GMS News

Early Summer 2019

Weeks 10-18

Contents

Editorial

As usual we begin this edition of the Newsletter with Evan's analysis of the results from the Early Summer recording. The weather started off rather cold but towards the end of the quarter temperatures rose, as did the numbers of moths in your traps. This time Evan's "special reports" include a comparison of the results from East England and Wales. As it happens there were more similarities than differences in weather conditions, number and variety of moths recorded. Also featured are the life and times of the Treble Lines, a comparatively localised moth that seems to be spreading and which had a particularly good year. Even I had two, only the thirteenth time I've had it in my trap in over 30 years here, and the first time I've had more than one at a time. And yet other recorders just a few miles away get it by the shed-load!

Next, David Baker concludes his account of the non-moth species he finds in his trap, followed by an account by Richard Cowen of his experiences as a moth-recording novice. And we've all been there haven't we? Then in Puzzle Corner we have a new Wordsearch by Nonconformist who tells me that there are 62 hidden words. After much searching I've found 60 so there are two more to go. Also included is the answer to last edition's Moth Spiral.

And now that we are well past the middle of the year it's time to think about our Annual Conference, the provisional date for which is Sunday March 29th 2020 (which is NOT Mothering Sunday) at Idle Valley Nature Reserve near Retford - please make a (pencil) note in your diaries. We need to think about the programme so do let me know if you have any thoughts about who could give an interesting talk. And don't be shy of volunteering yourself!

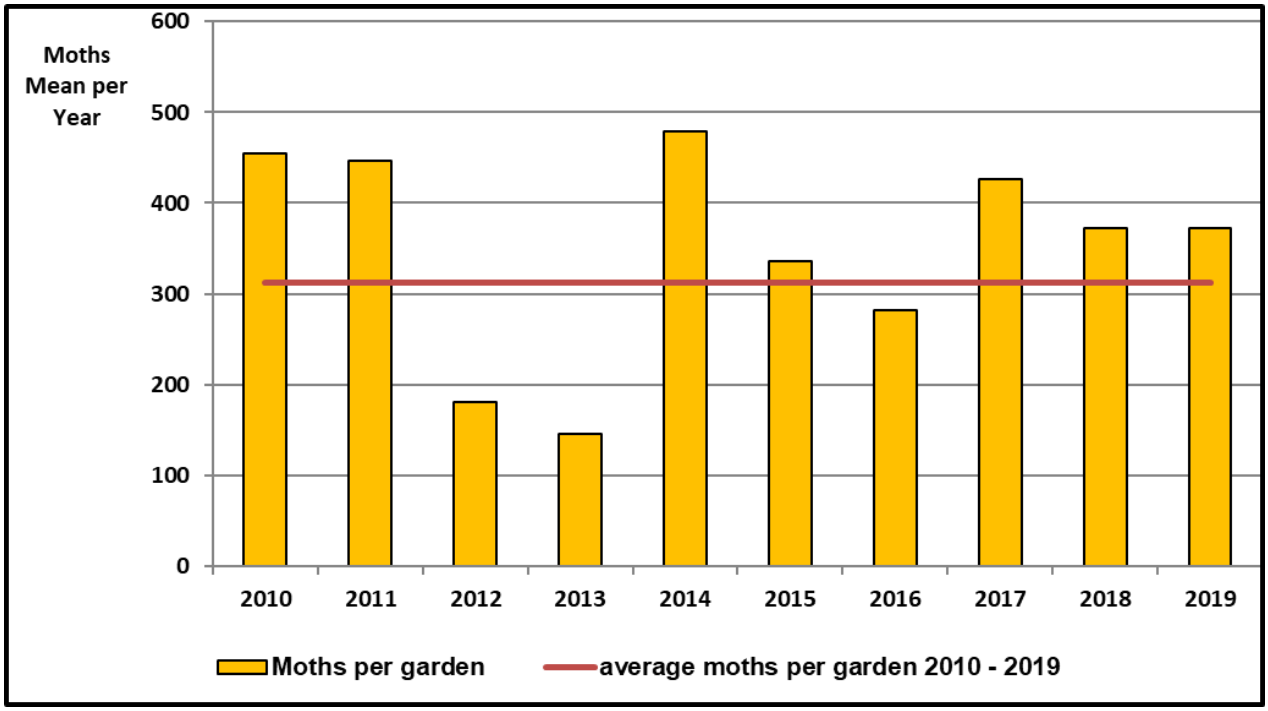
Overview GMS 2019 2nd Quarter by Evan Lynn

The proverb “cast ne’er a clout ‘til May is out” held true this quarter with low temperatures in May markedly depressing catches. With the arrival of more seasonal temperatures in June catches doubled; apart from a temporary drop in mid-June, moth numbers in the final week were almost five times better than those of May.

Yearly Comparisons

Despite the poor start to the quarter catches improved overall to produce numbers on a par with 2018 (fig 1).

Fig 1. GMS 2010 - 2019 Q2. Mean Quarterly Moth Numbers



Temperature and Catches

May started off cool everywhere with northerly winds and widespread frosts, putting paid to our apple blossom, and producing snow in parts of the Highlands of Scotland. The weather gradually warmed up towards the middle of the month until westerly winds brought cooler more changeable conditions to most areas, apart from the South and South East which remained very warm.

June started off warm with thundery showers in places until storm Miguel swept up from Spain producing heavy persistent rain and thundery showers in many areas. The latter half of the month was a mixture of weathers ranging from cold to warm, and wet to dry. Overall, June rainfall was 152% of the average and much of Lincolnshire, the Midlands and east Wales had well over twice the normal rainfall. The mean minimum temperatures for the quarter and the number of lightning strikes (thunderstorms) are shown in figures 2 & 3

Fig 2. Days of Mean Minimum Temperature for May & June 2019 (with permission of the Met Office)

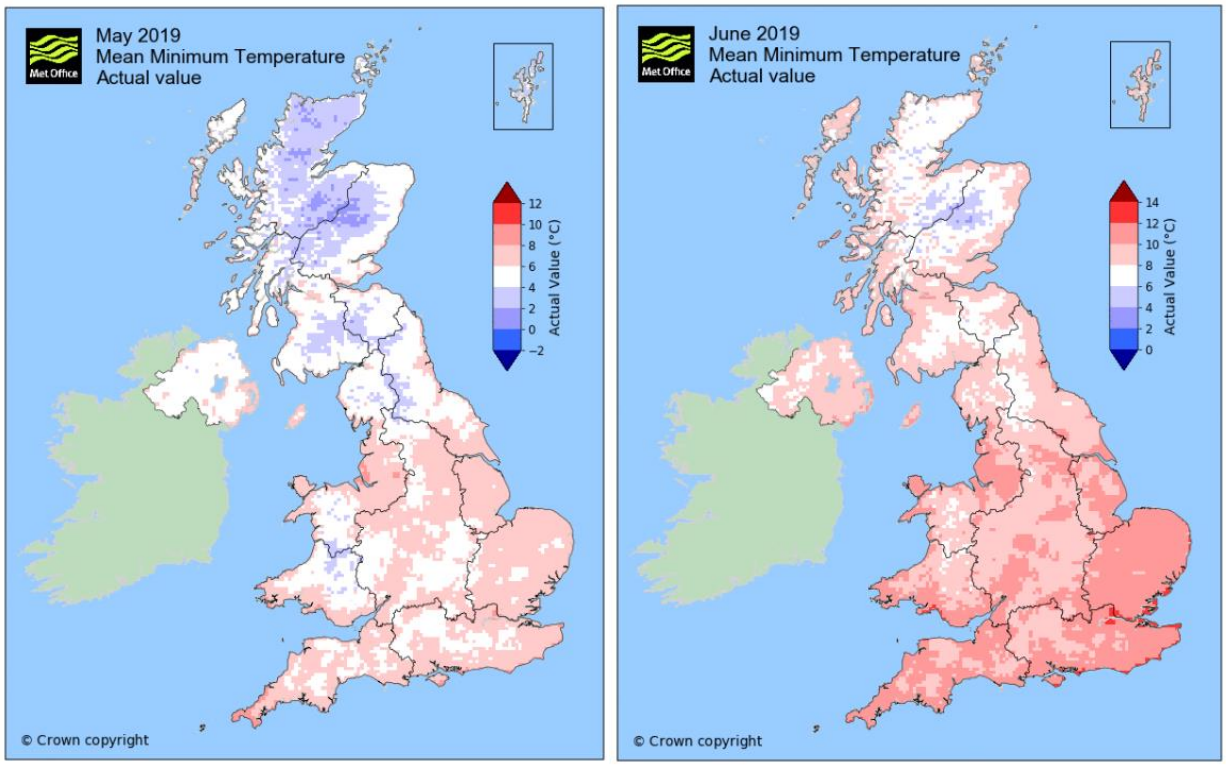
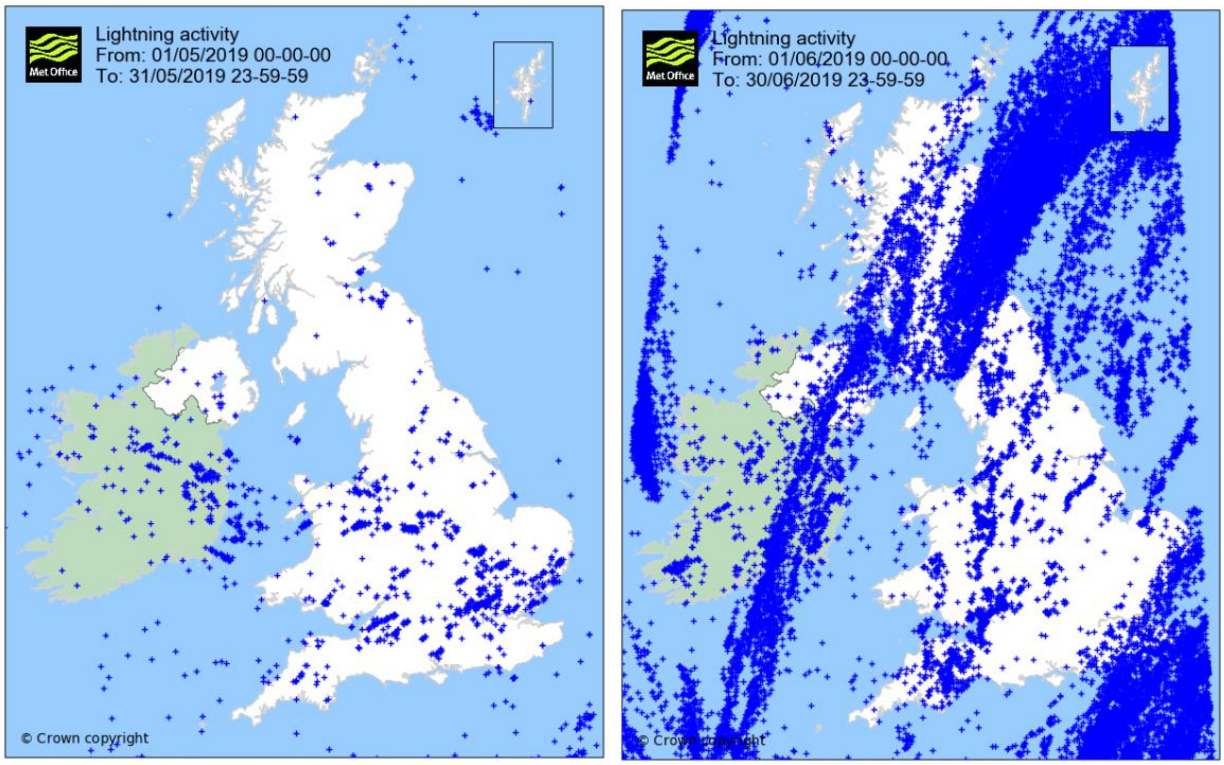
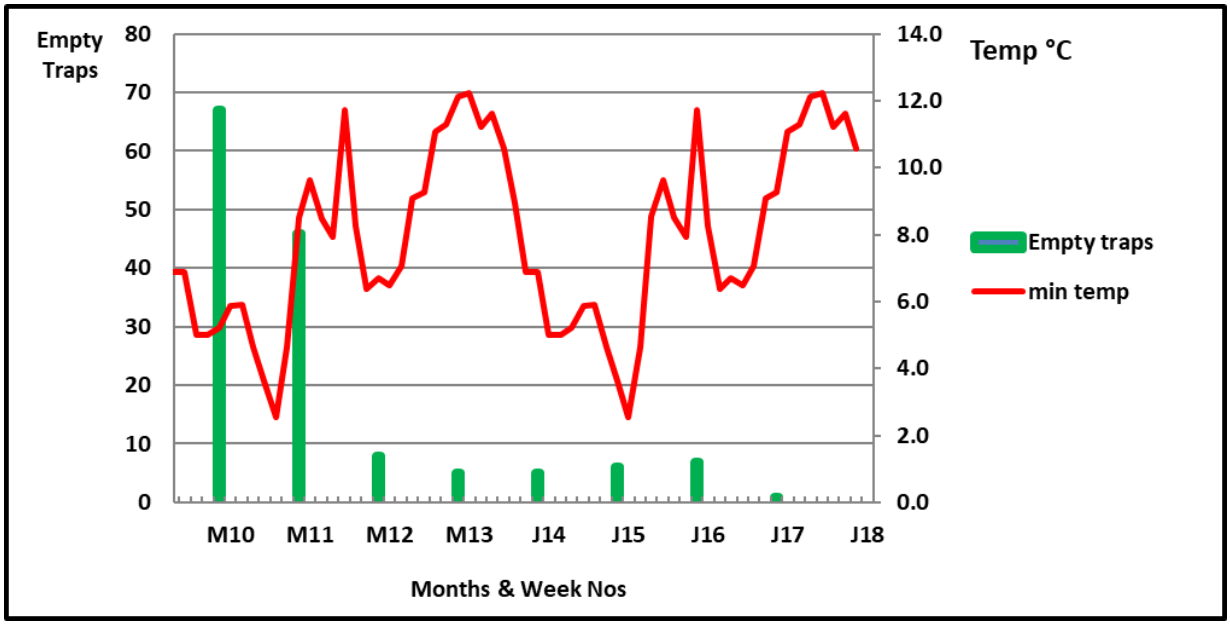


Fig 3. Days of Lightning Strikes for May & June 2019 (with permission of the Met Office)



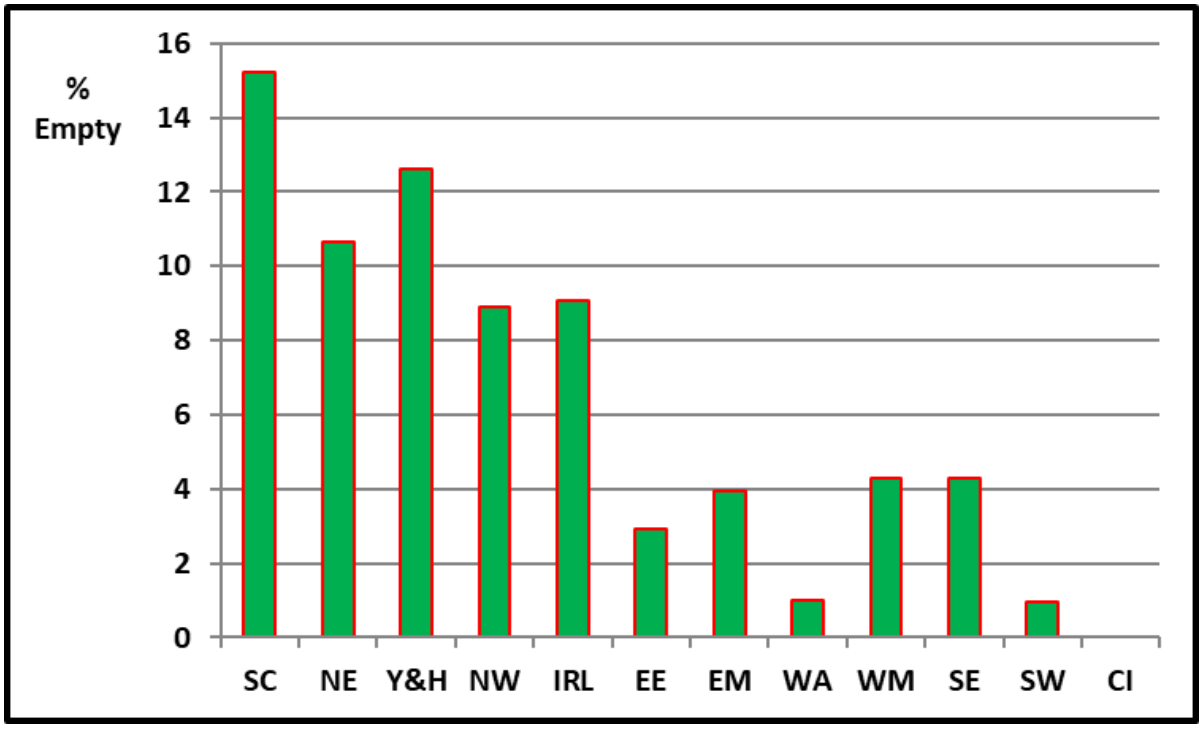
The cold nights in early May produced a large number of empty traps. Catches then improved apart from a brief spell in mid-June when temperatures returned to early May levels (fig 4).

Fig 4. GMS 2019 Q2. Average Minimum Temperature and Empty Traps



Almost all regions recorded empty traps, due possibly to prevailing weather conditions and low night-time temperatures (fig 5).

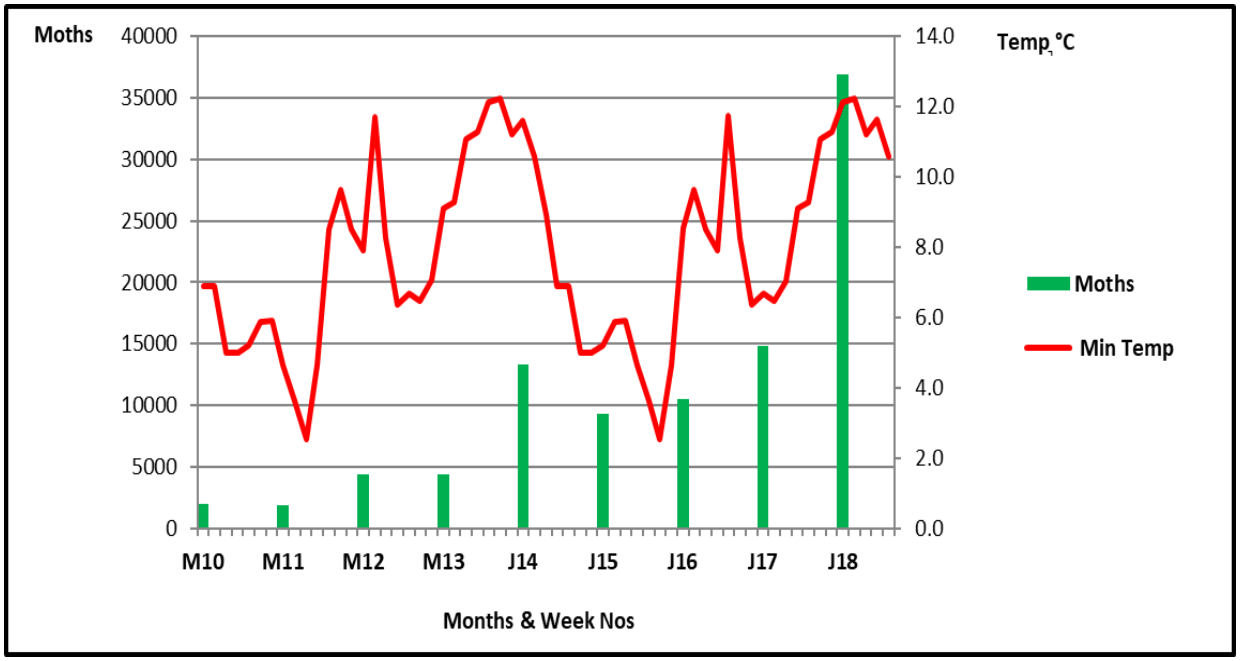
Fig 5. GMS 2019 Q2. Percentage Number of Empty Traps in Each Region



Total Traps	SC	NE	Y&H	NW	IRL	EE	EM	WA	WM	SE	SW	CI
	16	27	12	36	24	32	29	35	20	28	37	2

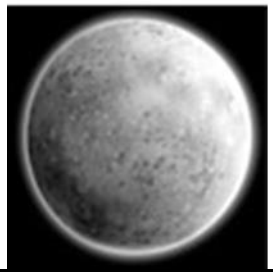
The catches for this quarter seem to show an almost classic correlation with the mean minimum temperatures rising and falling with the warm and cold nights (fig 6).

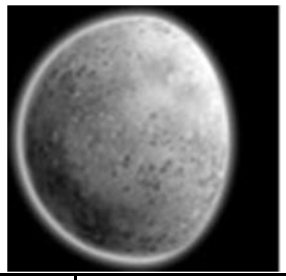
Fig 6. GMS 2019 Q2. Minimum Night Temperatures and Total Moths Caught



Night-time temperature can have a marked effect on the catches as shown in figure 7 which compares two successive weeks at our site in Mid Wales. A drop of about 7°C on the longest day produced the "shortest" catch.

Fig 7. GMS 2019 Q2. Comparison of Two Consecutive Weeks' Catches - Mid Wales

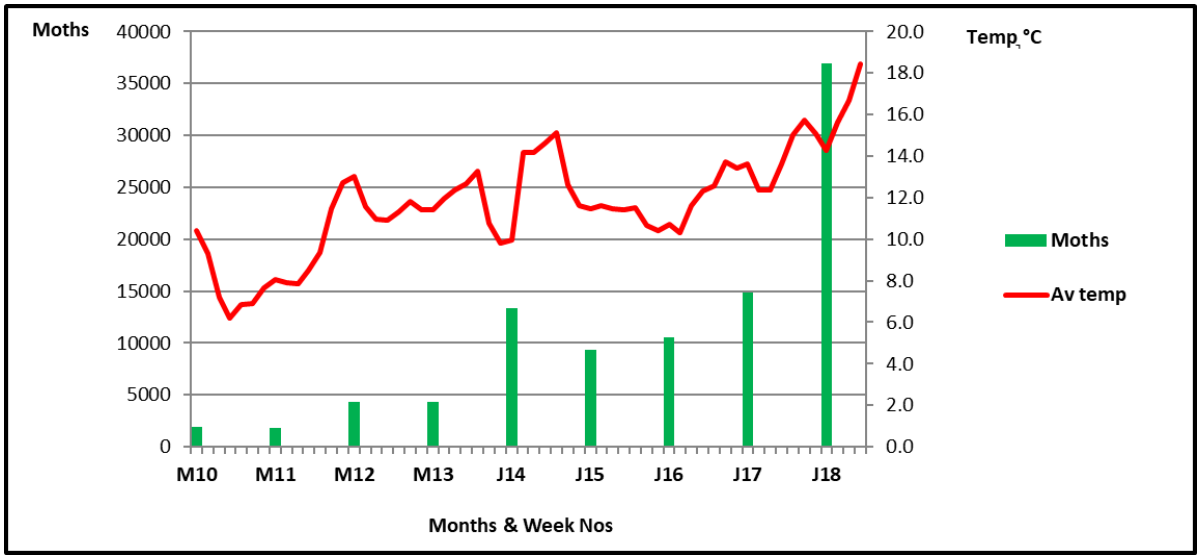




16/06/2019	Date	21/06/2019
Full Moon	Moon Phase	Gibbous Moon waning
95%	Moon visibility	82%
10.7°C	Min temperature	3.4°C
1.1 mph	Wind at 0000 hrs	1.1 mph
17	Species	1
62	Number of moths	1

While night temperatures may limit flying time, the daily average temperature may also have an effect on the life cycle by speeding up or slowing down emergences. Figure 8 shows the total number of moths flying at night compared to the daily average temperatures.

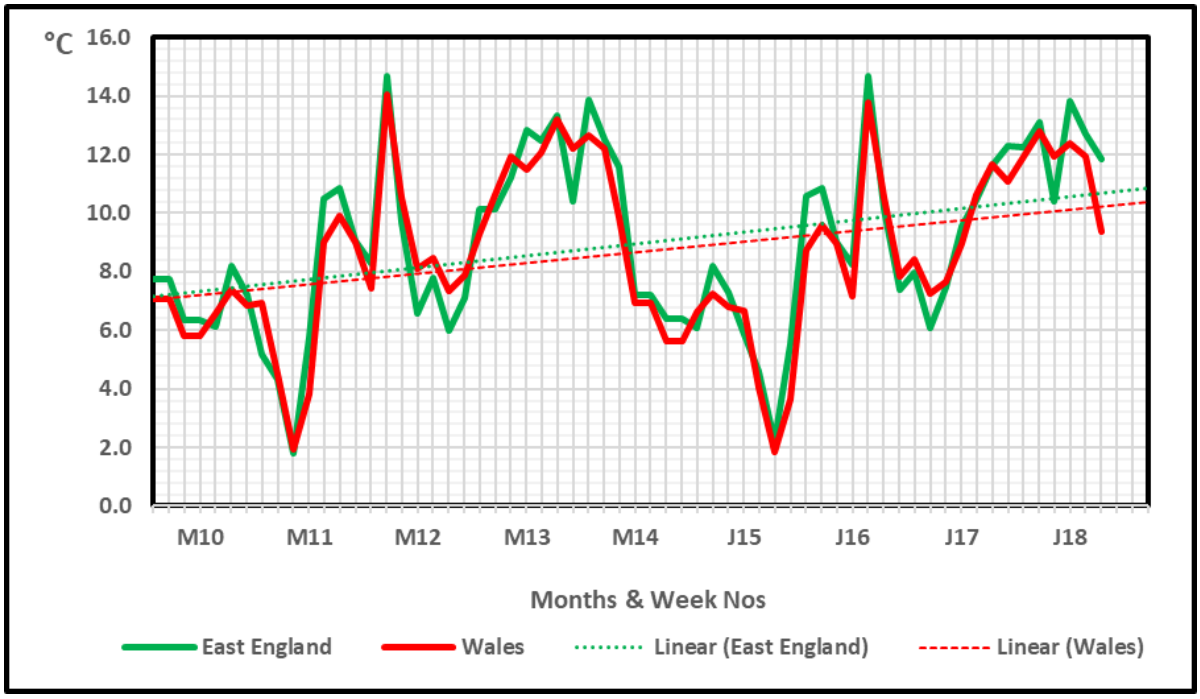
Fig 8. GMS 2019 Q2. Daily Average Temperatures and Total Moths Caught



Regional Comparisons

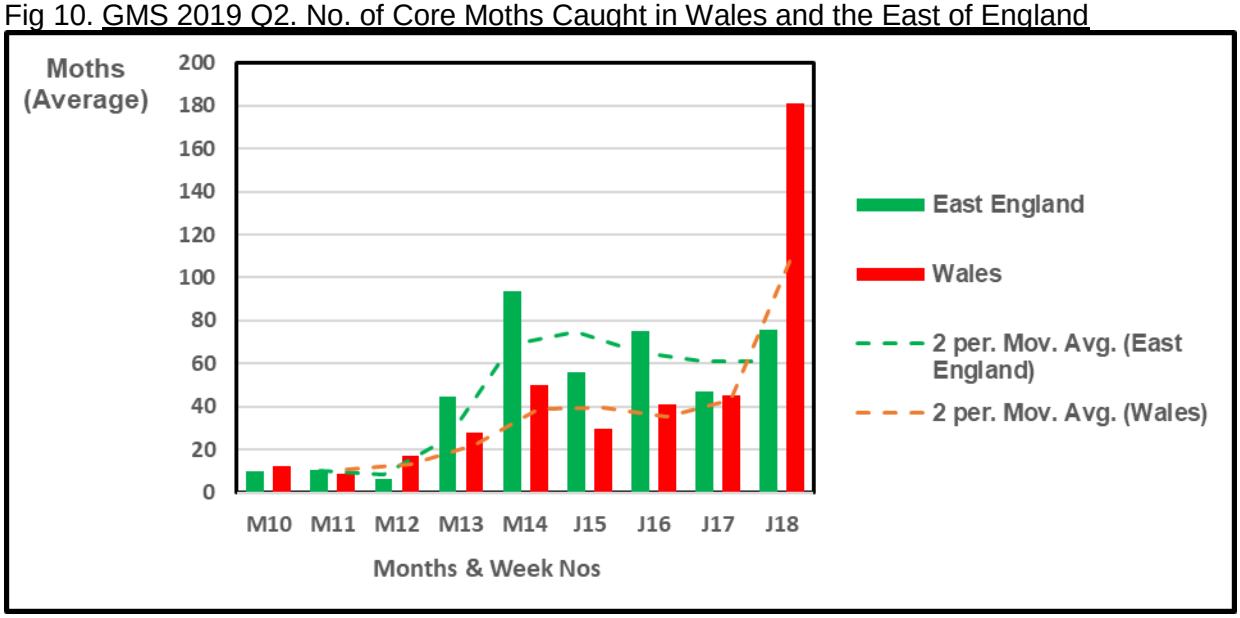
This quarter I compared Wales and the East of England to see if there were differences in temperature and moth catches. Wales receives warmer westerly winds and is buffered from the cold easterlies to which East of England is subjected; but even so when comparing average minimum temperatures there is surprisingly little difference between the two regions (fig 9).

Fig 9. GMS 2019 Q2. Minimum Temperatures in Wales and the East of England



Conversely, the number of core species caught in these regions demonstrated marked differences as shown in Figure 10. The “2 per mov av” on the chart is a way of smoothing out short term fluctuations to highlight longer term trends. It can be seen that at first they trade positions before week four when the East of England catches surge ahead. The final week shows a complete reversal with the Welsh catches taking the lead by over twice the number in the East.

Fig 10. GMS 2019 Q2. No. of Core Moths Caught in Wales and the East of England



Statistics

Comparing 2018 and this year there are many positive changes. While the Heart and Dart still retains first place, no doubt helped by its partial second-generation last year, the Dark Arches moves upwards from 21st to 2nd place and Treble Lines from 10th to 3rd position (table 1). Further down the column negative results begin appearing. These include Buff Ermine, Flame Shoulder, White Ermine and Brimstone Moth. All these catches are averaged by the total number of recorders in order to create a level platform so as to compare different years, but this can be slightly misleading as not every recorder catches all moths. Therefore, the final two columns (Catching Frequency) show a different perspective by calculating the number of sites each species was caught at least once. For both the Heart & Dart and the Dark Arches they were recorded at fewer sites so the catches per site must have been greater than in 2018.

Table 1. GMS Q2 2019 – Top 20 Core Species

Position		Top 20 Species	Mean Per Trap			Catching Frequency	
2018	**2019**		**2018** 357 Gardens	**2019** 303 Gardens	Change	**2018**	**2019**
1	**1**	Heart and Dart	45.9	79.2	33.3	318	292
21	**2**	Dark Arches	4.9	16.7	11.8	243	254
10	**3**	Treble Lines	6.8	13.6	6.8	162	176
20	**4**	Large Yellow Underwing	5	10.7	5.7	279	207
11	**5**	Garden Grass-veneer	6.5	10.7	4.1	217	260
8	**6**	Light Brown Apple Moth	7.1	8.2	1.1	220	215
4	**7**	Marbled Minor agg.	8.4	7.7	-0.7	273	234
26	**8**	Diamond-back Moth	3.2	7.4	4.1	152	153
3	**9**	Uncertain/Rustic agg.	8.4	7.3	-1.2	213	191
36	**10**	Shuttle-shaped Dart	2.6	7	4.5	178	219
12	**11**	Riband Wave	6.4	6.8	0.3	265	230
18	**12**	Set Hebrew Character	5.4	6.2	0.8	167	162
62	**13**	Vine's Rustic	1.4	5.4	4	90	116
7	**14**	Brimstone Moth	7.2	4.9	-2.2	295	244
6	**15**	White Ermine	7.8	4.6	-3.3	256	193
5	**16**	Flame Shoulder	7.9	4.4	-3.4	279	213
40	**17**	Common Swift	2.3	4.2	1.9	158	158
2	**18**	Buff Ermine	9.9	4.1	-5.8	267	188
16	**19**	Hebrew Character	5.5	3.9	-1.6	241	179
23	**20**	Willow Beauty	3.4	3.8	0.4	225	187

A regional comparison is shown in Table 2 where the top 10 moths are compared. As to be expected the Heart and Dart dominates all the regions apart from the Channel Islands where it is superseded by the Shuttle-shaped Dart.

Table 2. GMS 2019 Q2. Top 10 Regional Species

Scotland (16)	Mean	North East (27)	Mean	North West (40)	Mean
Heart and Dart	26.1	Heart and Dart	17.7	Heart and Dart	46.5
Light Brown Apple Moth	13.6	Diamond-back Moth	13.3	Dark Arches	16.2
Hebrew Character	9.2	Hebrew Character	6.2	Riband Wave	7.4
Garden Grass-veneer	8.2	Common Swift	5.9	Large Yellow Underwing	6.2
Diamond-back Moth	7.4	Shuttle-shaped Dart	4.0	Light Brown Apple Moth	5.2
Clouded-bordered Brindle	6.3	Silver-ground Carpet	3.5	Flame Shoulder	5.0
Silver-ground Carpet	5.0	Buff Ermine	3.1	Ingrailed Clay	4.6
Elephant Hawk-moth	3.9	Dark Arches	3.1	Garden Grass-veneer	4.6
Brimstone Moth	3.6	Lt Brown Apple Moth	3.0	Bee Moth	4.2
Marbled Minor agg.	3.4	Brown Rustic	2.8	Marbled Minor agg.	3.9
Yorks & Humber (12)	Mean	Ireland (24)	Mean	East of England (32)	Mean
Heart and Dart	41.3	Heart and Dart	46.5	Heart and Dart	129.7
Diamond-back Moth	10.8	White Ermine	15.3	Treble Lines	43.8
Garden Grass-veneer	9.3	Garden Grass-veneer	13.9	Dark Arches	19.8
Dark Arches	8.6	Lt Brown Apple Moth	10.9	Turnip Moth	18.5
Large Yellow Underwing	7.8	Small Square-spot	9.7	Set Hebrew Character	17.0
Light Brown Apple Moth	5.9	Brimstone Moth	9.7	Marbled Minor agg.	16.8
Shuttle-shaped Dart	5.4	Muslin Moth	8.5	Shuttle-shaped Dart	16.6
Set Hebrew Character	4.6	Buff Ermine	7.8	Vine's Rustic	14.6
Common Swift	4.5	Mottled Beauty	7.5	Large Yellow Underwing	12.4
Marbled Minor agg.	4.5	Flame Shoulder	7.0	Common Swift	11.5
East Midlands (29)	Mean	West Midlands (20)	Mean	Wales (35)	Mean
Heart and Dart	109.6	Heart and Dart	61.5	Heart and Dart	118.1
Dark Arches	35.4	Dark Arches	21.2	Treble Lines	21.0
Set Hebrew Character	20.1	Garden Grass-veneer	14.4	Garden Grass-veneer	18.5
Diamond-back Moth	16.8	Treble Lines	12.1	Dark Arches	16.2
Light Brown Apple Moth	15.3	Uncertain/Rustic agg.	11.5	White Ermine	11.7
Uncertain/Rustic agg.	13.6	Lt Brown Apple Moth	10.4	Large Yellow Underwing	10.7
Vine's Rustic	11.4	Marbled Minor agg.	10.3	Flame Shoulder	10.3
Marbled Minor agg.	9.7	Shuttle-shaped Dart	7.5	Buff Ermine	10.1
Large Yellow Underwing	8.9	*Crambus pascuella*	6.8	Hebrew Character	10.0
Garden Grass-veneer	8.9	Brimstone Moth	6.8	Riband Wave	9.7
South East (28)	Mean	Southwest (38)	Mean	Channel Islands (2)	Mean
Heart and Dart	98.1	Heart and Dart	109.2	Shuttle-shaped Dart	69.0
Dark Arches	16.7	Lge Yellow Underwing	35.8	Vine's Rustic	38.0
Garden Grass-veneer	15.6	Dark Arches	24.9	Marbled Minor agg.	38.0
Treble Lines	12.1	Treble Lines	24.3	Rusty-dot Pearl	37.0
Uncertain/Rustic agg.	12.1	Garden Grass-veneer	13.1	Large Yellow Underwing	37.0
Light Brown Apple Moth	10.8	Uncertain/Rustic agg.	12.2	Heart and Dart	27.5
Marbled Minor agg.	9.0	Riband Wave	11.8	Dark Arches	23.0
Shuttle-shaped Dart	8.8	Shuttle-shaped Dart	11.2	Brimstone Moth	20.5
Crambus pascuella	7.9	Vine's Rustic	11.0	Buff Ermine	18.5
Brimstone Moth	6.7	Marbled Minor agg.	9.6	Light Brown Apple Moth	15.0

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 ranges between 2 and 40 while the trapping effort (moth trap nights) is remarkably consistent (Table 3). Trapping consistency is also commendably high suggesting that our GMS records are 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.

Table 3. GMS Q2 2019 – Regional Statistics

Region	Gardens	Moths	Moths	Moths		Moth Trap Nights		
		Total	Mean	Min	Max	Possible	Actual	Percent
SC	16	2962	185	43	469	144	138	96
NE	27	3558	132	35	278	243	225	93
Y&H	12	2314	193	40	376	108	95	88
NW	40	8099	202	10	495	360	335	93
IRL	24	8301	346	13	1242	216	209	97
EE	32	16426	513	90	1546	288	275	95
EM	29	12432	429	37	996	261	254	97
WA	35	14705	420	52	1491	315	298	95
WM	20	5603	280	96	680	180	164	91
SE	28	9558	341	74	820	252	234	93
SW	38	17678	465	71	1015	342	324	95
CI	2	1719	859.5	619	1100	18	17	94

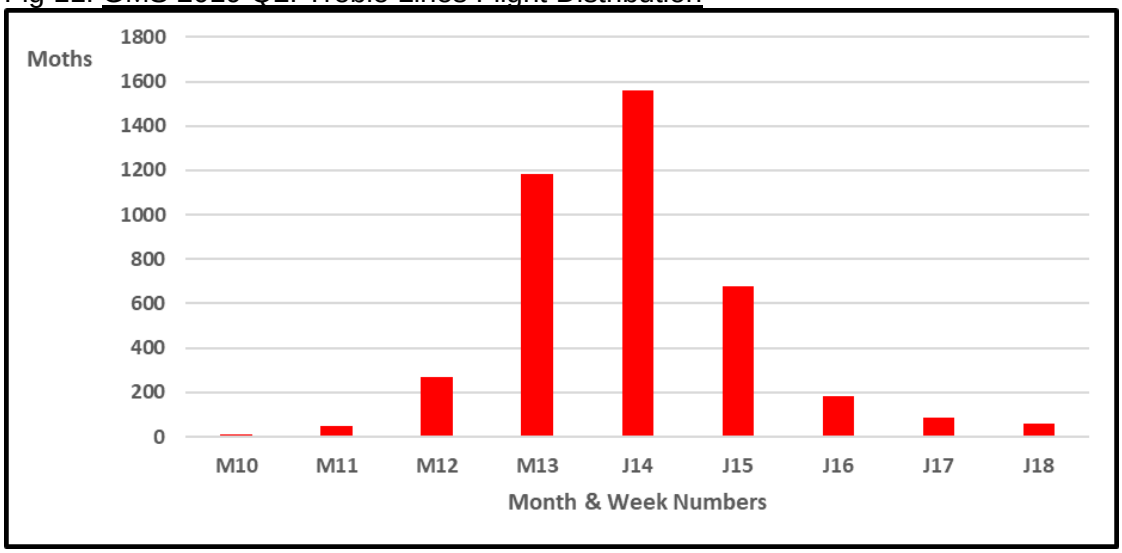
Night?	Tues	Wed	Thurs	Fri	Sat	Sun	Mon
Days	58	199	461	1340	331	123	40
Percent	2	8	18	53	13	5	2

Treble Lines

The Treble Lines was in third place this quarter (Table 1). To get to this position meant that it must have appeared in large enough numbers to get a high average despite many northern recorders never seeing this moth. The Treble Lines *Charanycha* (nightly delights) *trigrammica* (three lines) has a suitably explicit vernacular name as it has three broad lines crossing the wings.

The larvae feed on a wide range of herbaceous plants and are found in open woodlands, pastures and hedgerows, living underground and chewing through the stems at ground level. It overwinters either as a larva or as a pupa avoiding the worst of the winter conditions
The flight season is in May and June (fig 11).

Fig 11. GMS 2019 Q2. Treble Lines Flight Distribution



The GMS records from 2010 – 2019 show that from 2015 there is a slow northerly spread to the North West, Yorkshire & Humberside and East Midlands, but its presence in the North East and Scotland has not yet been recorded (Table 4a). Since I wanted to look at a species which not everyone caught in every region, I have only used the mean of the number of successful recorders instead of the usual number of regional recorders submitted this quarter to show its percentage distribution throughout the GMS region (Table 4b).

Table 4a. GMS 2019 Q2. Regional Distribution of Treble Lines 2010 – 2019

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
SC	0	0	0	0	0	0	0	0	0	0	
NE	0	0	0	0	0	0	0	0	0	0	
NW	0	0	0	0	0	0	27	11	2	2	
Y&H	0	0	0	0	0	5	19	5	9	10	
EM	0	0	0	0	0	5	9	3	5	11	
WM	11	17	12	28	20	20	18	16	29	47	
EE	8	17	6	17	19	4	6	6	6	12	
WA	12	15	11	3	10	12	15	8	18	24	
IRL	8	25	10	7	9	11	6	8	17	19	
SE	14	22	9	6	13	11	12	11	11	18	
SW	18	30	18	18	15	18	18	11	14	27	
CI	0	0	0	0	0	0	0	0	0	0	

Table 4b. GMS 2019 Q2. Number of Treble Line Sites per Region

Regions	SC	NE	Y&H	NW	IRL	EE	EM	WA	WM	SE	SW	CH
Treble Rec.	0	0	2	10	4	30	18	30	13	26	34	0
Total Rec	16	27	12	40	24	32	29	35	20	28	38	2
%	0	0	17	25	17	94	62	86	65	93	89	0

Down my Way *(Conclusion) by David Baker*

The Hymenoptera form a group of some 7,500 species with two pairs of wings, but with the hind-wings usually markedly smaller than the forewings. One of the groups which I collect in order to send away to a local “expert” for records purposes are the Ichneumon Wasps, a very varied group not always easy to identify. I try to photograph them and show three images here as representative specimens found in our gardens. The fourth in the sequence shows one of the Sawflies, in this case the Turnip Sawfly, Athalia rosae.

Heteropelma amictum

Ophion luteus

Dusona falcator

Athalia rosae (Turnip Sawfly)

Now, I believe that everyone running a moth trap must find a good number of Common Wasps during the summer season. At times they are, to me, a positive nuisance. However, its larger relative, the Hornet, is only a very infrequent visitor but none the less is also not welcome.

Common Wasp *Vespa vulgaris*

Hornet *Vespa crabro*

One group of “Flies” I bypassed in the list are the Ephemeroptera or Mayflies. Not true flies and some of the species lack hind-wings, as does the one in first image, the Pond Olive. The second, Green Drake, has small hind-wings and dark patches on the larger fore-wings. As the family name implies the Ephemeroptera are very short lived dispersing their eggs as soon as possible after mating, following which they soon die. I appear to have been fortunate enough to have photographed them whilst still searching for some suitable watery area.

Pond Olive Mayfly *Cloeon dipterum*

Green Drake Mayfly *Ephemera danica*

These two short accounts of my efforts at commenting on some aspects of insect life in my patch have left me with the thought that many of you have also experienced visits by species other than Lepidoptera. I would encourage you to look closer and even take photographs of as many as possible. As a retired “old codger” I do realise that time is not always readily available to people carrying out a full working life but, believe me, it is both pleasurable and educational.

Common Wasps *Vespa vulgaris*

Common Frog *Rana temporaria*

As a parting shot I finish with a pair of Common Wasps found on my garden steps in late October 2018. It may seem a bit voyeuristic but the Queen is presumably preparing for her next year’s brood which, no doubt, will annoy me again in 2019, and beyond? Perhaps I should have asked for the help of Cyclops, my one-eyed frog ??

Moth Recording – The Life of a Beginner by Richard Cowen

I have no ecological training (I was a lawyer by profession) but I have been recording various wildlife for some years now, at least since my retirement from work in 2010. As a keen member of Durham Bird Club, I have considered it essential to know where our birds are. This does not just help to identify trends but can also be used to draw to attention when planning applications are made which may affect important habitats.

This then developed to include sending records to the Environmental Records Information Centre (ERIC). I widened my interest to include flowers and realised what a steep learning curve I had set myself. Then, last year, I received an email from Paul Stevens of ERIC, asking if I was interested in taking part in the Garden Moth Scheme.

The challenge sounded interesting so I decided I would apply. I described my garden, not I think a standard one. I live in a rural area near to Bowburn in county Durham, about 4 miles south of Durham City. We have planted a number of trees, have various water features and are next to open fields – indeed altogether we have about 5 acres of land ourselves. After a while, I heard from Mike Cook that my application was successful and I went to collect my trap. Supplied by ERIC, it is a Skinner trap with a 40 W Actinic lamp. I have placed it near to our wooded area and close to the fountain.

For all my interest in wildlife, I realised I knew very little about moths. I had no idea just how many species there are and the split between macro and micro moths. But I quickly realised that I was setting myself a stiff task to identify species caught.

Of course, all started quietly. The number of moths at the beginning of the season is fairly limited. Even so, I had to have help to identify the Quakers, but felt confident when I trapped my first Hebrew Character. The shape on the wing is such a give- away with this one. And some weeks, my trap was in fact empty, disappointing but makes identification easy.

Then gradually, as the year progressed, things got more interesting, for want of a better word. I have never had the numbers some people record but numbers both of individuals and species began to increase noticeably. Add to that that many moths are more lively as the year progresses. For a novice, identification becomes more difficult.

This of course is where the county moth recorders come in. Assuming you are able to get a reasonable photograph, they prove invaluable in identification of the species. At this stage, you realise that there are so many moth species that trying to find the right one in among 1,000 others is a challenge. Of course, the general shape (is it flat or tent shaped) gives a start but there are still numerous in each of the various shapes. And of course, some species are so similar that only microscopic identification is possible. One begins to think that identifying butterflies, with some 60 species for the whole country, should be easy!

Some of the English names are interesting too. When you are a novice, you wonder if, say, a Spectacle is a common moth or not. Gradually, one starts to realise what are the more common moths, the ones you may expect to find. But it does take time, and a lot of help from others more experienced.

But I have found this first year of moth recording rewarding. I may still regard birds as my primary interest, but moths have certainly taken a firm hold of my interest. And my 7 year old grandson loves to help me set up the trap and look at the “catch” in the morning when he is here – even if it does not help in the process of identification!

When I trapped a couple of hawk moths, poplar and elephant, I wanted to show them to all. Even the Brimstone Moth, common though it may be, looks special. My first White Ermine stood out and then later a Yellow-tail, made me realise the variety in moths. And then a Light Emerald, or a Wave or Carpet moth make you realise the full variety of shapes, sizes and colour. Some I look at and think “this should be easy to identify”, only to realise then that it isn’t. But sometimes I surprise myself and find the species quite quickly. And often, I need that help from others.

No, I have not trapped the numbers and variety I have seen others record. I am not sure I would succeed in identifying them all if I did. But it has opened my eyes to what is there, flying around at night, that we all miss during the day. And they do not all eat clothes, tapestries or wallets!

However, I do like to think what we all use the records for. They do of course provide a personal record as to what we find in our gardens or neighbourhood, itself a worthwhile cause. Perhaps more importantly, they help identify trends - are long established species moving away, are new species moving in? Only by keeping records over a period of years will we know this.
I do comment on planning applications on a regular basis and, if a development is proposed on a site that is of interest from a Bird Club point of view, consider writing to draw this to attention. I have never seen a planning application where moths feature. Perhaps it is not possible to consider this as a relevant planning consideration, but as biodiversity becomes more and more relevant, I wonder if this is something that needs consideration. Are there sites where moths are so important that there is a need to consider them if development is proposed nearby?

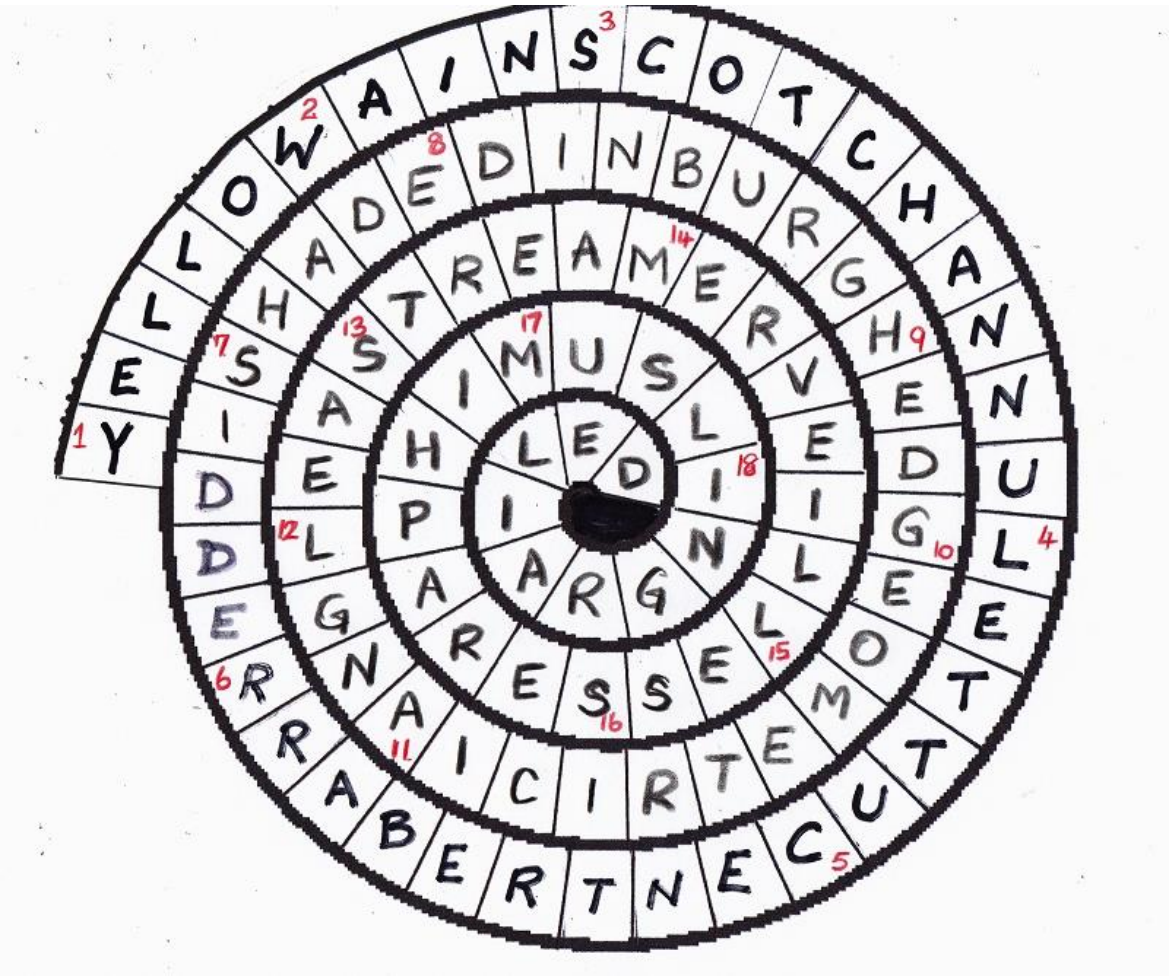
And so to the ultimate question. I have started trapping as part of the Garden Moth Scheme this year. Do I intend to continue? I think the answer is obvious. I may have a long way to go to be expert in this field, but I intend to try to get there. So, the answer is yes, I do. I don’t think my grandson would forgive me if I did not.

Word Search by Nonconformist

Words forming all, or part, of the Common Names of our British Macro-moths can be found in this maze. They can be Horizontal, Vertical or Diagonal and in any direction. See how many you can find! At least 60 I hope! (*I found 60 eventually plus a couple that are there twice but Nonconformist tells me there actually 62 - Ed)*

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

Moth Spiral No 2 Answers by Nonconformist



Tailpiece

Please spare a thought for your newsletter editor slaving away over a hot computer and wondering if anyone will actually read the finished product. So if you do get this far, perhaps you might consider dropping me a line, even if it's just to say hi! Better still, you might let me know which bits you like, or suggest how we could make it better. Contact me at the usual 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 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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