

GMS News

Spring 2018

Weeks 1-9



Contents

Editorial	Norman Lowe	1
Overview GMS 2017 1 st Quarter	Evan Lynn	2
Tips on Entering Data into the GMS Form	Evan Lynn	11
Personal Data Protection and the GDPR	Stephen Passey	13
Any port in a storm	Gary Williamson	13
A snippet	Rhian Davies	14
GMS Annual Conference 2018	Norman Lowe	15
Crossword 10	Nonconformist	16
Christmas Crossword answers	Nonconformist	17
Tailpiece	Norman Lowe	18
Communications & links		18
GMS sponsors		19

Editorial – Norman Lowe

We start as usual with Evan's analysis of how we did in the first quarter. Evan is always keen to ensure that his articles are as interesting as possible and to that end he looks at different things each time. But he'd very much like to know what you think and especially would be grateful for any suggestions as to the topics you'd like to see him cover. So please let me know!

Evan then remains centre stage with an article containing helpful suggestions on how to fill in the GMS recording forms. As he says, there were a number of questions on this at the conference so hopefully his tips will be useful. We stay with technicalities with an article by Stephen Passey on that most topical of subjects, data protection. Again, it would be very helpful to receive your views on this.

We then move into lighter territory with a look at moths-and-slugs, followed by a snippet from a new recorder. I've said it before and I'll say it again, please keep articles like this coming – we do need light relief as well as the serious stuff. Following an account of the Annual Conference there's more light relief with a new crossword (which I haven't yet had time to tackle) and the answers to the Christmas puzzle.

And we finish with my final thoughts, our update on comms and links, and our thanks to our sponsors.

Overview GMS 2017 1st Quarter – Evan Lynn

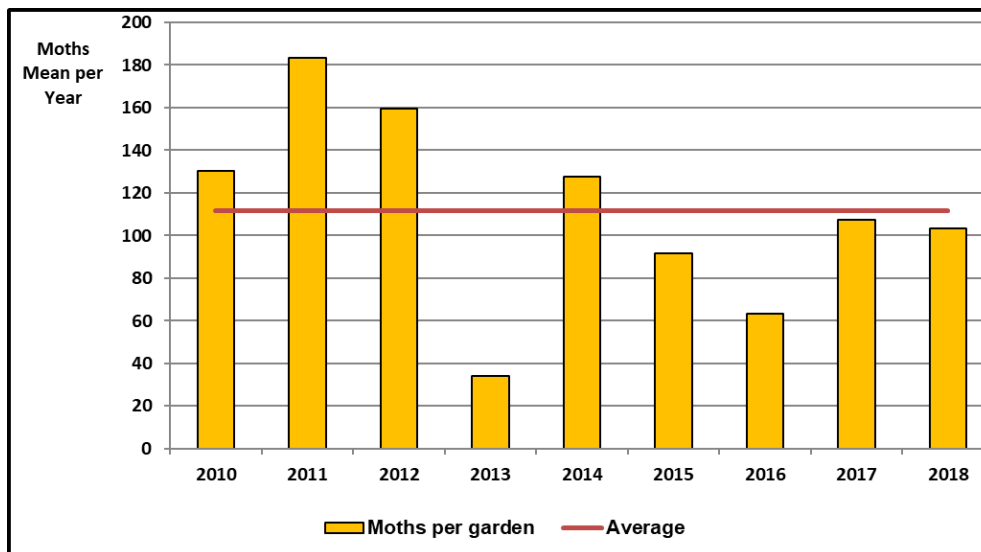
This year so far has been memorable for its low temperatures, easterly winds and blizzards as well as being a lexicologist's dream come true with terms such as Sudden Stratospheric Warming, Polar Low, Beast from the East and Pest from the West. All in all, from the moth-ers point of view this was a miserable start to the year. These large-scale disturbances take a long time to correct resulting in unseasonable temperatures lasting through to the beginning of May. The GMS Annual Moth Conference planned for March had to be postponed due to heavy snow in some parts of the country. Certainly, here in the Ceredigion hinterland we were blocked in by eight-foot drifts.



Yearly Comparisons

Despite the catastrophic start to the first quarter catches did pick up later in April bringing the mean number of moths per garden to just below that of 2017 (Fig1). Considering the low temperatures experienced throughout this quarter catches were much better than expected.

Fig 1. GMS 2010 - 2018 Q1. Mean Quarterly Moth Numbers

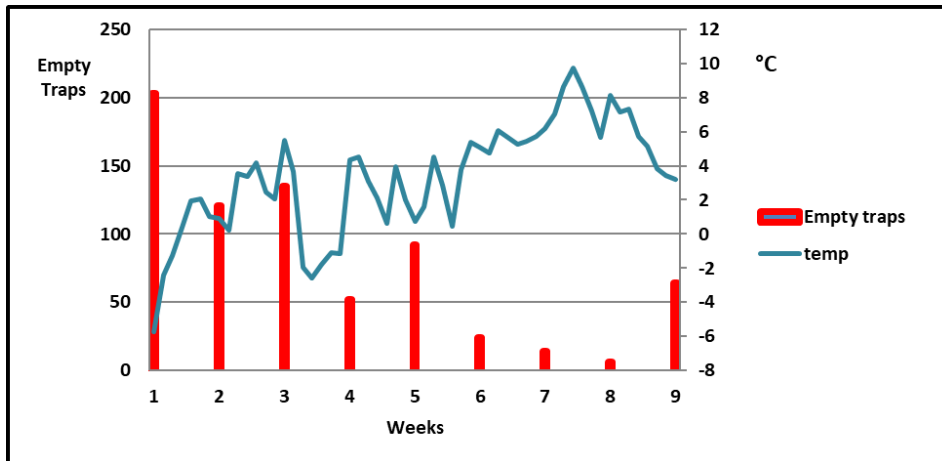


Temperature and Catches

As would be expected the combination of cold nights and strong winds produced disappointing results with many recorders opening their traps only to find them empty.

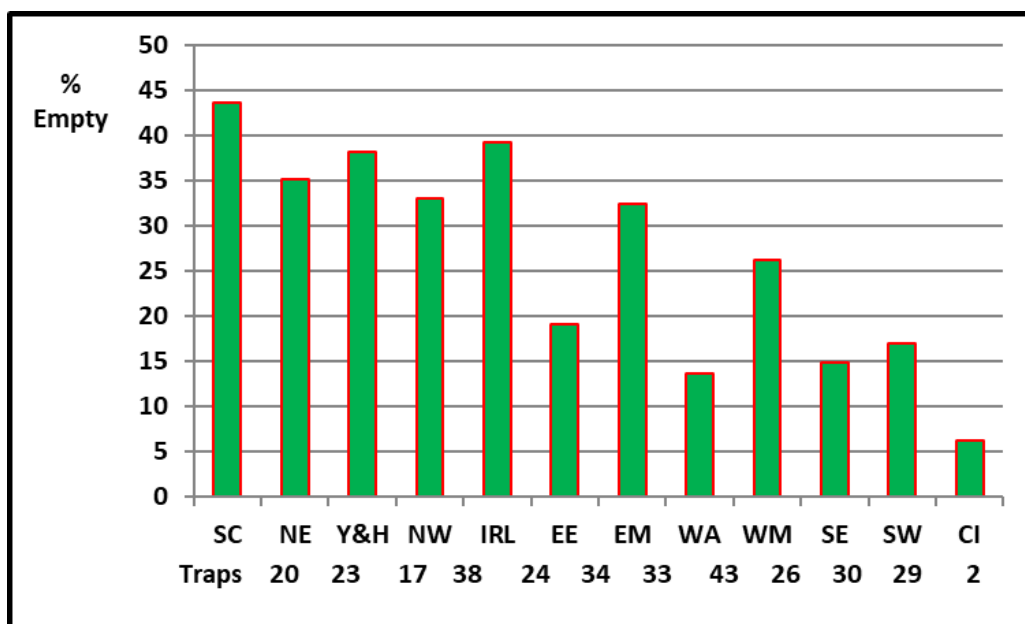
The possible relationship between temperature and the number of empty traps is shown below (Fig 2). After a cold and wintry start, conditions improved bringing about a fall in the number of empty traps until week nine when temperatures plummeted again.

Fig 2 GMS 2018 Q1 Average Minimum Temperature and Empty Traps



All regions suffered to a greater or lesser degree and figure 3 shows the percentage of empty traps in each region together with the number of traps in operation. It would appear that the further south and west a recorder is then the better was the chance of catching a moth, though Ireland does seem to buck the trend.

Fig 3 GMS 2018 Q1 Percentage Number of Empty Traps in Each Region



Following on from the now notorious conditions experienced in March, the first half of April showed little change, with the weather being significantly colder than average and Figure 4 shows the days of air frost according to the Met Office. High pressure then moved near the UK bringing warm air up from the south and leading to a more settled, warmer spell of weather especially in parts of the east and. The western side of the country had only about 70% average sunshine while the Western Isles in April basked in over 200 hours of sunshine compared to 132 hours in 2017 (Fig 5).

Fig 4. Days of Air Frost for March & April 2018 (with permission of the Met. Office)

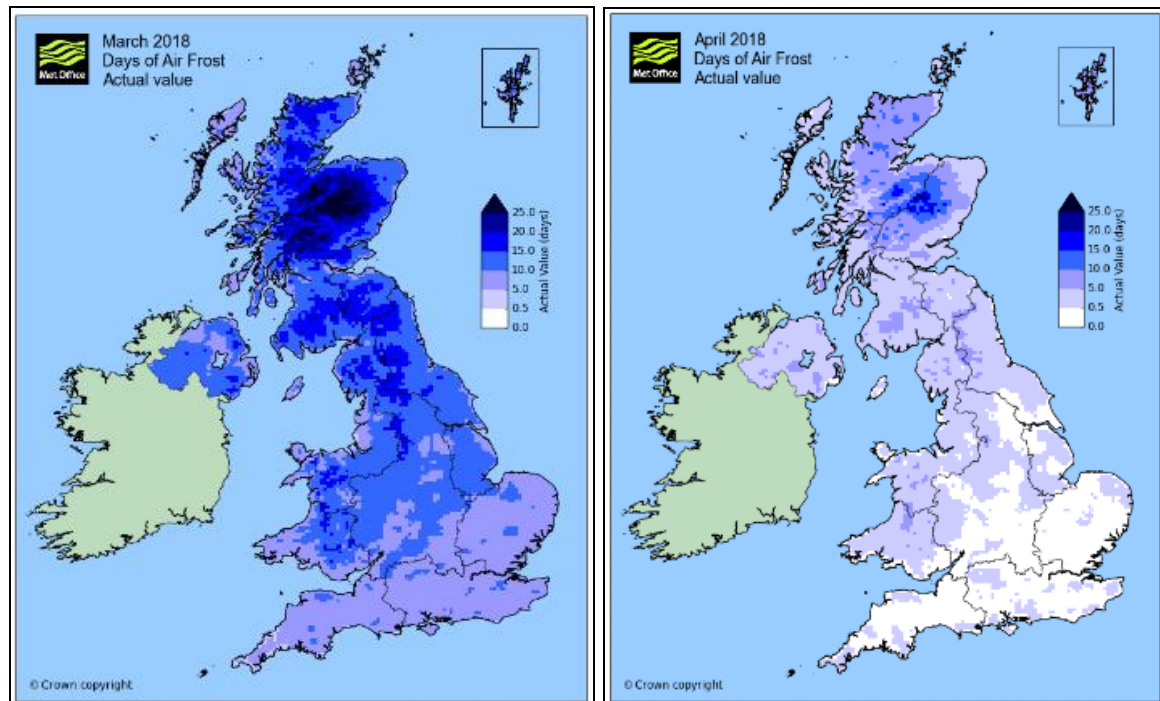
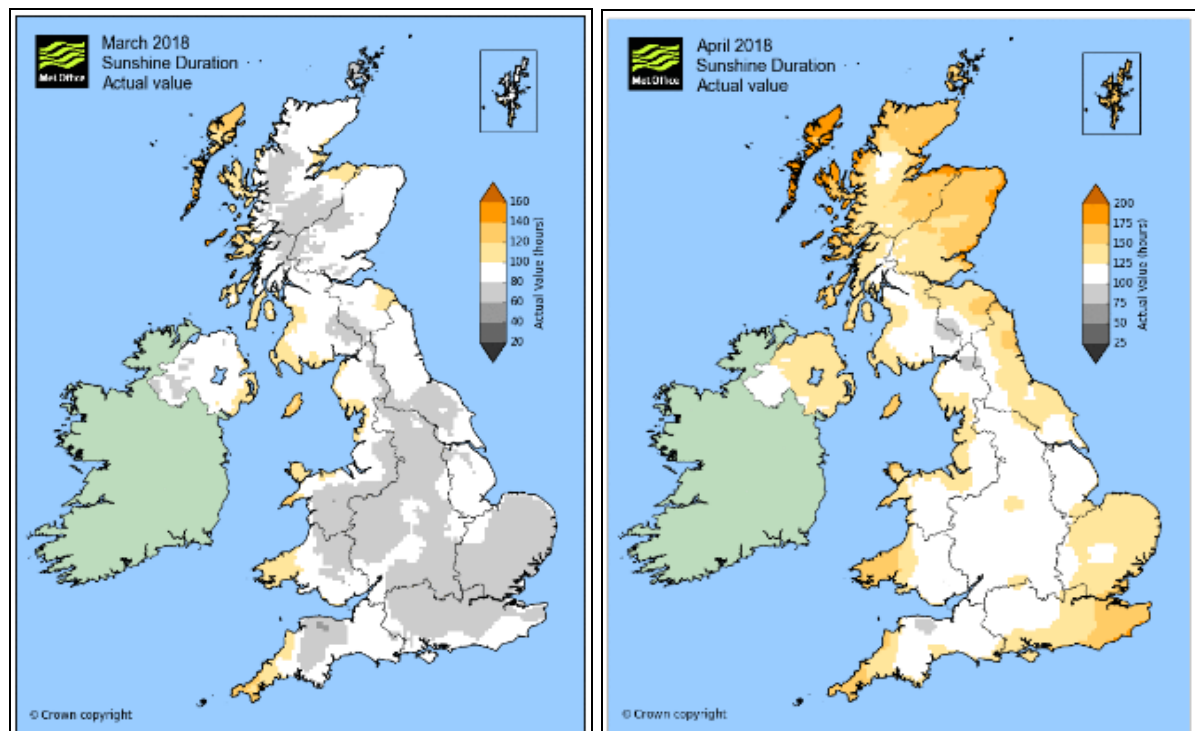
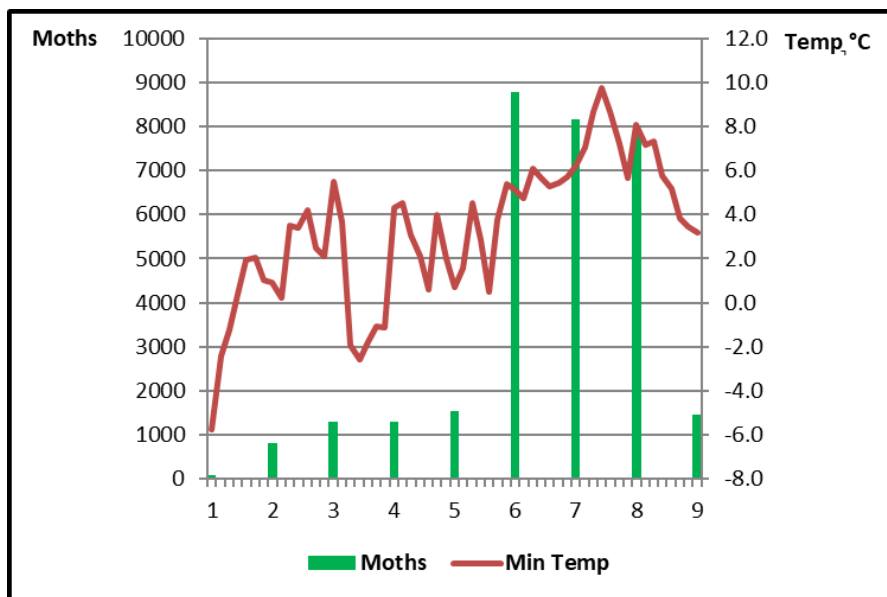


Fig 5. Hours of Sunshine for March & April 2018 (with permission of the Met. Office)



With these charts in mind the histogram of the number of moths caught and minimum temperatures (Fig 6 below) shows a poor start to the season from weeks one to five. Thereafter, rising temperatures improved catches until the temperature drop at the end of the quarter once again depressed the number of moths being caught.

Fig 6. GMS 2018 Q1. Minimum Night Temperatures and Total Moths Caught



Regional Comparisons

Normally I compare and contrast individual regions, but due to the late spring conditions I decided to contrast the North East part of the country against the South West. Risking the wrath of the recorders in God's Own County I have joined Yorkshire & Humberside and the North East together as they were among the first to experience the bitter easterly winds.

Figure 7 shows temperature differences between the two regions. The temperature rose in both regions albeit at different levels. The trendlines show that over the course of the quarter the North East temperature steadily closed the gap on the South West. This is reflected in the catch polynomial trendlines (Fig 8), though North East catches are higher despite the lower temperatures. Both catch trendlines rose steadily until week six when the North East began to exceed that of the South West. The temperature drop in week nine resulted in fewer moths being caught in the South West than in the North East

Fig 7. GMS 2018 Q1. Average Temperatures for the North East and South West

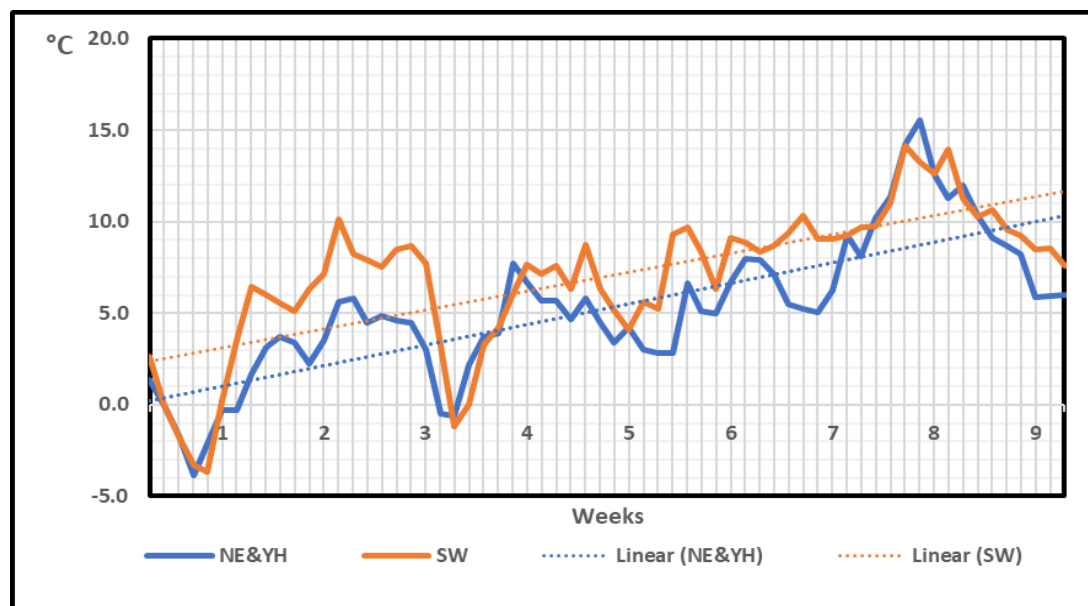


Fig 8. GMS 2018 Q1. Moth Catches for the North East and South West

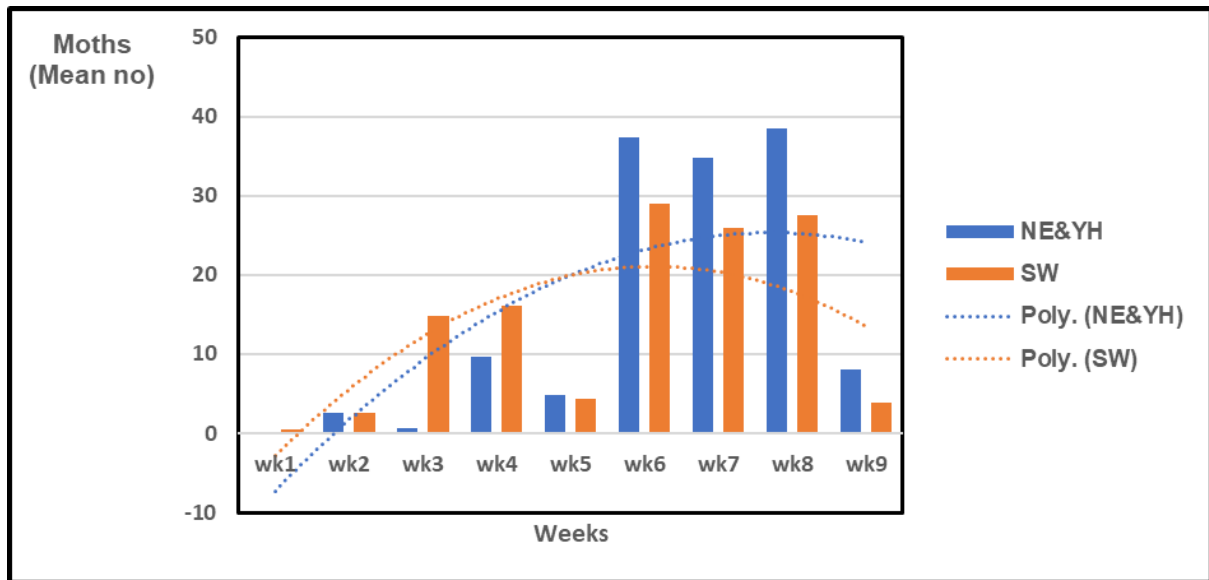
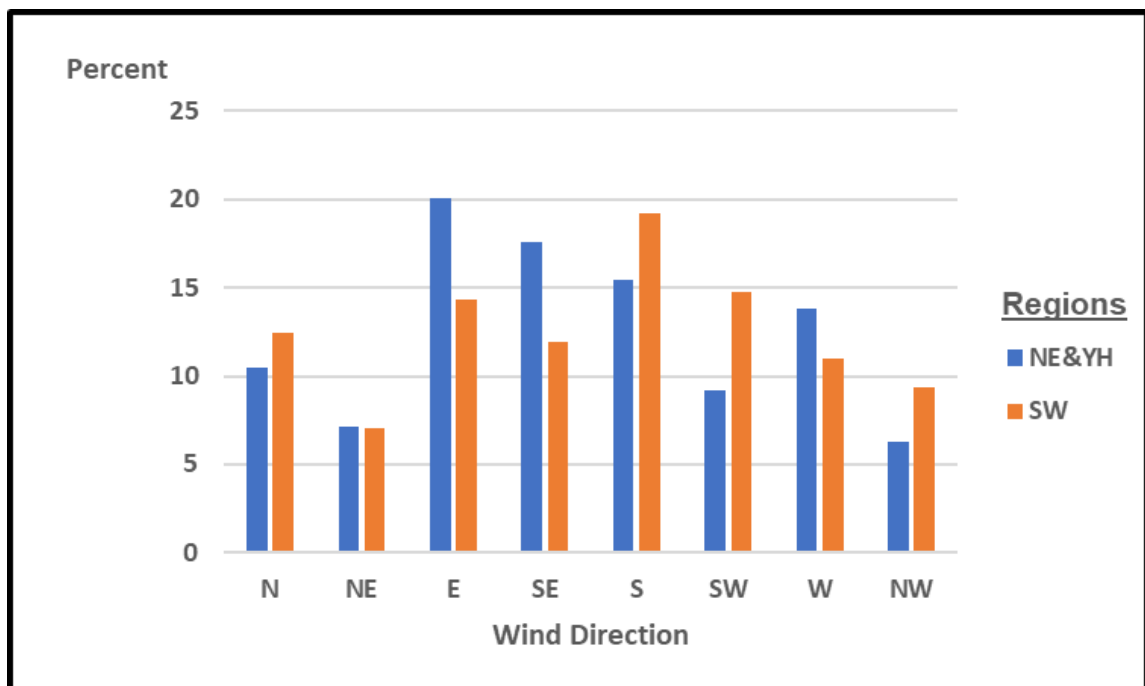


Figure 9 shows the percentage of wind directions for these two months showing that despite the greater exposure to the cold easterlies the North East Region did better than might have been expected.

Fig 9. GMS 2018 Q1. Frequency of Wind Directions



Statistics

Given the small difference between the number of moths caught in 2017 & 2018 (shown earlier in Fig1) it is not surprising that changes in numbers of moths would be small and this is seen in Table 1. The Hebrew Character suffered the most with a fall of 4.3% followed by the Early Grey at 2.1%. Other minor reductions included Brindled Beauty, Dotted Border and the now almost ubiquitous Light Brown Apple Moth. Despite its drop in numbers the Hebrew Character kept pole position. The other *Orthosia* species including the Common, Small and Twin-spotted Quakers showed an increase. The exception to this was the Powdered Quaker. Looking at the changes in position the Satellite has had a good season rising from 33 to 13.

Table 1 GMS Q1 2018 – Top 20 Core Species

Position		Species	Mean per trap		% change	No of records	Max per trap
2017	2018		2017	2018			
1	1	Hebrew Character	33.2	28.9	-4.3	1317	78
2	2	Common Quaker	25.2	28.6	3.5	1185	136
3	3	Clouded Drab	10.3	12.0	1.7	796	56
5	4	Small Quaker	3.6	7.2	3.6	524	33
4	5	Early Grey	6.6	4.5	-2.1	590	33
6	6	Double-striped Pug	1.9	2.2	0.3	233	20
12	7	Twin-spotted Quaker	1.2	1.8	0.6	253	18
13	8	Oak Beauty	1.1	1.7	0.6	278	14
8	9	March Moth	1.7	1.7	0.0	241	16
7	10	Brindled Beauty	1.8	1.5	-0.3	172	28
10	11	Early Thorn	1.5	1.5	-0.1	257	12
16	12	Chestnut	0.8	1.4	0.6	246	10
33	13	Satellite	0.2	0.7	0.6	174	7
15	14	Dotted Border	1.0	0.7	-0.3	150	6
9	15	Light Brown Apple Moth	1.6	0.6	-1.0	110	5
20	16	Shoulder Stripe	0.6	0.5	-0.1	107	12
19	17	Powdered Quaker	0.7	0.5	-0.3	89	7
25	18	Lunar Marbled Brown	0.3	0.3	0.0	59	7
23	19	Streamer	0.4	0.3	-0.1	77	5
22	20	Twenty-plume Moth	0.5	0.3	-0.2	55	4

319 Gardens 2018

353 Gardens 2017

Breaking these figures down into regions, Table 2 shows the mean number of the top ten moths for each region with some doing better than others. The figure in brackets is the number of recorders for that region. As expected, the *Orthosia* species occupy up to half the list in most regions with the Hebrew Character and Common Quaker vying for pole position.

Table 2. GMS Q1 2018 – Top 10 Regional Core Species

Scotland (20)	Mean	North East (23)	Mean	North West (38)	Mean
Hebrew Character	17.5	Hebrew Character	24.3	Common Quaker	31.5
Common Quaker	17.2	Clouded Drab	17.3	Hebrew Character	22.9
Clouded Drab	7.5	Common Quaker	15.3	Clouded Drab	7.5
Early Grey	2.6	Early Grey	3.9	Early Grey	4.4
Chestnut	1.1	Chestnut	2.2	Small Quaker	3.7
Small Quaker	0.8	Oak Beauty	1.5	Chestnut	1.6
Dotted Border	0.4	Small Quaker	1.4	Satellite	1.4
Satellite	0.4	Satellite	1.3	Oak Beauty	1.3
Powdered Quaker	0.3	March Moth	0.9	Twin-spotted Quaker	1.3
Double-striped Pug	0.3	Twin-spotted Quaker	0.7	Early Thorn	1.2
Yorks & Humber (17)	Mean	Ireland (24)	Mean	East of England (34)	Mean
Hebrew Character	27.8	Hebrew Character	30.2	Common Quaker	33.8
Common Quaker	19.1	Common Quaker	16.7	Hebrew Character	27.8
Clouded Drab	9.5	Clouded Drab	10.9	Small Quaker	13.5
Small Quaker	3.9	Early Grey	4.0	Clouded Drab	12.6
Early Grey	2.3	Double-striped Pug	1.5	Early Grey	4.1
Common Plume	1.1	Early Thorn	1.5	Double-striped Pug	3.6
Early Thorn	1.1	Twin-spotted Quaker	1.0	March Moth	2.8
March Moth	1.1	Small Quaker	1.0	Oak Beauty	1.8
Powdered Quaker	0.8	March Moth	0.9	Twin-spotted Quaker	1.5
Chestnut	0.7	Chestnut	0.8	Chestnut	1.5
East Midlands (33)	Mean	West Midlands (26)	Mean	Wales (43)	Mean
Common Quaker	28.4	Hebrew Character	38.7	Hebrew Character	41.0
Hebrew Character	23.3	Common Quaker	38.6	Common Quaker	30.8
Clouded Drab	10.9	Clouded Drab	14.2	Clouded Drab	20.2
Small Quaker	5.9	Small Quaker	12.3	Small Quaker	12.1
Early Grey	3.4	Early Grey	3.7	Early Grey	9.1
Double-striped Pug	2.6	Oak Beauty	2.3	Brindled Beauty	5.9
Common Plume	2.2	March Moth	1.7	Twin-spotted Quaker	4.7
Early Thorn	2.1	Double-striped Pug	1.5	March Moth	4.2
March Moth	1.2	Twin-spotted Quaker	1.4	Oak Beauty	3.8
Twin-spotted Quaker	1.2	Early Thorn	1.3	Chestnut	3.0
South East (30)	Mean	Southwest (29)	Mean	Channel Islands (2)	Mean
Hebrew Character	31.5	Common Quaker	39.0	Common Quaker	34.0
Common Quaker	21.0	Hebrew Character	38.5	Hebrew Character	26.5
Clouded Drab	11.6	Clouded Drab	10.0	Early Thorn	12.5
Small Quaker	8.6	Small Quaker	5.4	Early Grey	9.0
Early Grey	6.4	Early Grey	4.9	Double-striped Pug	8.0
Oak Beauty	3.6	Double-striped Pug	3.8	Waved Umber	5.0
March Moth	2.4	Twin-spotted Quaker	2.9	Clouded Drab	3.5
Double-striped Pug	1.9	Oak Beauty	2.8	White-shld House Moth	3.0
Twin-spotted Quaker	1.8	March Moth	2.2	Brimstone Moth	3.0
Early Thorn	1.5	Early Thorn	2.1	Dotted Border	3.0

Table 3 below compares the records received from each region for the quarter. 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 number of gardens per region varies between 2 and 43 while the trapping effort (Moth trap nights) is remarkably consistent. It is also commendably high, suggesting that our GMS records are truly representative of the moths of UK & Ireland. The

third table 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.

Until last year the Channel Islands had only one recorder but now there are two. Welcome aboard!

Table 3 GMS Q1 2018 – Regional Statistics

Region	Gardens	Moths			
		Total	Mean	Min	Max
SC	20	1108	55	11	185
NE	23	1767	77	4	287
Y&H	17	1237	73	5	228
NW	38	3183	84	1	435
IRL	24	1856	77	3	358
EE	34	3885	114	10	345
EM	33	2921	89	4	320
WA	43	6621	154	10	443
WM	26	3257	125	3	572
SE	30	3137	105	0	386
SW	29	3674	127	10	551
CH	2	285	143	65	220

Moth Trap Nights		
Possible	Actual	Percent
180	165	92
207	191	92
153	147	96
342	324	95
216	204	94
306	278	91
297	281	95
387	365	94
234	217	93
270	248	92
261	235	90
18	16	89

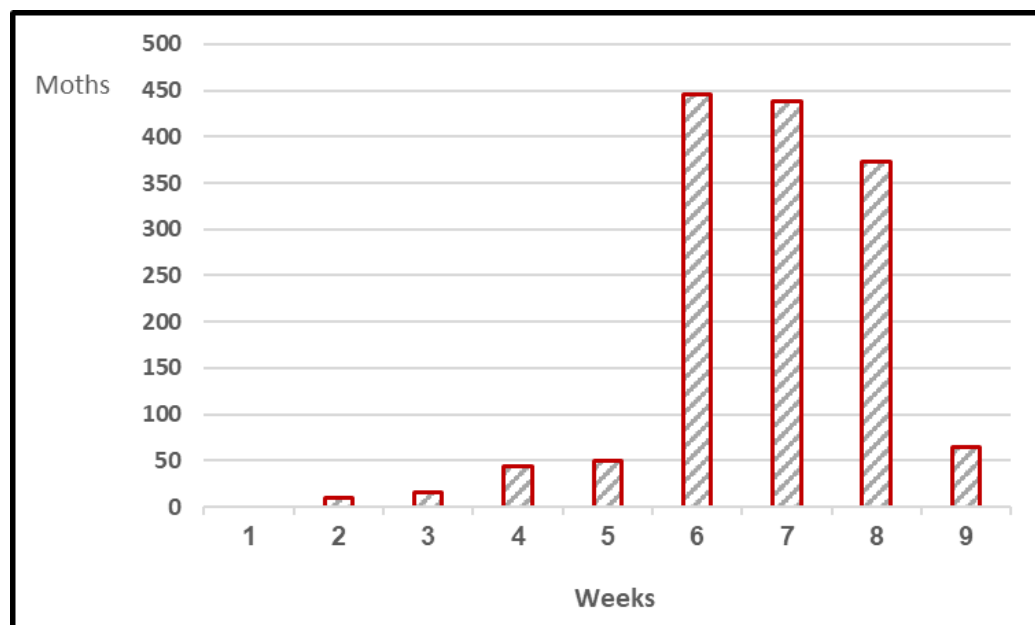
Night	Tues	Wed	Thurs	Fri	Sat	Sun	Mon
Days	33	57	268	1587	433	186	106
Percent	1	2	10	59	16	7	4

Early Grey

The Early Grey is, as its name suggests, one of the earliest moths to emerge in the spring and is often found nectaring on Sallow. Its Latin name is *Xylocampa areola* - xulon meaning wood and kampe meaning a caterpillar (Greek mythological she-dragon to be more precise) and areola referring to the adult is a small space demarcated by lines from the dark-ringed pale stigmata. As this name suggests the larva resembles a twig. The adult is an attractive moth often with a delicate pinkish flush, especially on the fringes. This moth is seen in increasing numbers from early March rising to a peak in April. The larva is monophagous feeding on honeysuckle.

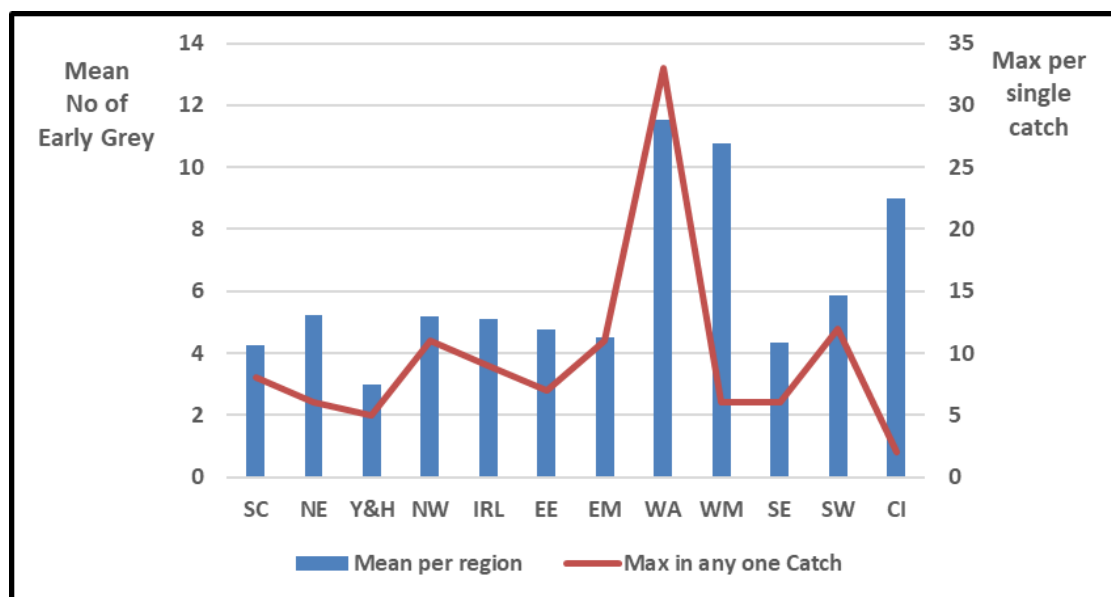


Fig 10. GMS 2018 Q1. Early Grey Catches



Different regions have reported varying numbers this year with the largest numbers seen in Wales (fig 9). Wales also reported the maximum number of 33 caught in one trap near Brecon.

Fig 11. GMS 2018 Q1 Mean Number Early Grey and Max catch

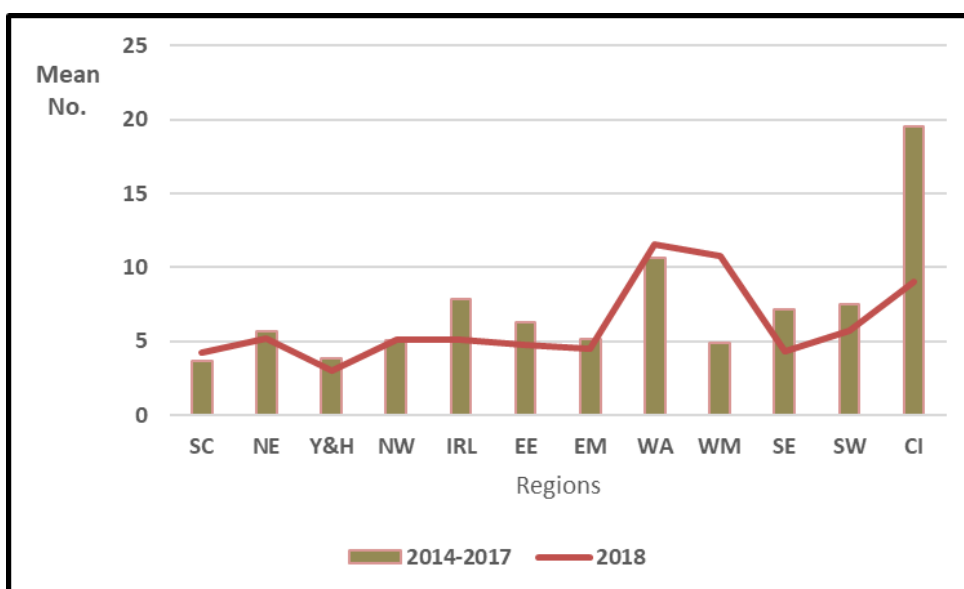


It was mentioned earlier (Table 1) that the mean number of Early Grey moths was lower by 2% so I decided to compare the mean number caught from 2014 to 2017 with this year's mean number (Fig 12). Since I wanted to look at one species which not everyone caught I have used the mean of the number of successful recorders instead of the regional totals which shows variation in catching areas within regions. This is illustrated in Table 4. It is noticeable that relatively few recorders had Early Grey in the West Midlands compared with everywhere else.

Table 4 GMS 2018 Number of Early Grey Recorders per Region

Recorders	SC	NE	Y&H	NW	IRL	EE	EM	WA	WM	SE	SW	CI
Total	20	23	17	38	24	34	33	43	26	30	29	2
Early Grey	12	17	13	32	19	29	25	34	9	25	24	2
Percentage	60	74	76	84	79	85	76	79	35	83	83	100

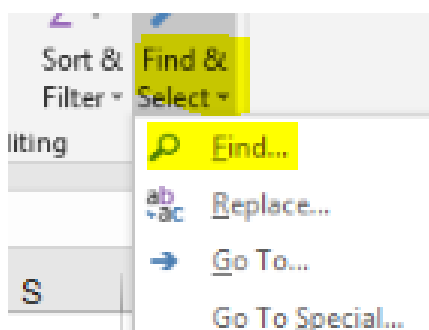
Fig 12. GMS 2018 Q1 Mean Number Early Grey 2014 - 2017 and 2018



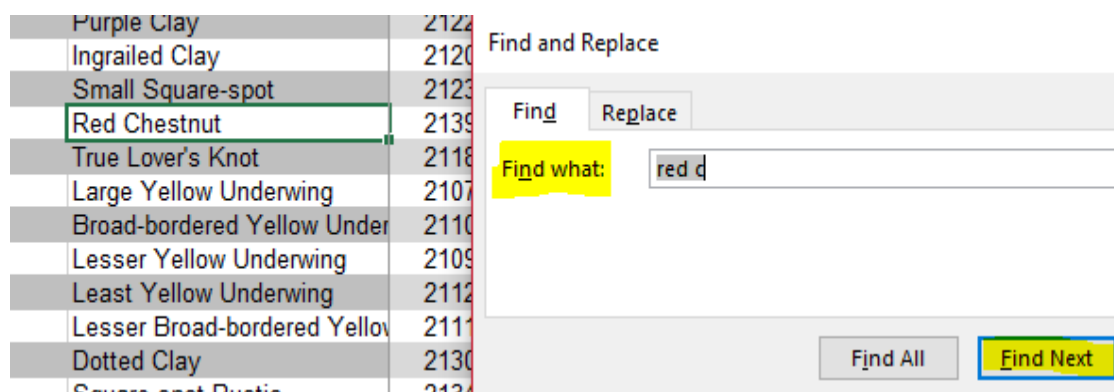
Tips on Entering Data into the GMS Form – Evan Lynn

At the 2018 AGM several recorders mentioned that they were still having problems entering data on the Reporting Form, relating mainly to the difficulty of locating a particular moth within the long list of species given in the Reporting Form, and to the efficient use of the various functions offered by the computer. To help resolve these difficulties this article may help these people. Firstly, ensure that your computer is set up with the English (United Kingdom) date format as the Form does not accept the default (US) format.

To locate the Red Chestnut (2139), for example in our Wales form, use the Find & Select function. This will greatly speed up your searching as this moth is on line 241 of the Wales form. To activate this function either use the short-cut key or click on the button as shown below in the screenshot. Click again on Find from the drop-down menu. The short-cut key is CTRL+H, though this may vary depending on your set up.



In the box “Find what:” enter the first three or four letters such as “red c” and Left Click on “Find Next”. The cursor should go to Red Chestnut.



There can be confusion if you just enter red as you will get a number of possibilities that have red somewhere in the name. Also entering “heb” for Hebrew Character may land you with Setaceous Hebrew Character, but you will get to know its foibles. Highlighting the Common Name column is more efficient as the same sequence of letters could be found in the Scientific Name column.

Sometimes you will enter letters and the moth cannot be found, so ensure that your cursor has not accidentally highlighted a couple of cells somewhere. Failing this then it is not on the list. Press CTRL+ Down arrow several times to get to the extreme bottom of the list. Enter the moth in the lower table.

If you want to search by numbers then enter the numbers instead of letters. Here you will have to enter the full number. To get to 2139 by just entering 213 took me 6 attempts to get there.

Once you have found the Red Chestnut the next difficulty is moving along the row to the correct column while staying in the same row. It is like a mirror image of finding co-ordinates on a map – down the stairs and along the corridor. The trick is to make sure the corridor is as short as possible.

Luckily the form is designed with frozen columns. To understand this, move the bottom horizontal window bar along to the right. You will notice that columns A to E remain stationary while the remaining columns move behind these frozen columns, so your working week column now has a very short corridor to traverse. Use the bar to get quickly to the beginning of a quarter and then press the arrow to the right of the bar to move the spreadsheet one week at a time.

Alternatively, you can use the Hide function. Assuming that you want to fill in week 25 then highlight columns D to AC, right click and select “Hide” from the drop-down list and these columns will disappear. Fear not, they haven’t been deleted, just hidden from view. You now have week 25 beside the frozen columns. For each week after that, just select and hide the completed column. Assuming you are working on week 28 then the columns lettering will go B, C, AG. To reveal these columns, highlight the unconformity and select unhide and all the hidden columns are revealed.

You can also fill the working column with a colour to doubly ensure that you are working on the correct column. When finished with that week select No Fill. It doesn’t matter that you have removed the yellow colour on the date row – it is there just for your convenience and the red font will still remain.

Personal Data Protection and the GDPR - Stephen Passey

The General Data Protection Regulation (“GDPR”) is a new law which comes into force from the 25th May 2018. The intention of the GDPR is to give you more control over your personal data and how it is used. In order to comply with these changes, we have conducted a review of the personal data held by the GMS and have written a data policy which we will display on our website. The data policy provides a clear description of what personal data the GMS collects and how we handle and protect it.

Personal data protection is extremely important to us. The GMS collects contact details solely for the administration of the scheme and these details are not passed on to anyone else. In addition, any personal data used to identify records on the GMS database is removed before analysis. Under the new regulations, your consent is required for us to hold and use your personal data. We will assume that by submitting your GMS recording forms you are consenting to the GMS to do so.

If you have any questions about personal data protection, please contact Stephen Passey for more information at: stephenpassey13@gmail.com

Any port in a storm – Gary Williamson

On the 28th of September last year, I caught a Double-striped Pug (*Gymnoscelis rufifasciata*), in my garden trap. After holding it in my fridge for a few hours, I tried to get a photograph for my records before releasing it. It was restless and wouldn't settle, and I failed to get any photos worth keeping under captive conditions, so eventually let it go, hoping it would land somewhere close by.

It did, but in a very unusual place. As you can see by the photograph below, it landed on the back of a slug! As it was an odd photo, I sent it to Roy Leverton as a peculiarity, and he pointed out something that I hadn't noticed on the small image on my phone – the moth was feeding off the moisture on the slugs back.



Roy said that moths often suffer from dehydration when released from long hours in captivity and will take nutrients from wherever they find them. It seemed to work for the pug at least – it flew off into the trees after a minute or so, and the slug appeared to be completely unaware of its own generosity!

A snippet - Rhian Davies

'This is the first year we've taken part in the Garden Moth Survey and it's been great. Until now we've only put our trap out in summer and only on "good" nights. Taking part in the scheme has made us realise what we've been missing out on the rest of the time, including our first black sexton beetle!



It's also going to be interesting for us as we've moved house and currently have a very barren garden, which we are planting up, so we will get to see if this has any effect on the species in our garden over the coming years. I'd also like to add that the help and advice from people in the Facebook group has been invaluable.'



GMS Annual Conference 2018 – Norman Lowe

Over 50 people attended this year's conference at one of our well-established venues, Moira Hall in Leicestershire. We had hoped to hold it on March 3rd but were defeated by the "beast from the east" and had to postpone it to April 29th, which unfortunately meant that our new leadership team of Helen and Stephen Passey weren't able to join us.

I started things off with the usual look back at the highs and lows of GMS 2017, much of which is reflected in Heather's analysis that you should already have seen. David Baker then took us to a look at moths in the singular – species that he'd only seen once in all the years he'd trapped in his garden. As he said, just the opposite of the GMS concept of looking for common garden moths.

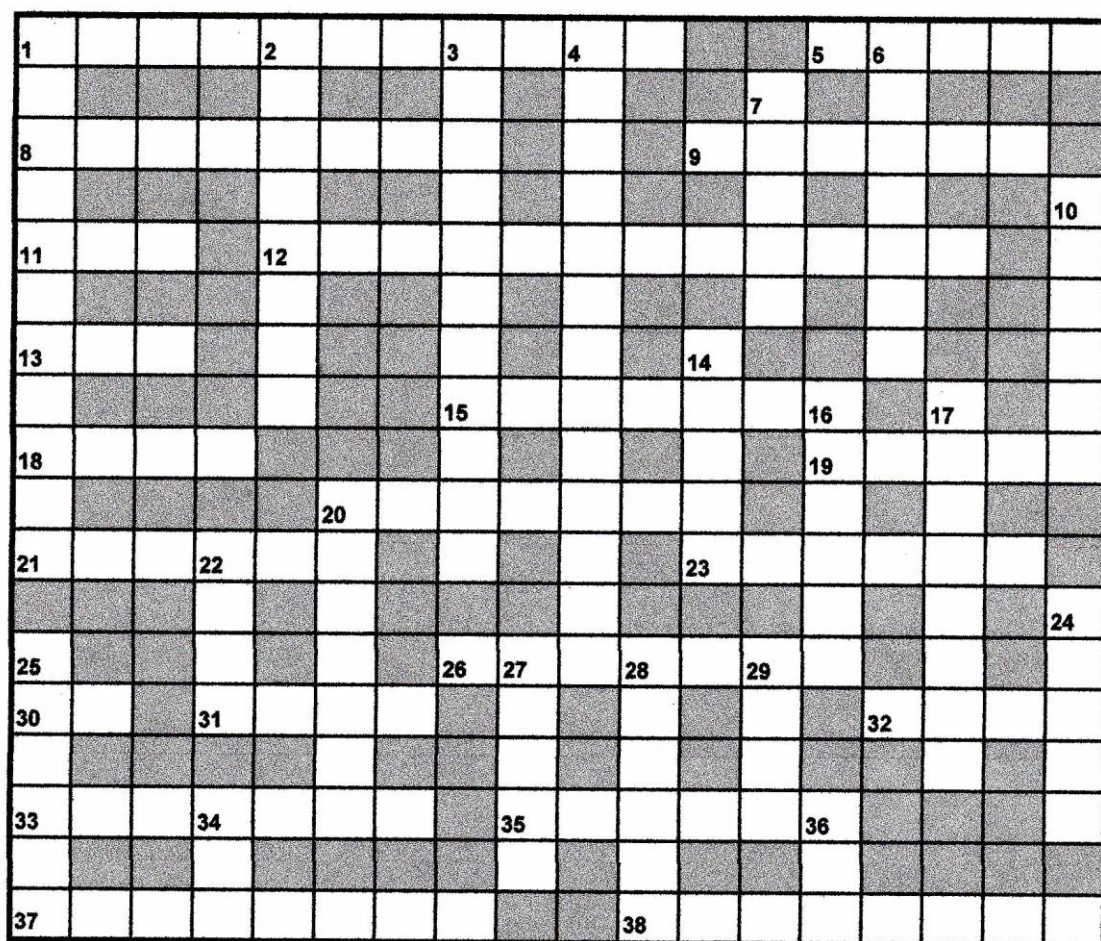
We then took a further look at things outside GMS when Ray Morris gave us some tips on identifying the caddis flies we all get in our traps. After a leisurely break for lunch, chat and a visit to our stallholders, we reconvened to hear from John Wilson on the effect (or otherwise!) of traffic pollution on moth numbers – see his detailed account in the Annual Report.

The next presentation was a welcome to what a Victorian writer once described as the dull and uninspiring Midlands. Adrian Russell gave the lie to that calumny by treating us to a run through some of the many scarce, interesting and attractive moths of Leicestershire and Rutland.

Finally we had a discussion on where GMS should go in 2018 and beyond. Stephen Passey had produced a draft paper on a possible GMS data protection policy and once agreed this will go on the website. And I described a positive meeting I'd had with Butterfly Conservation staff, after which the meeting agreed that we should have more talks with BC with a view to enabling wider dissemination of our data in order to further the aim we all have, the long-term benefit of moths. However it was emphasised that GMS should remain independent.

The enjoyment of the day was greatly increased by the presence of our commercial supporters Atropos Books and Hachiware Art, both of whose stalls seemed always to be surrounded by eager buyers. Thank you Mark, Scott and Izumi!

Crossword 10 – Nonconformist



Clues Across

- | | | |
|-----------|---|-----|
| 1 | Would he sell lowly blends and not dingy or scalloped items. | 6,5 |
| 5 | See 26a | |
| 8 | In the damp areas of the Harz, ride a confused race for this genus. | 8 |
| 9 | The quality of Cockney royalty kept undercover? | 6 |
| 11 | This not so bold lad yearns to be without his female companion. | 3 |
| 12 | T'is said that a girl led them astray to find this pale jewelled visitor. | 5,7 |
| 13 | Scientifically a dull species which Lady Macbeth queried. | 3 |
| 15 | See 37a. | 7 |
| 18 | Do some folks get a rude awakening from this group of moths? | 4 |
| 19 | Possibly a ragged return for some small, pale and grass moths. | 5 |
| 20 | A scarce speckled visitor shows up as microns. | 7 |
| 21 | Specifically a visitor returning on August 9th from the East | 6 |
| 23 | A ten strong micro genus sounds like a stuttering listening device. | 6 |
| 26. & 5a. | His Mum let Bart do whatever he wanted to get this cool species. | 7,5 |
| 30 | See 10d | |
| 31 | GMS has 5 portions in this period. | 4 |

32	You may need a third man to find this close relative of 38a.	4
33	An inebriate who is much kinder with Richard.	7
35	A visitor whose chaste character leaves taller impressions.	6
37 & 15a	A Yorkshire plant to give strength to a fictional seafarer.	8,7
38	Give our Henry a week and a day to spy out this Moth.	4.4

Clues Down

1	A Yorkshire missile puts a feather in the cap to find this beauty.	6,5
2	Specifically, one should eat local, try 38a on the menu.	8
3	"Can Titch hear us; we are looking for a moorland countryman"	5,6
4	This damp-lover definitely likes wearing costal markings.	5,8
6	Made model brambles in order to return to his domestic Beauty.	7
7	See 10d.	
10, 30a,7d.	Compo heads to the farm pool, there to find Howard's Mum-in-law.	6,2,5
14	Rarity, recorded by John a long time ago but without the usual charter.	5
16	Just a proclaimer, but dressed in a higher alderman's outfit.	6
17	Really, is Rio Gap the correct place to find this springtime group?	8
20	Does the person riding in the cab bag each food item the quicker?	7
22	Could be 13a, or one of the other five shades.	4
24	Group of tiny moths made larger by their frontal appendages.	5
25	Some brightly shining old entomological specimens are this!	6
27	Evil or not, she may well be involved with 15a in some way.	5
28	Truly, no lies, this is a real moth not a fabrication.	6
29	Small, mainly local, group found in clean areas of the country.	4
34	Little Women subject leaves moth to find food item.	3
36	Future light source for our traps?	3

Christmas Crossword answers

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

Tailpiece - Norman Lowe

It is gratifying to be able to report that GMS data is being used by a student at Cardiff University as part of a study on “The relative importance of putative larval food sources to adult abundance and richness in an urban macro-moth community”. We supplied data from three Cardiff gardens (anonymised of course) and Professor Steve Ormerod tells me that it is intended to produce a peer-reviewed paper on the subject, with appropriate acknowledgement to GMS.

Thanks to all who have contributed articles for this magazine. Please keep them coming. I am always cheered by the variety of material I receive, whether long articles, short snippets, technical pieces, learned academic contributions, or light-hearted tales, with and without pictures. I have to date used every article I've received though I may occasionally do a bit of minor editing and re-formatting. Send whatever comes to mind (and your pen) to me at norman@enviro-consulting.com

I rarely get Eyed Hawk in my garden but recently I had two in two weeks. Here's a pic of one just about to take off, hopefully avoiding my sparrows!



And just to finish, we were very thankful for financial assistance during 2017 from our sponsors, listed below; please consider using them for your purchases!

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 1100 'Likes'!

Facebook Group - <https://www.facebook.com/groups/438806469608527/> - currently with more than 2200 Members (not all active GMS participants) – open membership – all recording forms, instructions and micro-moth identification guides are available in the Files section

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