previous years.

For the full list of species recorded, and their abundance, since 2014, see Annex.

Distribution

Table 1 presents the number of butterflies in each sub-section of the transect in 2019 and 2020 and the change over the two years. This shows the concentration of butterflies in section G (the Mire) and the adjoining section H. In 2020 these accounted for 53% of all butterflies recorded. In contrast sections C, J and L combined had fewer than four percent of the records.

Eight of the 12 sections declined, and one had no change. Only three (A, I and K) show increased numbers and these increases are comparatively small. Although section G (the Mire) accounts for the largest share of the total it also had the largest decline, with more than a hundred fewer butterflies recorded than in 2019. Sections B, H, L and E (the Butterfly Glades) also had substantial losses.

Table 1 Change in number of butterflies by transect sub-section, 2019-2020

	Butterflies (n)		Change	
	2019	2020	N.	%
A	8	13	5	62.5
B	62	15	-47	-75.8
C	3	3	0	0.0
D	59	36	-23	-39.0
E	59	27	-32	-54.2
F	30	24	-6	-20.0
G	230	126	-104	-45.2
H	115	70	-45	-39.1
I	9	14	5	55.6
J	5	2	-3	-60.0
K	22	37	15	68.2
L	50	8	-42	-84.0

Annex

Markstakes: number of butterflies recorded by species and year, 2014-2019⁵

	2014	2015	2016	2017	2018	2019	2020
Small Skipper	57	34	11	7	22	44	6
Large Skipper	5	5	1	4	8	2	30
Brimstone	32	41	23	15	21	17	4
Large White	33	24	23	30	43	28	21
Small White	12	2	0	2	9	7	2
Green veined white	2	3	0	6	1	2	1
Orange Tip	5	12	3	1	0	3	0
Clouded Yellow	1	0	0	0	0	0	1
Small Copper	4	2	5	7	2	1	9
Holly Blue	3	2	4	4	4	3	11
Common Blue	33	14	0	25	31	4	0
White Admiral	6	2	4	5	9	4	3
Red Admiral	13	4	5	12	2	6	6
Peacock	51	42	48	25	12	15	7
Comma	6	10	7	8	4	9	6
Silver Washed Fritillary	28	15	12	27	15	15	0
Small Tortoiseshell	11	3	1	0	0	0	0
Painted Lady	0	1	1	0	1	5	0
Marbled White	7	14	16	14	7	21	16
Purple Emperor	1	1	1	2	0	0	0
Purple Hairstreak	0	0	0	1	14	22	0
Speckled Wood	29	21	32	43	40	21	27
Gatekeeper	63	77	45	112	52	165	101
Meadow brown	197	178	102	317	157	215	108
Small Heath	3	12	1	2	11	31	10
Ringlet	0	11	1	16	7	12	5

⁵ For 2012 and 2013 see earlier reports