

# **GMS News**

## **Early Summer 2021**

### **Weeks 10-18**



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### **Editorial – Norman Lowe**

The more that I look at GMS results (and I've been doing it for very long time) the more it strikes me that everybody's gardens are different and we don't know why. Not only that but every year is different to every other year. And from limited data I suspect that the exact location in the garden makes a difference though I shudder to think of the difficulties involved in designing a study to test this rigorously.

This takes us to Evan's quarterly report which as always brings together the results from the last 9 weeks. He starts by confirming that the quarter has seen lower numbers than usual – no surprises there, then! He then shows us the fascinating weather maps with so much detail. I see for example, that my bit of mid Wales managed to almost completely avoid lightning strikes. As always the numbers of moths in different parts of the British Isles is of interest to me, though I do recognise that some of you are turned off by lots of numbers. Then to that almost ubiquitous moth, the Flame Shoulder including our usual attempts to introduce our readers to the classical languages.

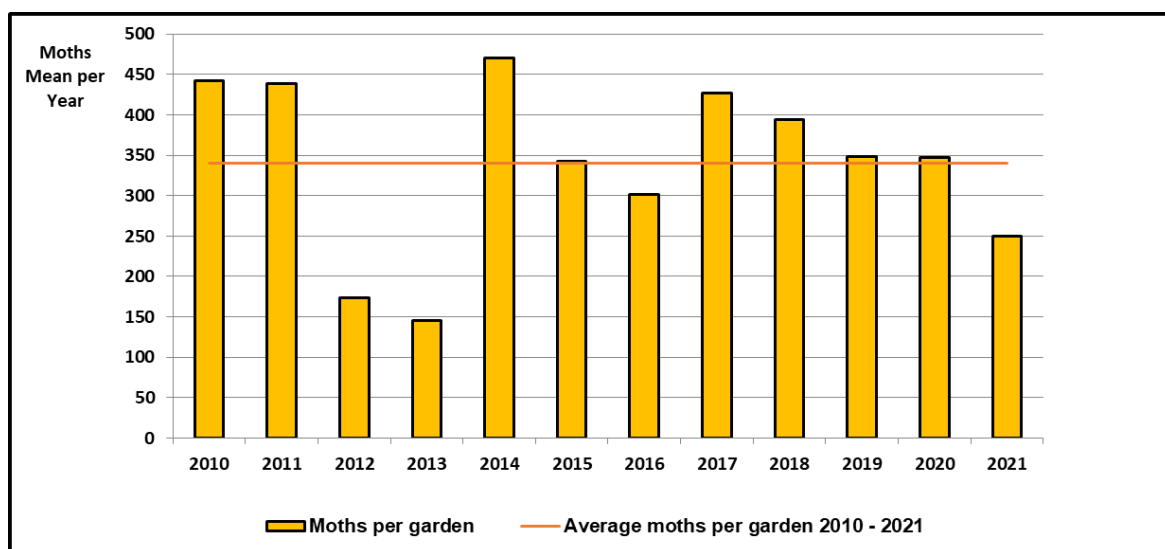
Next David Baker takes his own view on the extent to which 2021 has been a poor year so far. And then a couple of snippets – I do hope that Meldrew was joking!

In puzzle corner we return to our efforts to educate readers in the classics – to solve one of the clues you have to know which is the 22<sup>nd</sup> letter of the Greek alphabet. And don't forget to read to the end including our messages from sponsors.

## Overview GMS 2021 2<sup>nd</sup> Quarter – Evan Lynn

I was expecting Mother Nature to start self-correcting herself following the poor results in the 1<sup>st</sup> quarter this year but, as can be seen in figure 1, this was not the case. Unfortunately, May weather remained unpredictable emphasising the old saying “cast ne’er a clout till May is out.”

Fig 1. GMS 2010 - 2021 Q2. Mean Quarterly Moth Numbers



Several deep low pressure systems crossed the country bringing in cool, wet and windy conditions for much of May. The overall mean temperature was 9.1°C which was 1.3°C below the 29 year average making it the coldest May since 1996. Nearly all areas had a wet month with only parts of West Scotland having average rainfall. Most other areas experienced higher rainfall making it the fourth wettest May since 1862. Sunshine, predictably, was lower in most areas apart from Ireland which had 86% of the average for the UK. Towards the end of the month high pressure slowly moved in bringing hot drier conditions.

June looked set to bring in good warm weather but all was not roses as a number of thunderstorms and heavy showers developed in various parts bringing floods in their path, particularly in the south. Overall, the UK had only 59% of its monthly rainfall, while areas in the south had double their quota. The average temperature was 14.2°C, 1.2°C higher than the last 29 years' average. This pattern of events is shown in the following charts (figs 2-5)

Fig 2. Mean Temperature for May & June 2021 (with permission of the Met Office)

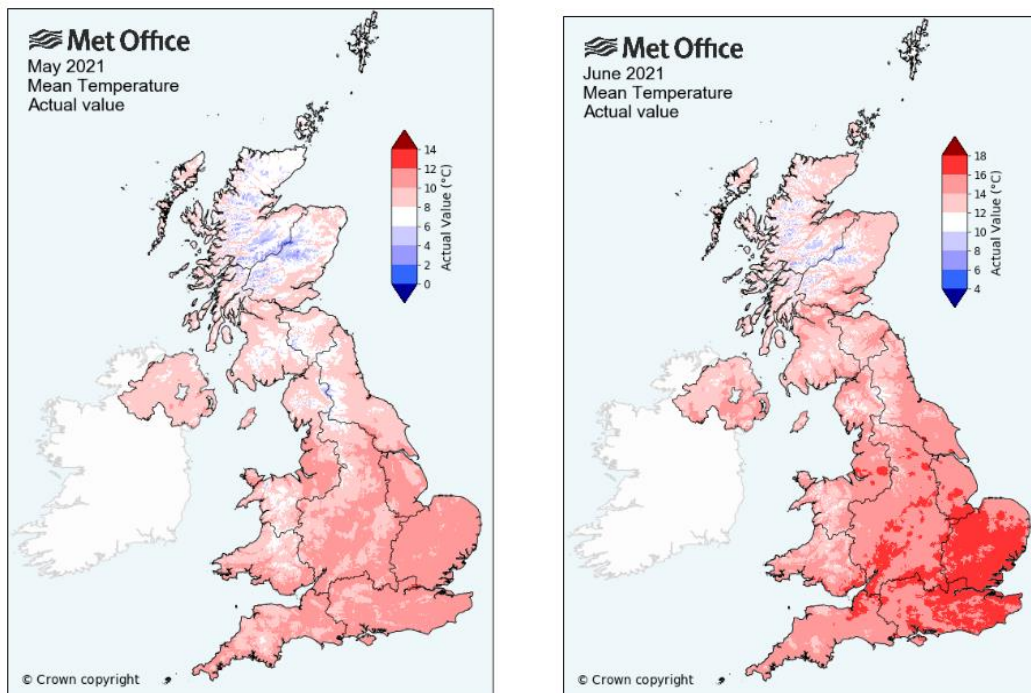


Fig 3. Days of Rain  $\geq$  1mm for May & June 2021 (with permission of the Met Office)

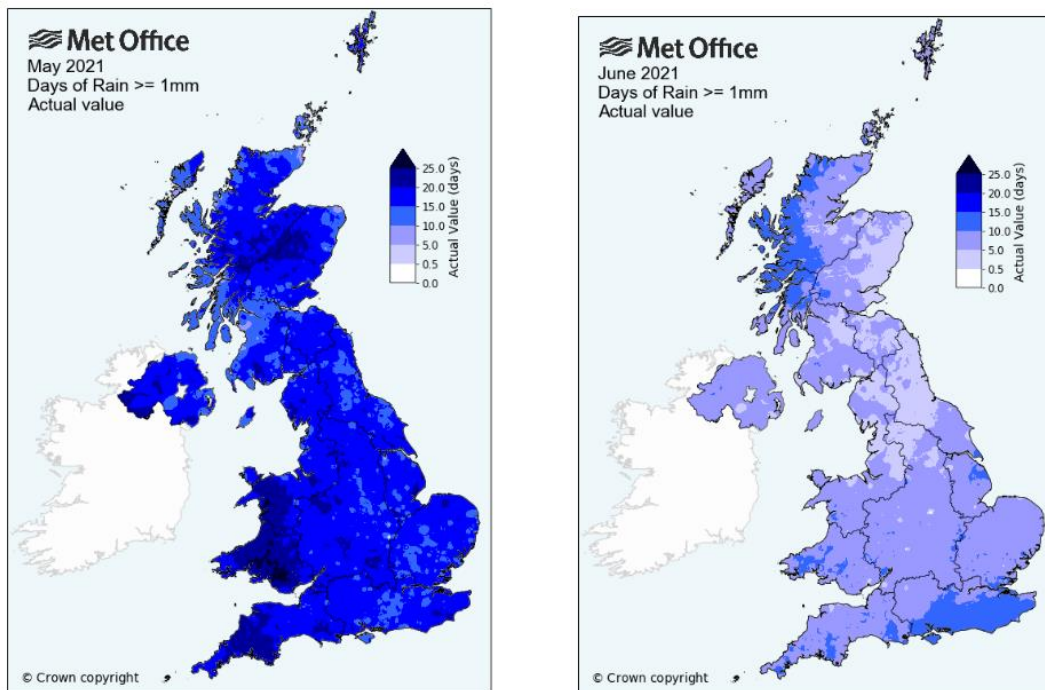


Fig 4. Lightning Strikes for May & June 2021 (with permission of the Met Office)

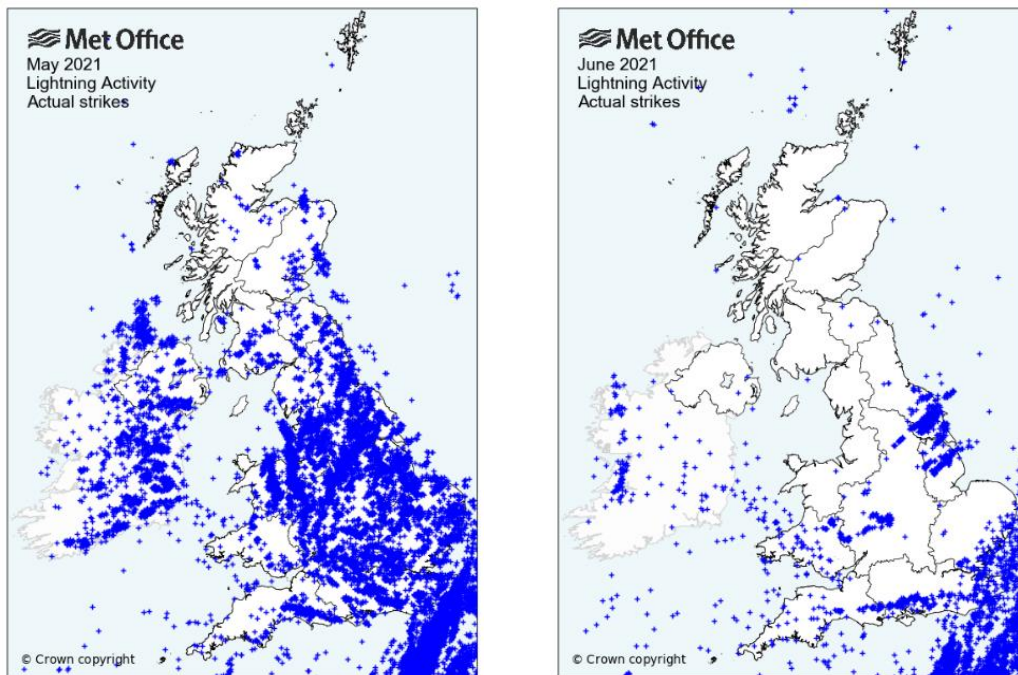
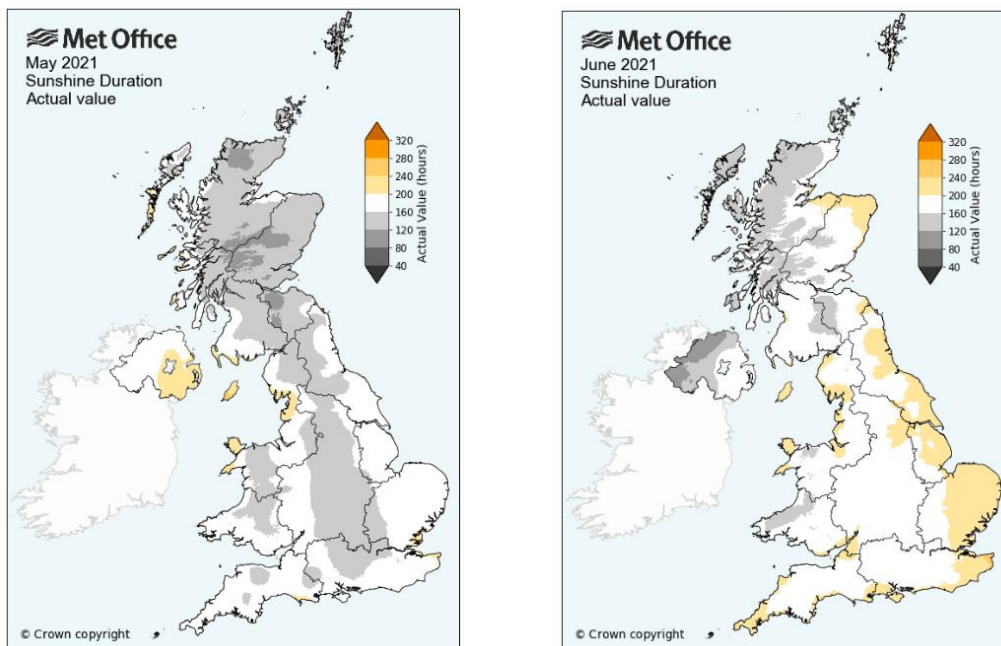
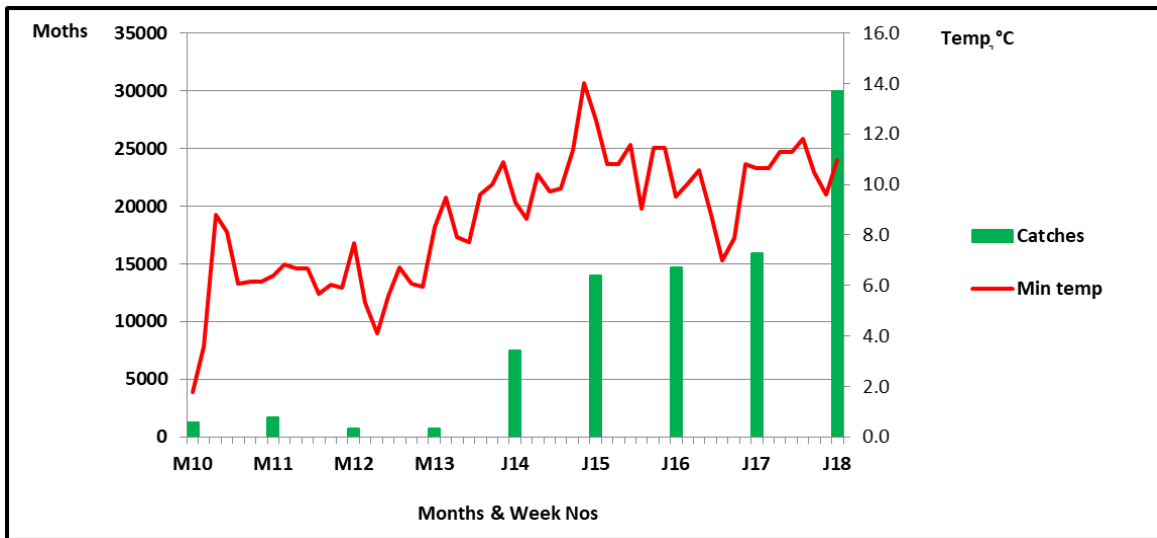


Fig 5. Hours of Sunshine for May & June 2021 (with permission of the Met Office)



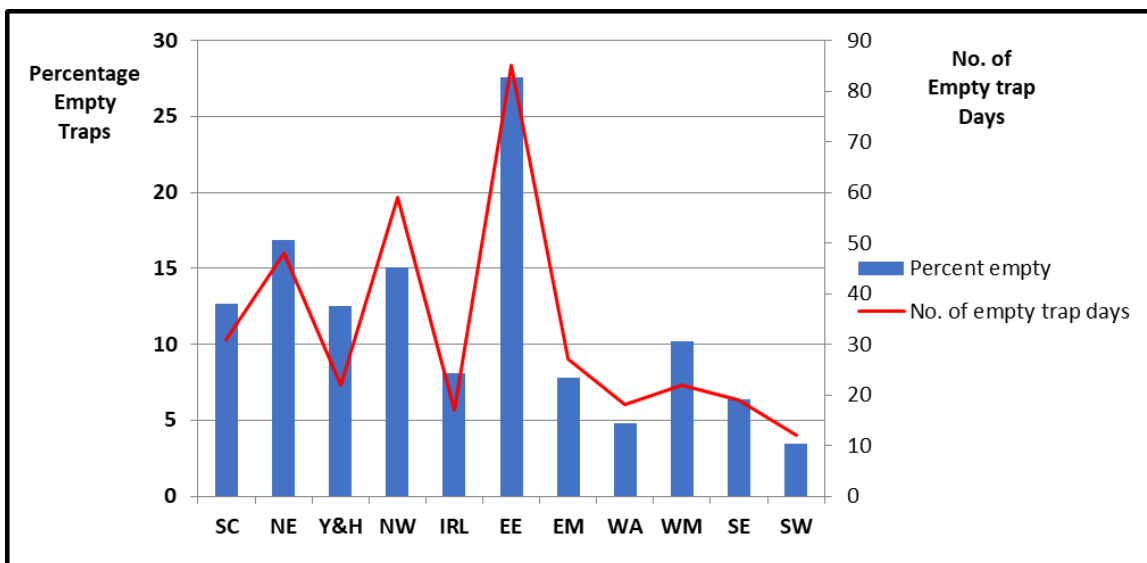
This is reflected in the number of moths caught this quarter with the number increasing as the weather improved (fig 6)

Fig 6. GMS 2021 Q2 Number of Moths and Minimum Temperature



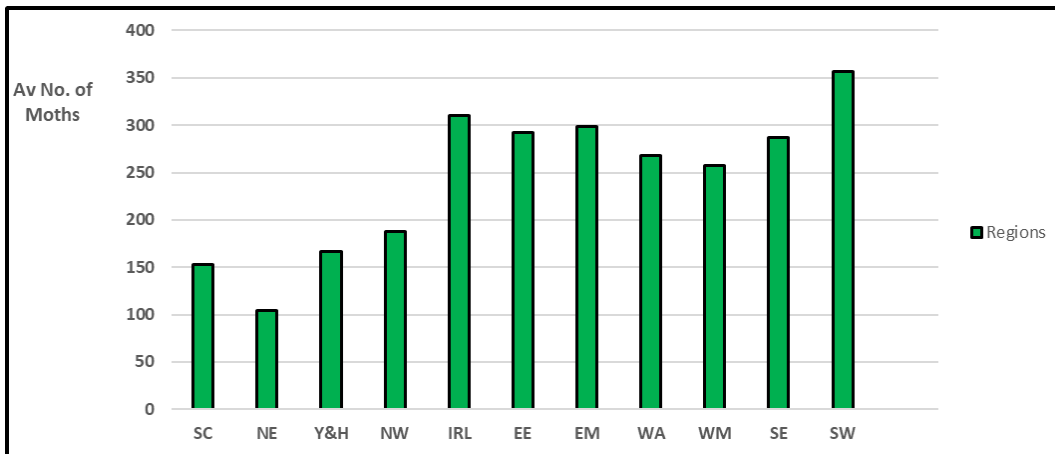
This is also mirrored in the abnormal number of empty traps for this quarter, figure 7 showing the percentage number of empty traps as a bar chart and the actual number of empty trap days as a line graph.

Fig 7. GMS 2021 Q2 Regional Number of Empty Traps



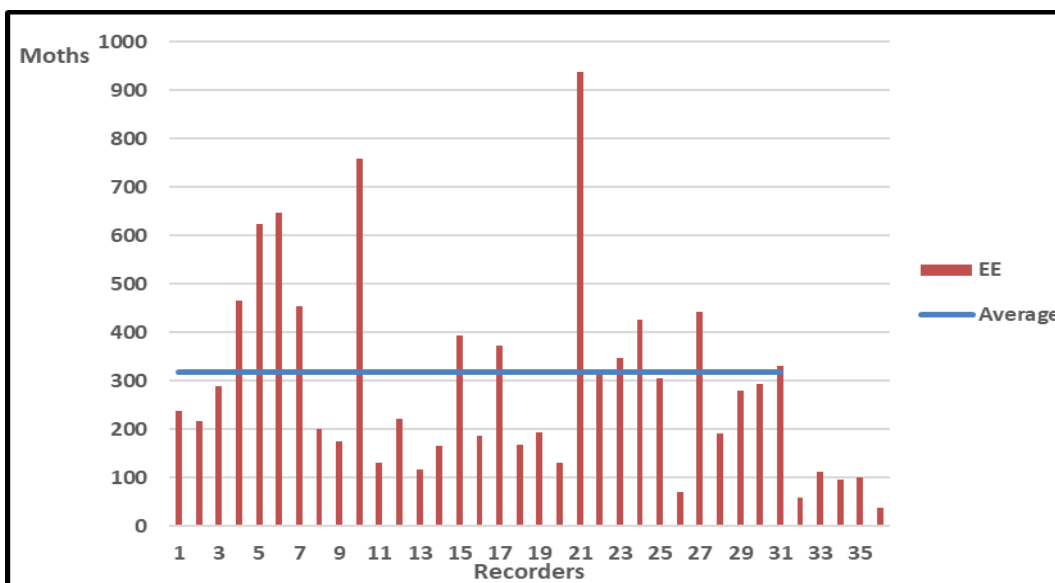
As to be expected from the weather charts the more southern regions caught more moths than the northern ones (fig 8). Although minimum temperatures were not all that different, perhaps these regions were windier.

Fig 8. GMS 2021 Q2 Regional Average No. of Moths



Although the East of England appeared to have the greatest number of empty traps (fig 7) it was still among the top achievers this quarter showing that either the better weeks or other recorders made up for the poor weeks. Each garden has its own characteristics such as exposure to frosts, winds and suitable moth friendly habitat which can affect the number of moths caught (fig 9). The area outside of the garden is also important including close proximity to street lights, woodlands and hedgerows or diligent neighbours with bowling green mentality.

Figure 9. GMS 2021 Q2 East of England Garden Catches (36 recorders)



Following on from last quarter’s report I have again compared average temperatures (fig 10) and this quarter’s catches to that of last year showing how moth numbers have again dropped (fig 11). It would appear that until the two average temperatures came closer together in week 14 moth catches this year decreased with the lower temperatures. In week 15 an increase in temperature may have helped moth catches to exceed that of last year. After that they dropped along with the temperatures.

Fig 10. GMS 2021 Q2. Average Temperatures 2020 & 2021

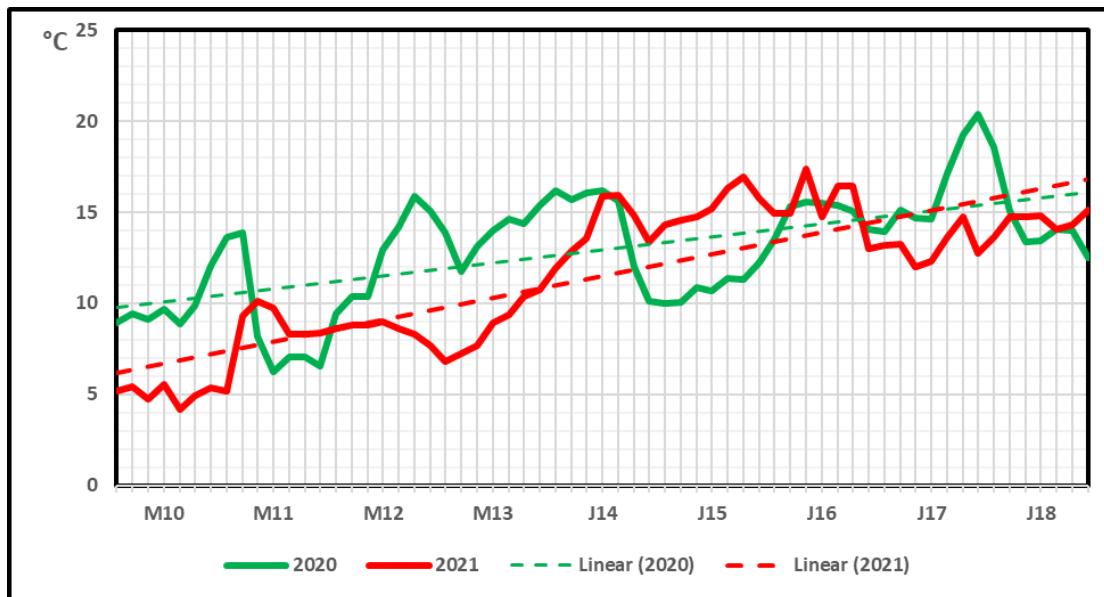
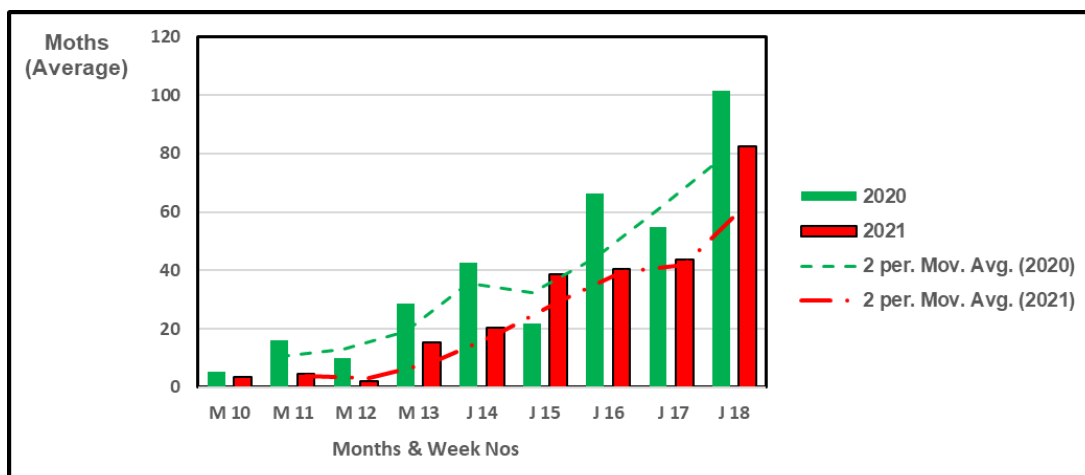


Fig 11. GMS 2021 Q2 Average Weekly Catches 2020 & 2021



There is never just one factor involved, but possibly the heavy rains of the first four weeks may have assisted in depressing catches (fig 12).

Fig 12. GMS 2021 Q2. Average Rainfall 2020 & 2021

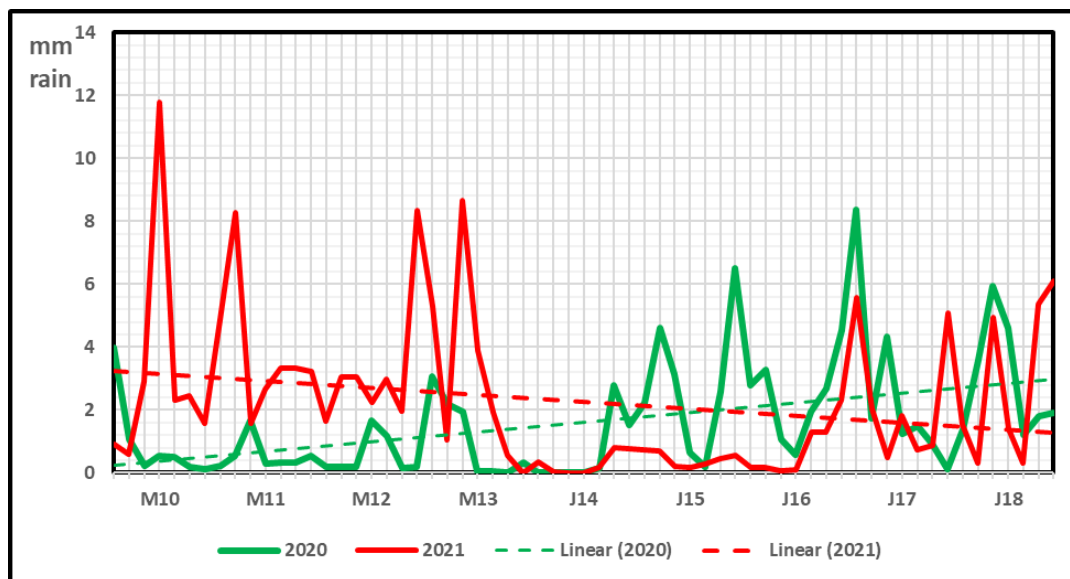
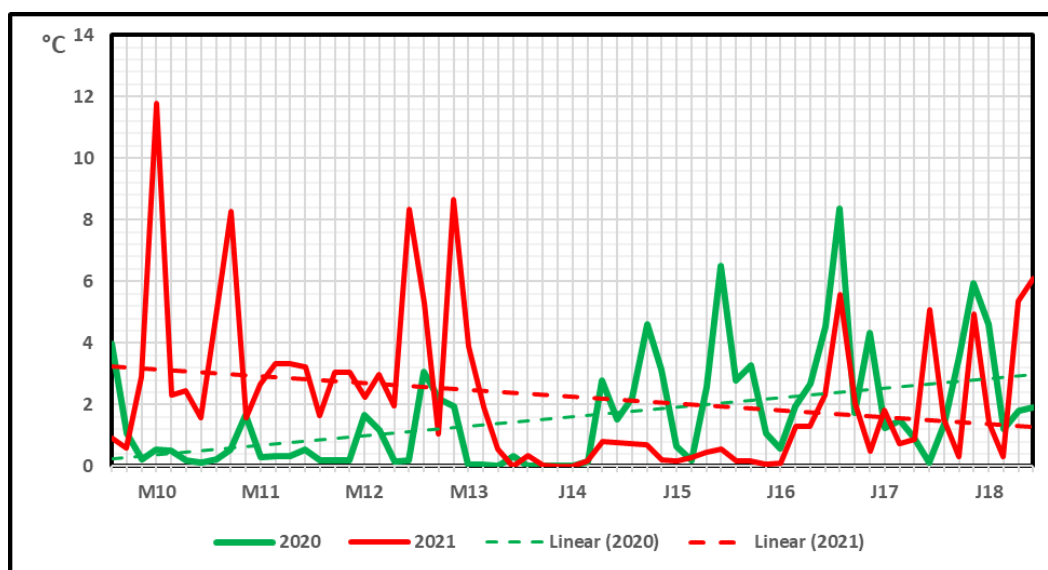


Fig. 13. GMS2021 Q2 Average Temperature 2020 & 2021



This trend was evident in the results from our garden with only weeks 16 & 18 (Table 1) exceeding those of last year. Our low numbers hopefully will be of some comfort to those recorders who fared poorly this quarter.

Table 1. GMS 2021 Q2 Comparison of Moth Catches from a Garden in Wales 2020 & 2021

Week No.	10	11	12	13	14	15	16	17	18
Q2 2020	19	53	29	46	10	64	17	26	39
Q2 2021	5	6	8	18	5	37	38	4	48

## Statistics

The reduction in moth numbers from last year is reflected across all species except four (Table 2). Furthermore, all species have been found in fewer gardens as shown for example by the Elephant Hawk-moth which had a negative change of 3.2 as well as being found in 9% fewer gardens than last year.

Just because the numbers of any moth have decreased, it does not necessarily mean that this species is in decline since these quarters are just a snapshot in time. Perhaps this moth has been delayed because of the cold spring. The real answer should come out at the end of the year when all quarters are merged together.

Table 2. GMS 2021 Q2 Top 20 Core Species

Position		Top 20	Mean Per Trap			Catching		
2020	2021	Species	2020 369 Gardens	2021 370 Gardens	Change	Frequency (% of gdns)		
						2020	2021	Difference
1	1	Heart and Dart	75.0	33.1	-41.8	96	92	-4
2	2	Garden Grass-veneer	17.7	11.4	-6.3	76	69	-7
3	3	Uncertain/Rustic agg.	13.8	9.5	-4.3	75	71	-4
6	4	Treble Lines	8.3	7.9	-0.4	53	51	-2
5	5	Dark Arches	8.4	6.5	-1.9	81	74	-7
7	6	Marbled Minor agg.	7.5	6.0	-1.5	81	78	-4
12	7	Brimstone Moth	5.6	5.9	0.4	84	80	-4
9	8	Buff Ermine	6.7	5.3	-1.4	76	68	-8
13	9	Light Brown Apple Moth	5.5	4.9	-0.6	65	65	0
18	10	Willow Beauty	3.8	4.5	0.7	70	66	-4
11	11	White Ermine	5.6	4.0	-1.6	67	62	-5
15	12	Flame	4.3	3.8	-0.5	67	61	-6
19	13	Common Marbled Carpet	3.8	3.8	0.0	74	65	-9
8	14	Elephant Hawk-moth	7.0	3.8	-3.2	77	68	-9
14	15	Flame Shoulder	4.3	3.4	-0.9	72	64	-8
23	16	Bright-line Brown-eye	3.1	3.3	0.2	62	58	-4
41	17	Green Carpet	1.9	3.3	1.3	48	57	10
10	18	Riband Wave	5.9	3.1	-2.8	80	68	-12
46	19	Garden Carpet	1.7	3.1	1.3	58	69	11
21	20	Shuttle-shaped Dart	3.5	3.0	-0.5	56	53	-4

I have compared this year with last year by taking the **maximum** number of moths caught in any trap and subtracting the values of 2021 from those of 2020 (table 3). The highlighted cells show a drop in the maximum catch so for example in Wales, the maximum catch for the Heart & Dart dropped from 236 to 98 (-138). Conversely, congratulations go to a recorder in the West Midlands who laboriously counted 106 Garden Grass-veneers in Week 18. Furthermore, the number of species caught this year dropped from 356 to 319 Table 3).

Table 3. GMS 2021 Q2. Maximum Catches (2021 minus 2020)

<b>Vernacular</b>	<b>SC</b>	<b>NE</b>	<b>Y&amp;H</b>	<b>NW</b>	<b>IR</b>	<b>EE</b>	<b>EM</b>	<b>WA</b>	<b>WM</b>	<b>SE</b>	<b>SW</b>
Heart and Dart	1	-6	-19	-3	-92	7	19	-138	-37	-30	-3
Garden Grass-veneer	-4	-39	-38	-13	0	-69	-50	-26	-94	-6	5
Uncertain/Rustic agg.	-2	11	-21	6	-12	-6	26	-15	-14	-24	-17
Treble Lines	0	0	4	-1	3	-22	11	-12	-11	14	27
Dark Arches	-5	1	-2	4	4	-8	-15	-28	-3	3	19
Marbled Minor agg.	-19	1	-5	-20	2	-107	-2	3	-7	18	4
Brimstone Moth	0	0	7	-3	46	0	4	2	-6	20	3
Buff Ermine	1	5	-2	0	-21	1	-5	2	24	10	4
Light Brown Apple Moth	-9	0	0	-4	10	-5	-3	-3	-5	9	14
Willow Beauty	1	0	-2	-4	0	1	-8	4	3	23	6
White Ermine	3	-2	-14	-9	-40	-16	-8	0	-20	9	-8
Flame	-22	-1	-7	-13	-4	-3	3	31	-13	9	11
Common Marbled Carpet	-21	-47	0	-3	-15	-2	0	-23	9	16	10
Elephant Hawk-moth	5	-1	9	0	0	14	13	-4	9	13	8
Flame Shoulder	-7	-1	-2	6	2	-13	0	-8	-2	12	1
Bright-line Brown-eye	-4	0	3	1	-15	-1	13	-5	0	15	-1
Green Carpet	3	4	1	7	10	-9	13	12	5	9	3
Riband Wave	-5	-2	-13	-7	-3	-18	-11	-4	-33	8	-14
Garden Carpet	5	0	-7	5	10	-4	6	-5	-9	22	2
Shuttle-shaped Dart	-7	-15	-1	-17	-20	-9	9	-11	-10	-4	-10

In this table I have calculated the number of species caught per week to note the difference in overall number. It would appear that the number of species in 2021 starts to drop off towards the middle of the quarter.

Table 4. GMS 2021 Q2 Difference in Number of species 2021-2020

<b>Year</b>	<b>week 10</b>	<b>week 11</b>	<b>week 12</b>	<b>week 13</b>	<b>week 14</b>	<b>week 15</b>	<b>week 16</b>	<b>week 17</b>	<b>week 18</b>
<b>2020</b>	109	186	165	215	241	207	284	278	305
<b>2021</b>	174	190	204	206	165	204	93	186	161
<b>Change</b>	<b>65</b>	<b>4</b>	<b>39</b>	<b>-9</b>	<b>-76</b>	<b>-3</b>	<b>-191</b>	<b>-92</b>	<b>-144</b>

Breaking the more numerous moths down to regional level I have listed the top 10 regional moths.

Table 5. GMS 2021 Q2. Top 10 Regional Core Species

Scotland (29)	Mean	North East (33)	Mean	North West (46)	Mean
Heart and Dart	17.2	Heart and Dart	8.6	Heart and Dart	25.2
White Ermine	9.8	White Ermine	4.2	Buff Ermine	6.2
Garden Grass-veneer	8.6	Silver-ground Carpet	3.8	Uncertain/Rustic agg.	6.1
Clouded-bordered Brindle	6.2	Hebrew Character	3.6	Garden Grass-veneer	5.5
Silver-ground Carpet	4.2	Common Swift	3.5	Crambus pascuella	4.8
Poplar Hawk-moth	4.0	Buff Ermine	2.9	Brimstone Moth	4.8
Middle-barred Minor	4.0	Map-winged Swift	2.6	Garden Carpet	3.9
Brimstone Moth	3.7	Bee Moth	2.5	Dark Arches	3.8
Beautiful Golden Y	3.6	Common Pug	2.3	Marbled Minor agg.	3.6
Map-winged Swift	3.6	Brown Rustic	2.2	Flame Shoulder	3.6
Yorks & Humber (20)	Mean	Ireland (24)	Mean	East of England (36)	Mean
Heart and Dart	15.6	Heart and Dart	23.3	Heart and Dart	34.4
Uncertain/Rustic agg.	9.5	Brimstone Moth	15.3	Treble Lines	21.1
Garden Grass-veneer	6.4	White Ermine	13.3	Garden Grass-veneer	14.5
Marbled Minor agg.	5.7	Common Marbled Carpet	11.5	Dark Arches	10
Buff Ermine	5.2	Small Square-spot	11.4	Marbled Minor agg.	9.7
Light Brown Apple Moth	4.5	Flame Shoulder	9.4	Uncertain/Rustic agg.	9.4
Elephant Hawk-moth	4.5	Buff Ermine	9.0	Shuttle-shaped Dart	7.9
Brimstone Moth	4.2	Light Brown Apple Moth	8.2	Heart and Club	7.0
White Ermine	3.9	Silver-ground Carpet	7.8	Light Brown Apple Moth	6.0
Dark Arches	3.3	Uncertain/Rustic agg.	7.5	Turnip Moth	5.6
East Midlands (40)	Mean	West Midlands (25)	Mean	Wales (43)	Mean
Heart and Dart	44.1	Heart and Dart	38.2	Heart and Dart	35.2
Uncertain/Rustic agg.	20.6	Garden Grass-veneer	19.9	Garden Grass-veneer	10.2
Dark Arches	12.3	Uncertain/Rustic agg.	17.1	Buff Ermine	10.2
Garden Grass-veneer	11.5	Crambus pascuella	11.2	Flame	8.7
Brimstone Moth	10.8	Dark Arches	10.8	Brimstone Moth	8.0
Bright-line Brown-eye	9.0	Treble Lines	9.1	Uncertain/Rustic agg.	7.5
Marbled Minor agg.	8.6	Marbled Minor agg.	6.6	Treble Lines	7.5
Light Brown Apple Moth	8.4	Buff Ermine	6.3	Marbled Minor agg.	6.7
Elephant Hawk-moth	7.5	Shuttle-shaped Dart	5.5	Flame Shoulder	6.1
Green Carpet	6.7	Brimstone Moth	5.1	Green Carpet	4.8
South East (34)	Mean	Southwest (40)	Mean		
Heart and Dart	48.7	Heart and Dart	58.0		
Treble Lines	20.1	Garden Grass-veneer	20.6		
Garden Grass-veneer	17.9	Treble Lines	15.4		
Uncertain/Rustic agg.	10.7	Uncertain/Rustic agg.	14.2		
Dark Arches	10.6	Willow Beauty	9.4		
Willow Beauty	9.4	Dark Arches	8.9		
Light Brown Apple Moth	7.9	Marbled Minor agg.	8.9		
Heart and Club	7.2	Common Marbled Carpet	7.6		
Shuttle-shaped Dart	6.7	Heart and Club	7.3		
Marbled Minor agg.	6.3	Light Brown Apple Moth	7.1		

All the trap nights and catches completed by the recorders are summarised in Table 6. The minimum and maximum moth numbers both within and between regions over the nine-week period vary considerably, yet with some similarities, possibly reflecting location, type of trap and/or the individual micro-climates. The minimum and maximum number of moths caught per region ranges between 3 and 1223 while the trapping effort (moth trap nights) is remarkably consistent. For many recorders this quarter has certainly been better than last quarter, though not as good as last year. The only good thing that has come out is that for new moth-ers the reduced number of species will help identification problems. The third section shows the preferred night for trapping. Although Friday is the official night three nights either side are acceptable as everyone hopefully has a life apart from mothing. Certainly, this quarter we have had to vary our trapping nights due to family commitments and power supply problems.

Table 6. GMS 2021 Q2 - Regional Statistics

Region	Gardens	Moths				Moth Trap Nights		
		Total	Mean	Min	Max	Possible	Actual	Percent
SC	29	4424	153	18	378	261	245	93.9
NE	33	3457	105	4	398	297	285	96.0
Y&H	20	3338	167	38	448	180	176	97.8
NW	46	8635	188	3	491	414	391	94.4
IRL	24	7451	310	13	1077	216	210	97.2
EE	36	10514	292	71	939	324	308	95.1
EM	40	11960	299	45	1091	360	348	96.7
WA	43	11504	268	36	813	387	377	97.4
WM	25	6428	257	58	883	225	216	96.0
SE	34	9752	287	51	680	306	298	97.4
SW	40	14260	357	69	1223	360	349	96.9

Weekday Trap Nights							
Night	Tues	Wed	Thurs	Fri	Sat	Sun	Mon
Days	35	73	330	2823	825	177	86
Percent	1	2	8	65	19	4	2

### **Additional Species**

This is the section where you are invited to add moths caught which are not on the core/regional list. Although not essential to the immediate running of the scheme they are useful for working out any future possible addition to the species list and can produce a more comprehensive list of the moths caught should the need arise in the future. Also, by listing them together with the usual moths, they can be converted into a format suitable for submission to your county recorder.

The number of entries this quarter has been very gratifying due in part to the time of the year but also to the number of recorders entering their results. It brings a whole new life into the scheme.

This quarter there were over 1795 rows of data coming from all of the regions giving a total of 3709 moths of 446 species. Some of these may be duplicated when one recorder identifies it as the species whilst others record it as a sp. or an agg. Table 7 below lists the top 20 moths from the section for this quarter. "R" identifies it as a regional species. Five of the species

listed are pugs, but in the entire list 26 pugs were identified ranging in quantity from the Common Pug found 262 times down to just one sighting each of eight other pugs. This is of course assuming the identifications are correct.

Table 7. GMS 2021 Q2. Top 20 Additional Species

Vernacular	Position	Total	SC	NE	Y&H	NW	IRL	WA	WM	EM	EE	SE	SW
<b>Common Pug</b>	<b>1</b>	<b>262</b>	22	R	R	32	71	35	2	73	46	14	24
<b>Foxglove Pug</b>	<b>2</b>	<b>110</b>	0	0	0	30	R	82	11	R	R	0	0
<i>Eudonia lacustrata</i>	<b>3</b>	<b>103</b>	6	2	11	12	27	7	2	27	5	2	2
<b>Coronet</b>	<b>4</b>	<b>83</b>	0	1	2	4	23	42	2	24	2	R	R
<i>Eudonia mercurella</i>	<b>5</b>	<b>82</b>	3	3	R	5	32	3	0	33	5	R	2
<i>Scoparia ambigualis</i>	<b>6</b>	<b>68</b>	18	0	0	8	14	18	3	14	10	R	R
<b>Large Nutmeg</b>	<b>7</b>	<b>68</b>	0	0	0	0	27	0	0	29	0	29	0
<b>Mottled Pug</b>	<b>8</b>	<b>65</b>	2	R	R	14	13	11	1	17	10	3	8
<i>Hedya nubiferana</i>	<b>9</b>	<b>65</b>	11	R	R	13	12	3	2	12	6	8	3
<i>Hedya pruniana</i>	<b>10</b>	<b>61</b>	2	0	16	3	9	12	1	9	5	7	2
<b>Freyer's/ Edinburgh Pug</b>	<b>11</b>	<b>56</b>	33	0	1	4	3	4	2	3	3	2	3
<i>Celypha lacunana</i>	<b>12</b>	<b>47</b>	7	R	0	10	R	34	4	R	R	R	R
<b>Grey Pug</b>	<b>13</b>	<b>43</b>	22	0	6	11	0	10	2	2	1	0	1
<i>Acentria ephemerella</i>	<b>14</b>	<b>43</b>	0	0	R	0	11	0	0	11	R	24	3
<b>Brussels Lace</b>	<b>15</b>	<b>41</b>	12	1	0	0	R	38	0	0	0	0	R
<b>Scorched Wing</b>	<b>16</b>	<b>39</b>	R	R	0	R	R	42	3	R	R	R	R
<b>Lackey</b>	<b>17</b>	<b>37</b>	0	0	R	0	14	9	0	14	R	7	R
<b>May Highflyer</b>	<b>18</b>	<b>36</b>	1	R	R	17	0	15	1	0	2	0	1
<i>Crambus lathoniellus</i>	<b>19</b>	<b>36</b>	7	R	R	1	4	3	0	5	8	4	2
<i>Aleimma loeflingiana</i>	<b>20</b>	<b>35</b>	0	0	1	1	3	1	1	3	16	3	0

### **Flame Shoulder (*Ochropleura plecta*)**

This moth is a member of the family Noctuidae and was first described by Carl Linnaeus in 1761. It is recorded in the Atlas of Britain and Ireland's Larger Moths as having a GB status of least concern with a 65% increase in abundance between 1970 and 2016. However, in Norman Lowe's assessment of the Welsh results for this quarter it is present in the lowest ever numbers over the last 15 years prompting us to select this moth for discussion.

The vernacular name refers to a bright straw-coloured band, the flame, running along the leading edge of the forewing emphasised by the dark black streak behind it. The scientific name similarly describes it (*Ochros* -pale, *pleura* – rib; *plecta* – twisted rope) with the pale rib referring to the costa of the wing looking like a twisted rope.



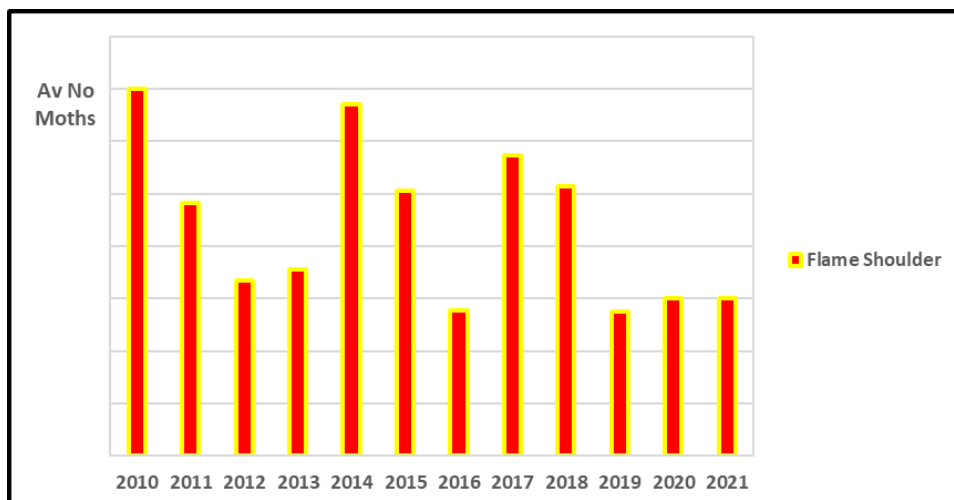
It is ubiquitous throughout mainland Britain, Ireland, the Isle of Man and the Channel Islands. Roy Leverton says it is the absence of recorders rather than of the moth that is responsible for the higher proportion of blank squares in Scotland.

It flies at night and is readily attracted to light, sugar and ragwort flowers. When it comes to light it flies wildly and has an unfortunate habit of occasionally entering an ear of a moth recorder which on more than one occasion has necessitated a trip to hospital to remove the moth! (Waring and Townsend).

It has two generations flying in May & June and again in August & September and occupying a broad range of habitats from low to mid altitude including gardens, woodlands and wetlands among others. The nocturnal larvae feed on a wide range of herbaceous plants including Groundsel, Ribwort Plantain and bedstraws and overwinter as a pupa just below the ground surface.

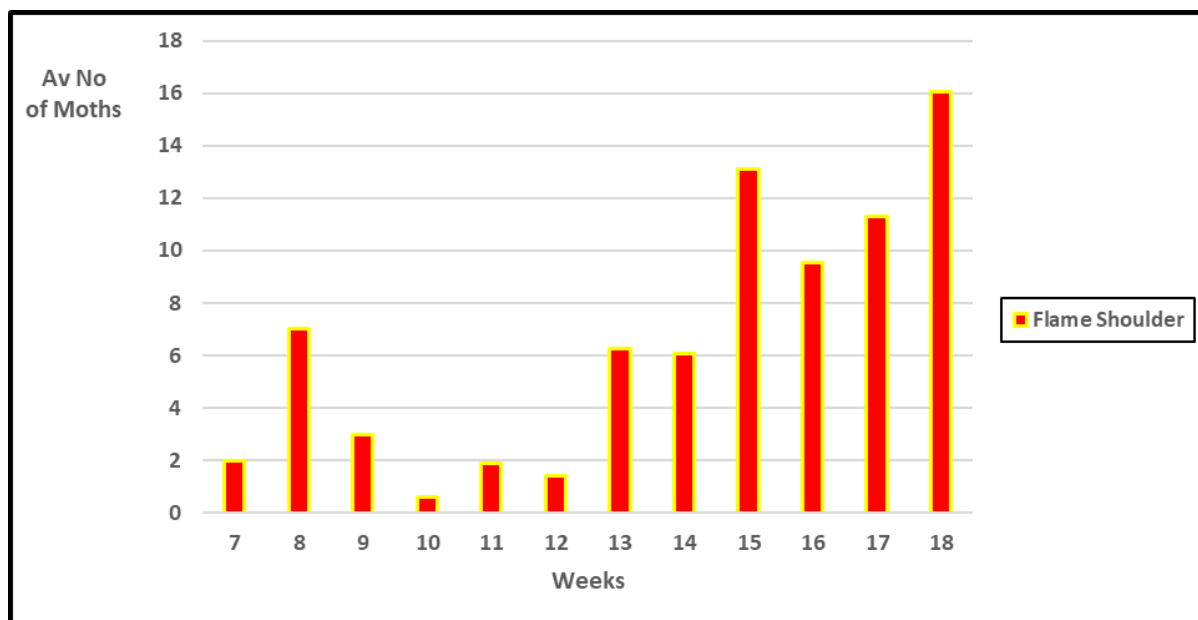
The results so far do not seem to agree with the statement in the Atlas as it has dropped from 14<sup>th</sup> to 20<sup>th</sup> in the Top Twenty table but to be fair, they quoted two generations so I will re-run this chart in the final quarter using both generations to see if there is a difference in totals. Looking at this flight period numbers have dropped significantly since 2018 but have held their own since 2019.

Fig 13. GMS 2010 - 2021 Q2 Flame Shoulder 1<sup>st</sup> Generation



This flight season is shown in figure 14 starting in the first quarter and increasing towards the end of this quarter. They were caught by 237 out of the total number of 370 recorders.

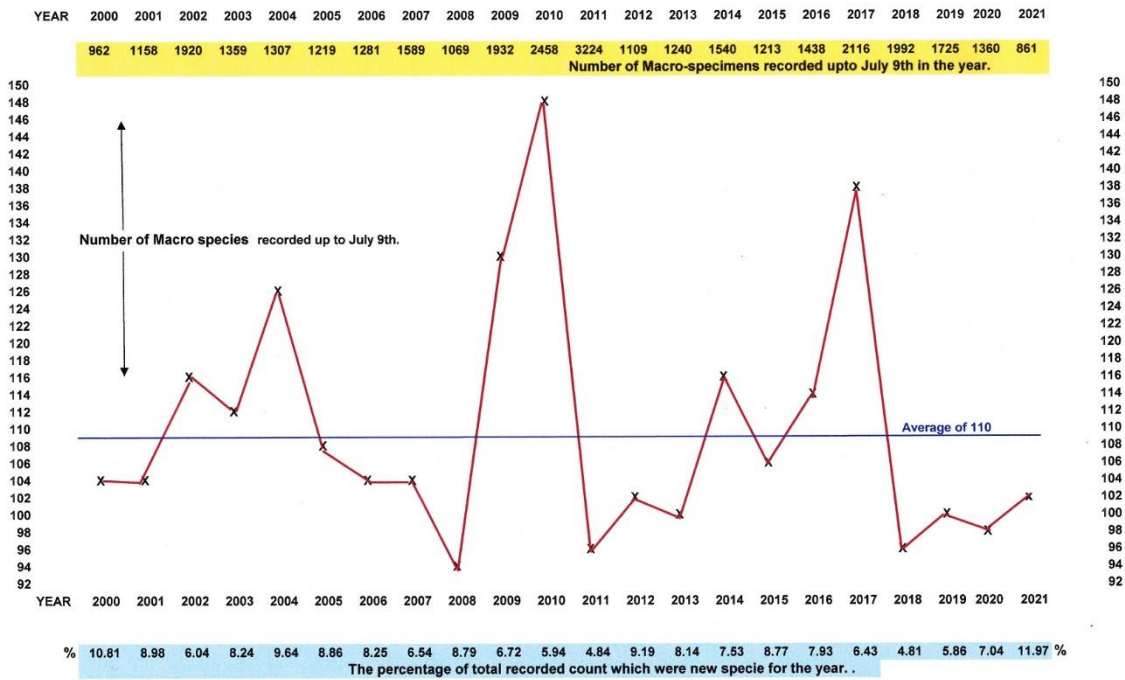
Fig 14. GMS 2021 Q2 Flame Shoulder 1<sup>st</sup> Generation



### ***Has it really been a poor half-year? – David Baker***

Throughout the dreadful lockdown of 2021 and now, hopefully, with the easing of restrictions at last, I have been thankful that my interest in nature and particularly our moths has kept me motivated. The weather, however, did not help us throughout the spring and I remember many people, including myself, commenting on how poorly moths were faring and predicting a very poor year.

Our Quarter 1 results didn't give us much hope as Evan Lynn reported in the Spring newsletter. However, on 9th July, whilst checking through the incoming Yorkshire and Humberside GMS Q2 records, I realised that I had recorded the one hundredth macro-moth species for the half-year and decided it was time to look back through my records to see how things compared over the last twenty-two years. The diagram on the next page shows the results of my meanderings.



Firstly, I prepared the graph showing the number of species recorded up until the 9th July each year. This shows a variation from 95 in 2000 up to 148 in 2010 but, even with the four highest counts, leads to an average figure of 110 macros. This year it was 103 which, I believe, does compare favourably with the majority of years.

One question I must ask myself is: “Did my decision to change from 125 watt Mercury Vapour to a 3x20 watt black-light system keep down the figures?” Who can tell? They are, in fact, all better than the final MV year of 2018!

Still with a wondering, and indeed wandering, mind I decided to extrapolate figures from the 21 previous year’s records to find the total catches up to 9th July for each of my 22 years. These can be seen along the top edge of the diagram.

This led me to wonder about the ratio of “Total to New”, so back into my files again and, hence, the row of figures along the bottom of the diagram showing the percentage of the catch when compared to the total specimen count. This showed me that in this half-year, although the total count has been low the “new species” made up approximately 12% of the total catch, i.e. 103 of 861. In some earlier and, seemingly better, years the percentage count is much lower. Was I lucky to record a few singletons in some years, particularly this year? We are surely aware that moth populations naturally have a series of peaks and troughs ?

So, finally, I will paraphrase that wonderful Lancashire comedian, Eric Morecambe, and let’s face it even without him there are still many things to smile about in our second best county. “Of course I’m showing the correct facts, Sunshine, but they may not necessarily lead to the correct answers”.

Well, I am not a statistician and certainly have no formula which can magically find a solution to the overall question: “Has it really been a poor half-year”. What is more interesting, what will the second half be like?

This question; I will leave for your consideration!

## Snippets

Take a look at this...

The moths of Craig-lais (also known as Constitution Hill, in Aberystwyth), a summary of four years of moth-trapping at this coastal site, along with photos of some star species, is in the latest, Summer 2021, Natur Cymru (Number 64 – published by the Initiative for Nature Conservation Cymru). There are a lot of other interesting articles on (non-mothy) wildlife in Wales, too.

A dissatisfied customer during the spring when the weather was a bit dismal...

Dear Mr Lowe

I write to complain about your so-called Garden Moth Scheme. In three weeks I have rescued from grey mushy soggy egg-boxes drowning gnats, midges and slugs. Moths? Diddly-squat! Over Belle Vue (ha-ha) Gardens murkily sags a clouded drab concolorous grey carpet, gloomy, monotonous, soaking. I am getting mighty suspicious that GMS in this grim miserable season is grandiose mock-science for gullible mugs and suckers.

Meldrew

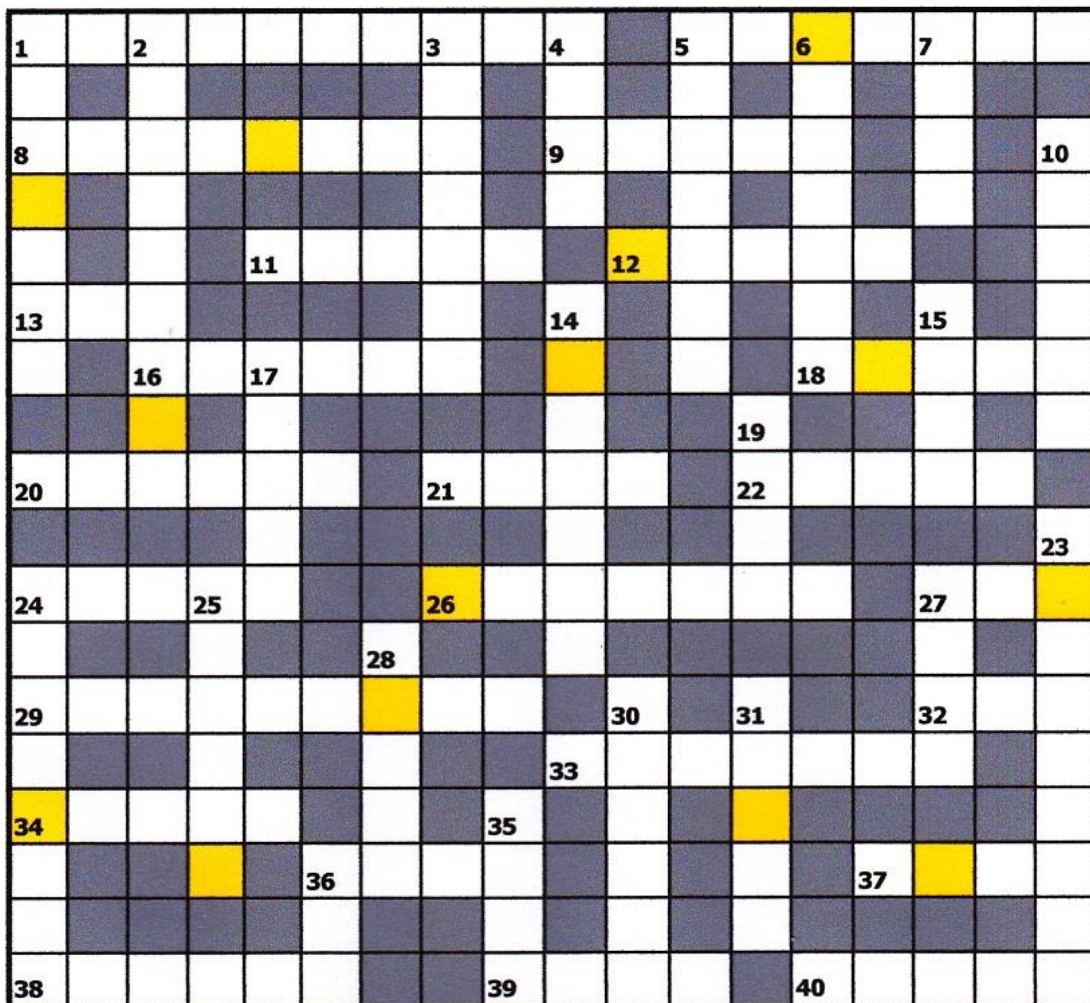
## Puzzle Corner

Lepidoptera Crossword No.16

Nonconformist

All answers are vernacular names, or parts of, moths on the British list.

The letters in the yellow squares form an anagram of another British moth.



### Clues across

- 1 This ethnic informer admits he caused the local bus to clank.  
5 & 30d Clever Rod Lamb helped the coppers to find this colourful creature.  
8 This small pine lover chose our garden to show its colouring.  
9 & 20a Looking amongst the ruins I count this moth as one of the best.  
11 & 39a A solid implement found, at best, out Dartmouth way.  
12 They make and serve ornate alternate cream teas and floor coverings here.  
13 Initially editorial advice restricted finding any clue for this group, so hear this.....  
16 & 22a ....you'll likely see these after putting lentils in your beer.  
18 & 20a To record this moth I helped Ruth chase it across the moors.  
20 see 18a,9a  
21 see 4d  
22 see 16a  
24 & 34a Plain material used within seat can have beautiful result.  
26 Get a learner to resend this small marked item.  
27 see 37a  
29 & 27d This moth can be found mostly when the weather is clearing daily.  
32 Another small one found, just as he expected.  
33 The first female receiver of the covid vaccine was the Doll of the Day.  
34 See 24a  
36 & 24d The cold weather of winter comes a bit soon for this species.  
37 & 27a A dismally coloured twenty second, it's mostly Greek to me.  
38 & 28d Either double cross with a feather or wet ten lumpy items to find our moth.  
39 see 11a  
40 see 15d

### Down

- 1 Harold initially thought he was related to Robert, what a mix-up!  
2 & 20a A Welsh delicacy, a short-crust, wish I could find them in my county.  
3 & 24d In the wetlands a cubist crew soon found our local specimen.  
4 & 21a A moth which took turns to revel and then left two title characters out.  
5 & 31d He handed his young wife, Sam, his bundle and received this response.  
6 Our recorder ran no checks when I trapped in this upland area.  
7 A small moth found in many dwellings, gardens and moors.  
10 If falling whilst looking for moths this plant is good for aches and pains.  
14 Noble attire which would never rot once it was arranged properly.  
15 & 40a To hang up images of this declining species you will certainly need a large peg.  
17 Has this come from Jersey because it does not sound like a local.  
19 Nice colour and sounds as if it arrived on the wind.  
23 see 36d  
24 see 3d, 36a.  
25 When potting this returning species, possibly a Swede, always drop in ruthlessly.  
27 see 29a  
28 see 38a  
30 see 5a  
31 see 5d  
35 Habitat only found at the rare edges of our lakes and ponds.  
36 & 23d A species expected to go up in the world just before summer

Crossword 15 solution

B	U	R	R	E	N	G	R	E	E	N		C	I	S	T	U	S	
L				A		E		M				A		I			T	
A	L	D	E	R		M	A	P	L	E		M	I	L	L	E	R	
C				L			E					E		V			E	
K	E	W		Y		F	E	R	N			L	O	V	E	R		A
N		A				L		O						R			K	
E	X	I	L	E		A	R	R	A	N		A			B			
C		N		A		M					S	C	A	L	L	O	P	
K		S	O	R	C	E	R	E	R			C			U			
		C			H			S		S		E		L	E	A	D	
S.	P	O	T	T	E	D		S	A	T	I	N					E	
T		T			S			E		O		T	I	S	S	U	E	
R			A		T			X		U					P		P	
A	U	T	U	M	N	A	L		S	T	A	R		D	R	A	B	
N			T		U			W		D					I		R	
G		R	U	S	T	Y		O	R	A	N	G	E		N		O	
E			M					R		R					G		W	
R	A	N	N	O	C	H		T		T	H	Y	M	E			N	

Bonus moth – FEATHERED RANUNCULUS

### Tailpiece

I'm starting to run a bit short of articles again as you can see by the relatively small number of contributors in the contents table. If you haven't already contributed your news or views please think about sending something in. Tell us about the interesting moths you get in your part of the world. Or perhaps some you don't get and wished you did? Maybe you have views on the content of this newsletter. Whatever it is, send it to me at [norman@enviro-consulting.com](mailto:norman@enviro-consulting.com)

## Communications & Links.

GMS Website - <http://www.gardenmoths.org.uk/> - the Communications section gives information on the regional coordinators; the Downloads section provides access to Identification Guides, Annual Reports and Newsletters, as well as all the regional recording forms and instructions.

Facebook Page - <https://www.facebook.com/GardenMothScheme> - we now have over 2100 'Likes'!

Facebook Group - <https://www.facebook.com/groups/438806469608527/> - currently has over 2500 Members (not all active GMS participants). Membership is open and all recording forms, instructions and micro-moth identification guides are available in the Files section. We now also have a separate group solely for help with moth identification, so if you need an ID or can offer help to others please join the GMS Moth ID Help group at <https://www.facebook.com/groups/GMS.Moth.ID.Help/>.

You can also find us on Twitter [@GardenMoths](https://twitter.com/GardenMoths) and Instagram at <https://www.instagram.com/gardenmothscheme/>.

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[www.mapmate.co.uk](http://www.mapmate.co.uk)

MapMate continues to support the GMS by providing software and support for the GMS database, and for that we are very grateful.