

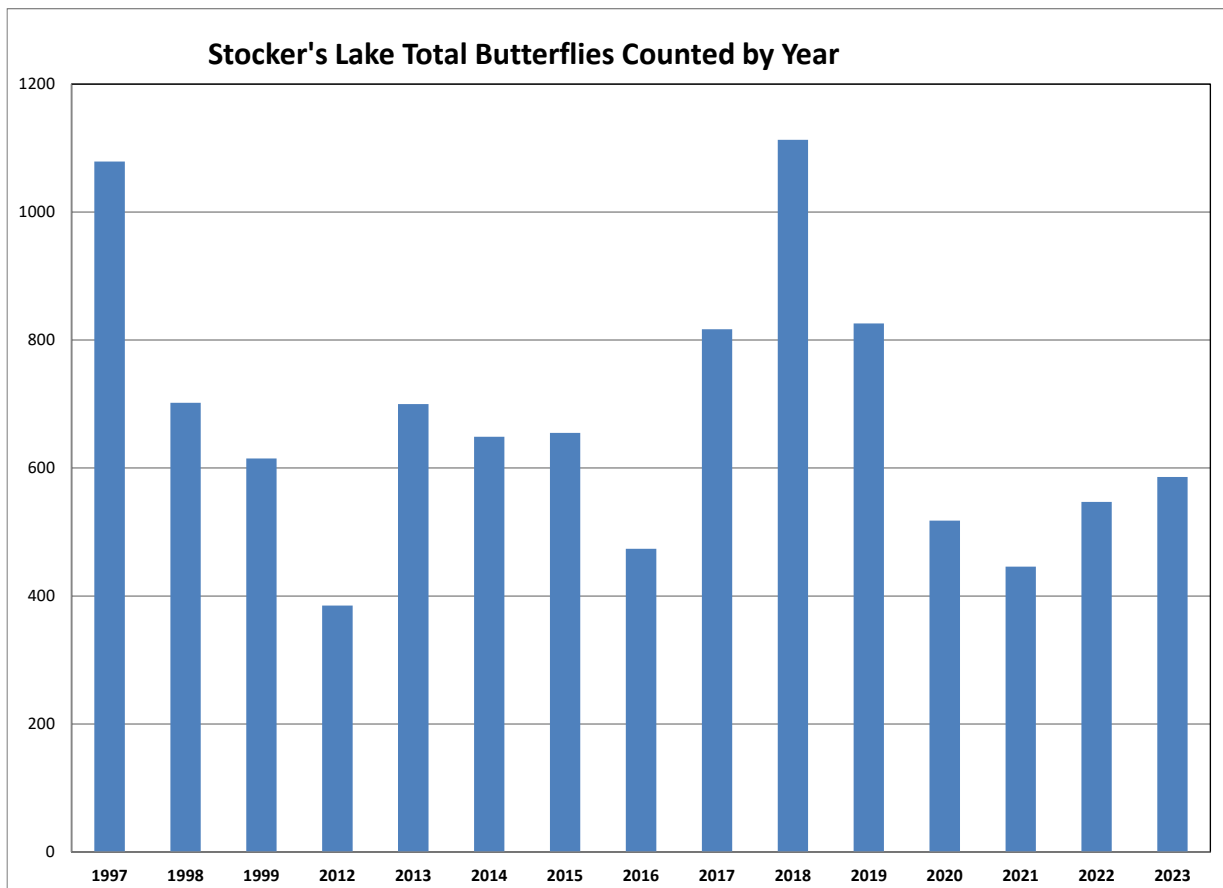
Butterflies at Stocker's Lake 2023

The recording scheme

Weekly counts of butterflies seen in 12 sectors around the lake continued in 2023 with results entered into the UK Butterfly Monitoring Scheme. This year's team consisted of Carole Holton, Simon Jones, Barbara James and Cliff & Jacky Buckton.

Total butterflies counted by year

Following on from last year's very hot, dry summer, 2023 was much less extreme with slightly above average temperature and rainfall. Unusually, June was the hottest and driest month. These milder conditions were more favourable for butterfly development and produced a modest increase in numbers compared to 2022 but still slightly fewer than the average measured since 2012 with the total number counted at 586 compared to an average between 2012-23 of 644. Note that 2020 was an incomplete survey year due to covid.



The national picture

The report on Butterfly Conservation's Big Butterfly Count held each summer noted that the effects of last year's drought were not as bad for butterflies as feared. The mixed weather this year has helped as there has been an abundance of green food plants available for caterpillars, and plenty of nectar-rich flowers for adult butterflies. However, while the

number of butterflies recorded this summer has been the highest since 2019, the longer-term trends show worrying declines for some of the UK's most common butterfly species.

The most-seen species this year was the Red Admiral, Gatekeeper was next, Large and Small Whites took the third and fourth spot while Holly Blue had another good summer. Species that saw a decline from last year include Ringlet, Common Blue and Speckled Wood, all of which also show long-term declines.

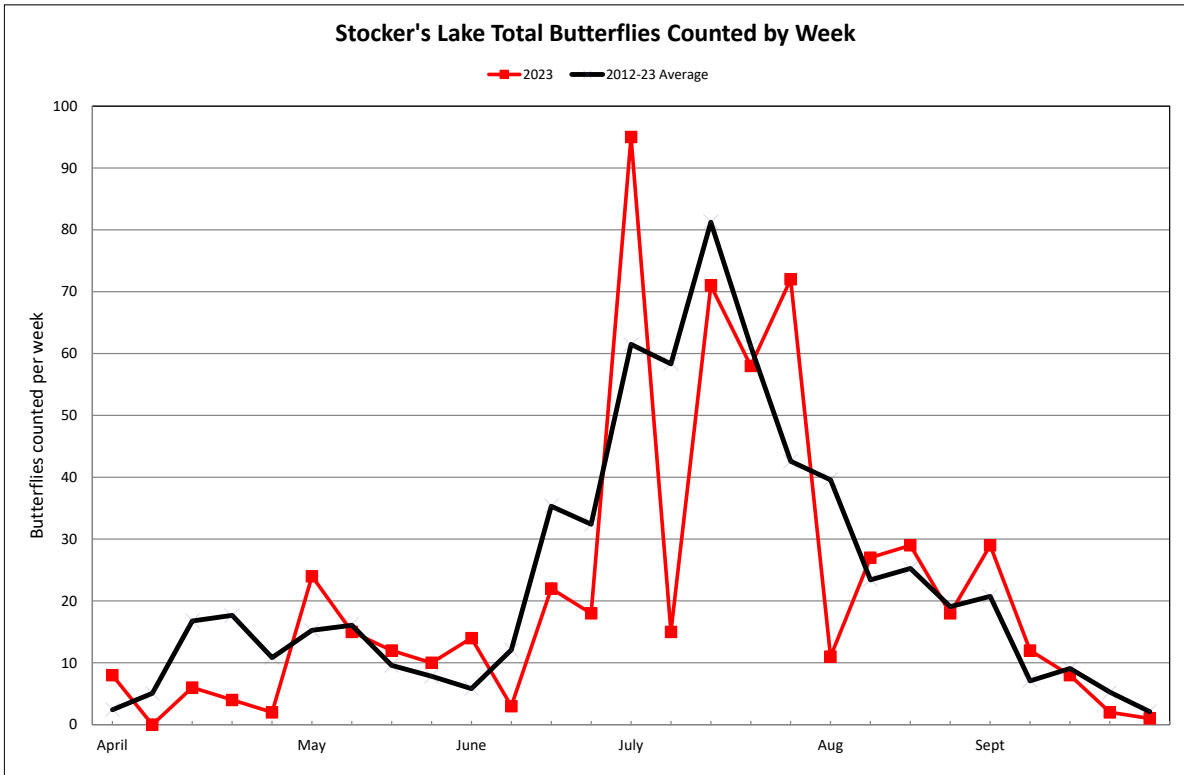
Butterfly species counted by year

As elsewhere in the country, our stand out success in 2023 was Red Admiral which was present in record numbers. A major disappointment was the huge decline in Marbled White as well as poor numbers of Skippers (see the Section Report below for further information). Ringlet also continued its steep decline with just one record this year.

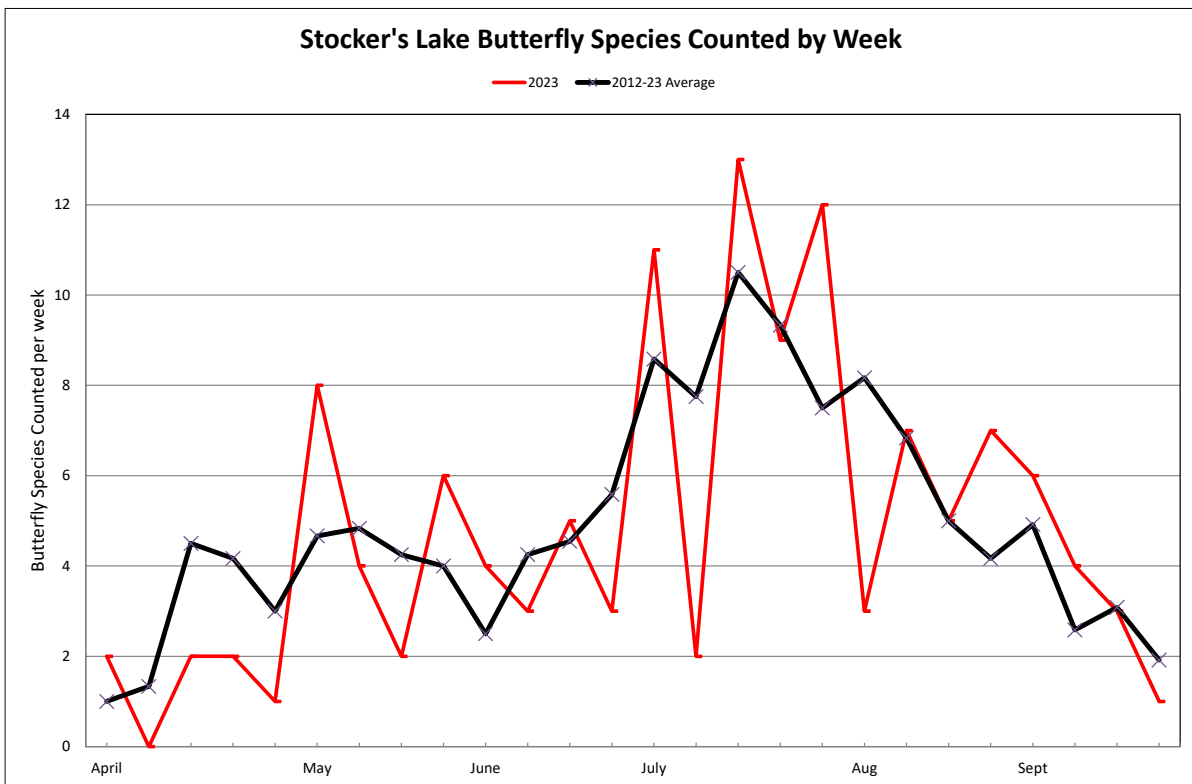
	1997	1998	1999	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Small White	286	168	104	52	218	118	94	86	109	358	170	115	81	107	119
Red Admiral	10	5	7	44	0	15	8	17	50	16	35	30	22	20	80
Meadow Brown	96	88	64	141	48	113	137	49	235	154	126	115	66	94	72
Large White	85	60	25	30	111	48	67	58	60	136	103	50	49	34	52
Speckled Wood	9	34	46	25	41	66	49	55	64	123	68	29	43	85	49
Peacock	36	19	24	7	70	76	37	19	13	23	16	25	22	19	48
Brimstone	0	3	2	6	4	19	22	9	10	18	35	2	17	18	30
Holly Blue	6	3	5	1	7	0	8	12	8	27	22	5	2	6	27
Gatekeeper	152	142	166	14	41	46	92	27	66	39	57	30	33	11	27
Orange Tip	18	30	11	8	52	28	24	38	38	47	58	6	33	42	23
Comma	13	8	6	26	23	10	14	17	52	24	28	19	12	14	22
Green-veined White	102	24	20	10	25	29	47	34	21	69	13	43	25	32	18
Common Blue	13	4	4	3	2	2	9	1	4	18	17	5	3	5	9
Small Tortoiseshell	139	51	14	5	49	57	31	20	15	5	4	5	6	7	4
Small Skipper	67	37	90	2	0	6	3	7	7	5	22	10	13	11	3
Painted Lady	6	0	0	0	0	0	1	0	2	0	10	0	2	1	1
Ringlet	0	1	0	5	7	4	4	18	49	36	19	7	4	3	1
Marbled White	0	0	0	1	0	0	5	2	12	5	2	19	13	28	1
Essex Skipper	31	17	5	0	0	3	0	0	0	4	11	0	0	6	0
Large Skipper	5	8	16	0	0	2	2	3	0	1	7	2	0	2	0

2012-23 weekly data

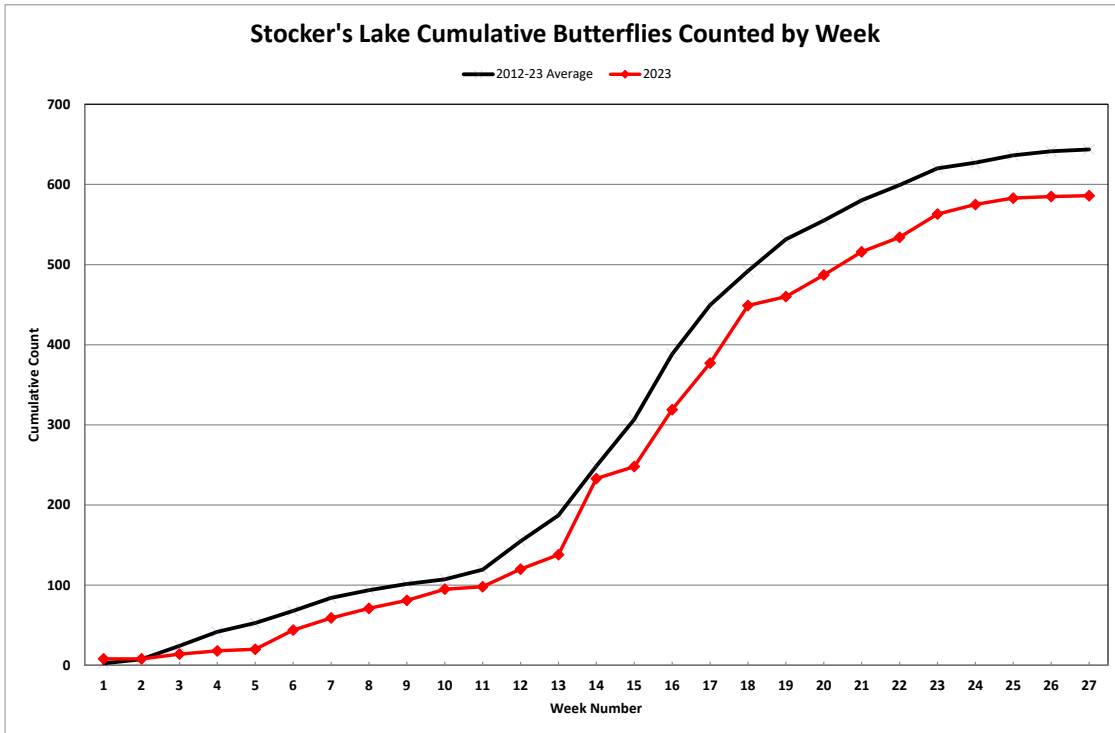
The counts for each week followed the long-term trend fairly closely apart from a couple of very low counts in what should have been the peak season in July/August. This usually occurs when there have been a few days of bad weather which both reduces butterfly activity and affects the ability to perform qualifying surveys which have limits of temperature and sunshine. Had these 2 low counts not occurred, the total for the year would have been very close to the long-term average.



This distribution was mirrored by the number of different species recorded each week as shown below.

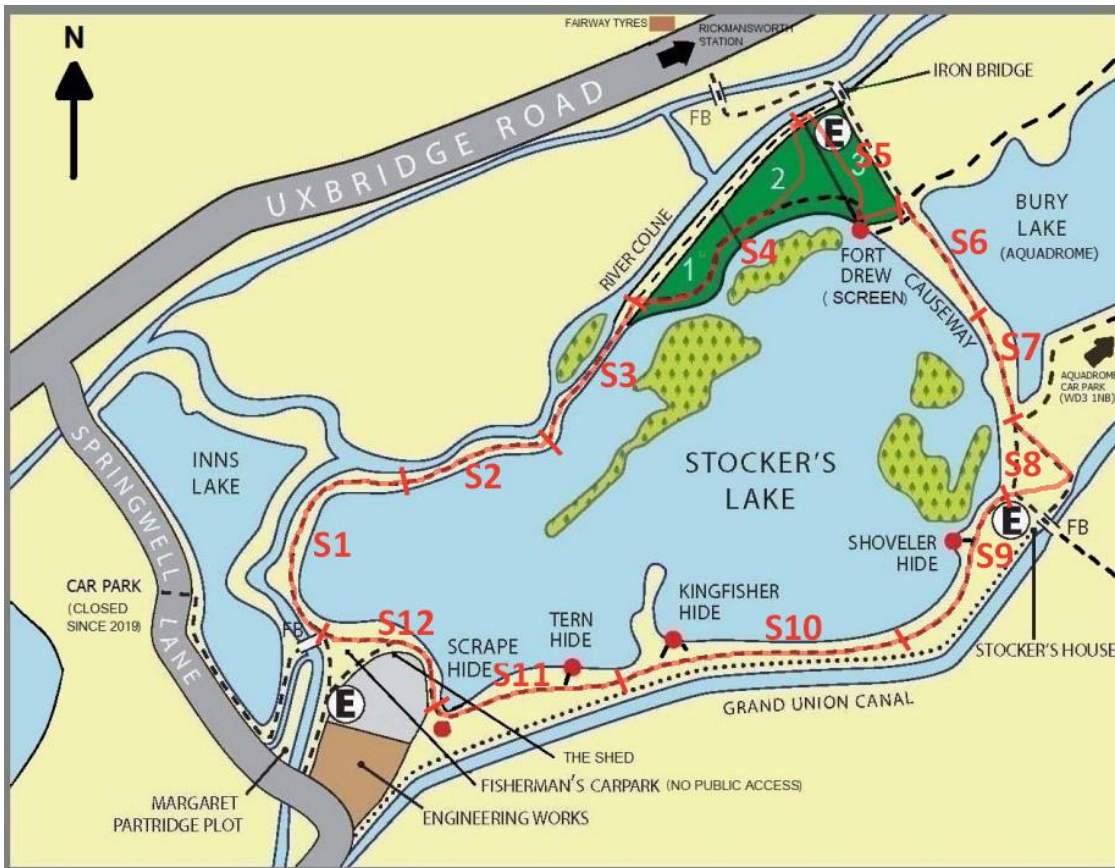


The following chart for cumulative butterflies counted follows the long-term average very closely, presumably because there were few extreme weather conditions.

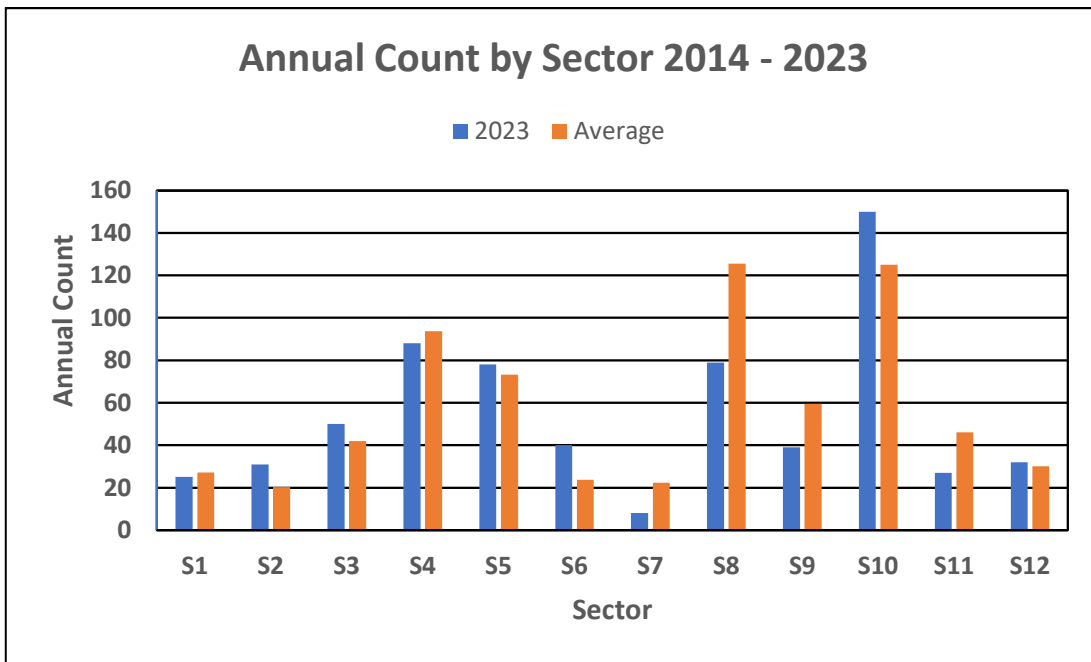


Sector Report

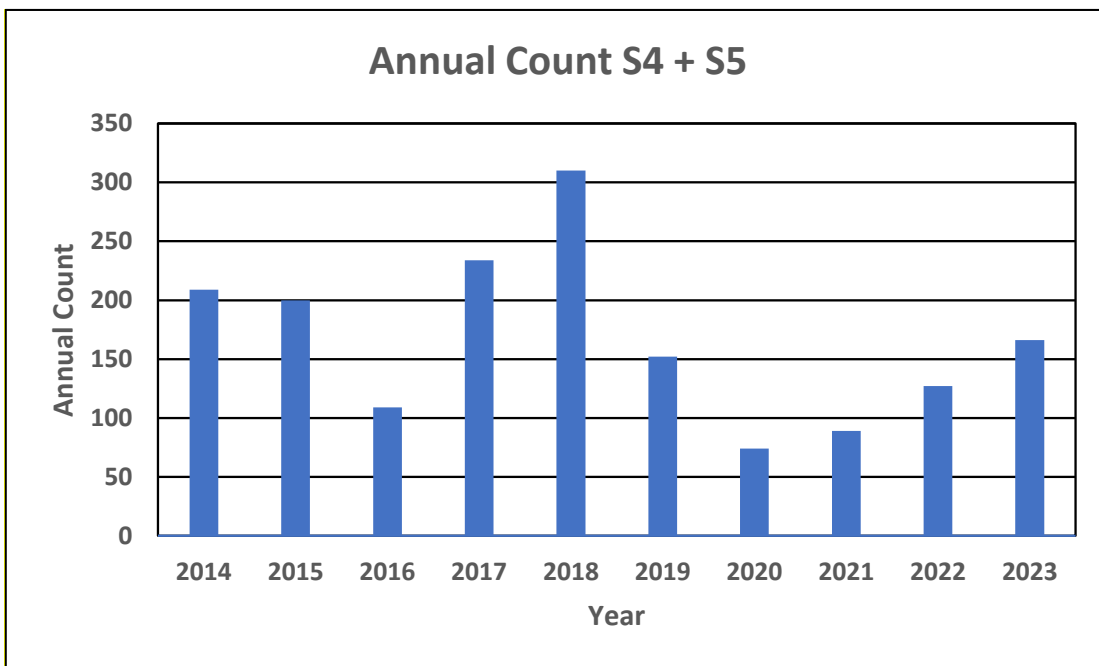
The Stocker's Lake monitoring transect is divided into 12 sectors of varying habitat such as meadows, scrub, reedbed, open and wooded as follows:



It is now possible to analyse the count number by sector for the period 2014 – 2023:

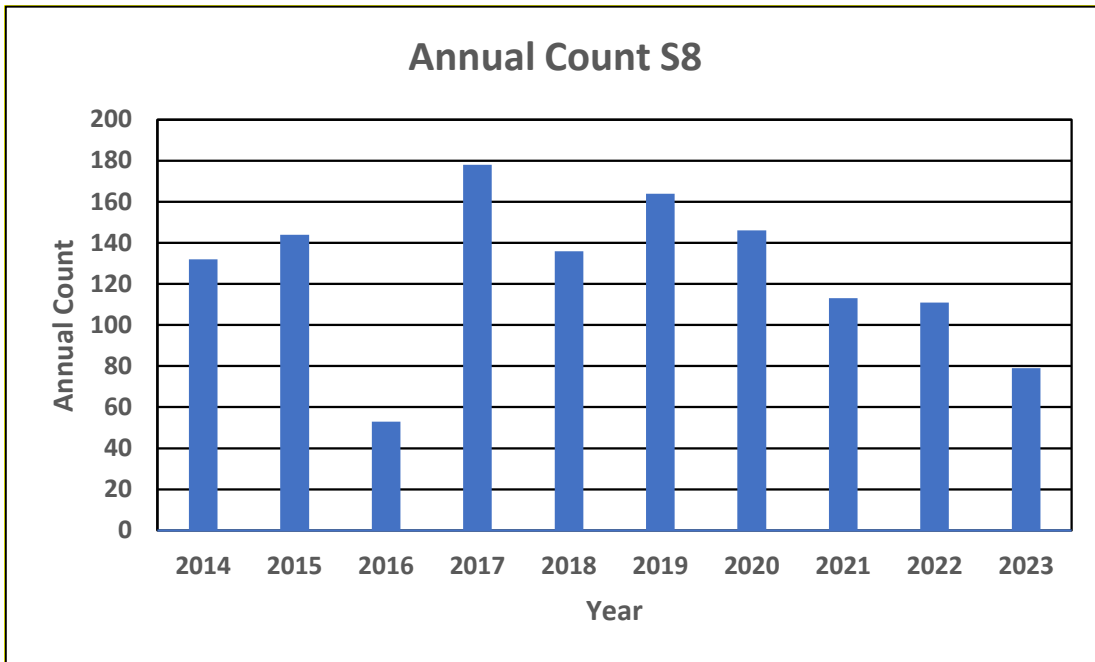


It can be seen that sectors 4, 5, 8 and 10 account for over 60 % of the total. Sectors 4,5 and 8 consist of meadows whereas sector 10 is fairly open scrub with a lot of Buddleia, also known as the Butterfly Bush. Given that the meadows have been subject to active management to diversify and encourage flora, it is interesting to see if this is having any effect on butterfly numbers. The count in S4 and S5 where the cattle have been grazing is showing a steady increase albeit from a very low base so hopefully that trend will continue.



Sector S8 is the meadow next to Stocker’s Lock and unfortunately numbers there have decreased sharply this year which accounts for the virtual wipeout of Marbled Whites (28 in 2022 down to 1 in 2023) as well as the Skippers (19 in 2022 down to 3 in 2023). This can

probably be largely attributed to the very early (June 26th) cutting of the Lock Meadow which is where these species are normally seen. However, other factors could also have had an effect and it is hoped that more frequent cutting, especially later in the season will produce long term improvements for butterflies.



Hopefully active management of all the meadows to improve diversity of flora will benefit future butterfly numbers and diversity. Currently, butterflies are barely considered in the Stocker’s Lake Management Plan but it is hoped that this can be included in future.

We will be continuing our weekly counts again in 2024 to see if this happens.



2023 was a great year for Red Admiral