GMS News

Spring 2020

Weeks 1-9

Contents

Editorial – Norman Lowe

I'm afraid that I have to start with the effects of coronavirus and the current lockdown. Although it has focussed attention on our gardens and perhaps made us appreciate them more than ever it has also prevented us from doing so many things. And important to us, but tiny in the grand scheme, we had to cancel our 2020 Annual Conference. Hopefully we can arrange it for next year. Or maybe we could have a webinar?

We start with Evan's usual roundup in which he describes a general downturn compared with 2019. He then compares two areas, Eastern England and Wales, which while being at a similar latitude have quite different weather. He also takes a look at the very variable Clouded Drab, which seems to have had a particularly poor year.

Don Matthews then asks the question that we all want answering – do moths like daffodils? This turns into a debate on correlation and causation, or "do you believe in coincidence?". This is followed by some very good advice from Mark Pewtress on how to adapt your Skinner trap to cope successfully with bad weather.

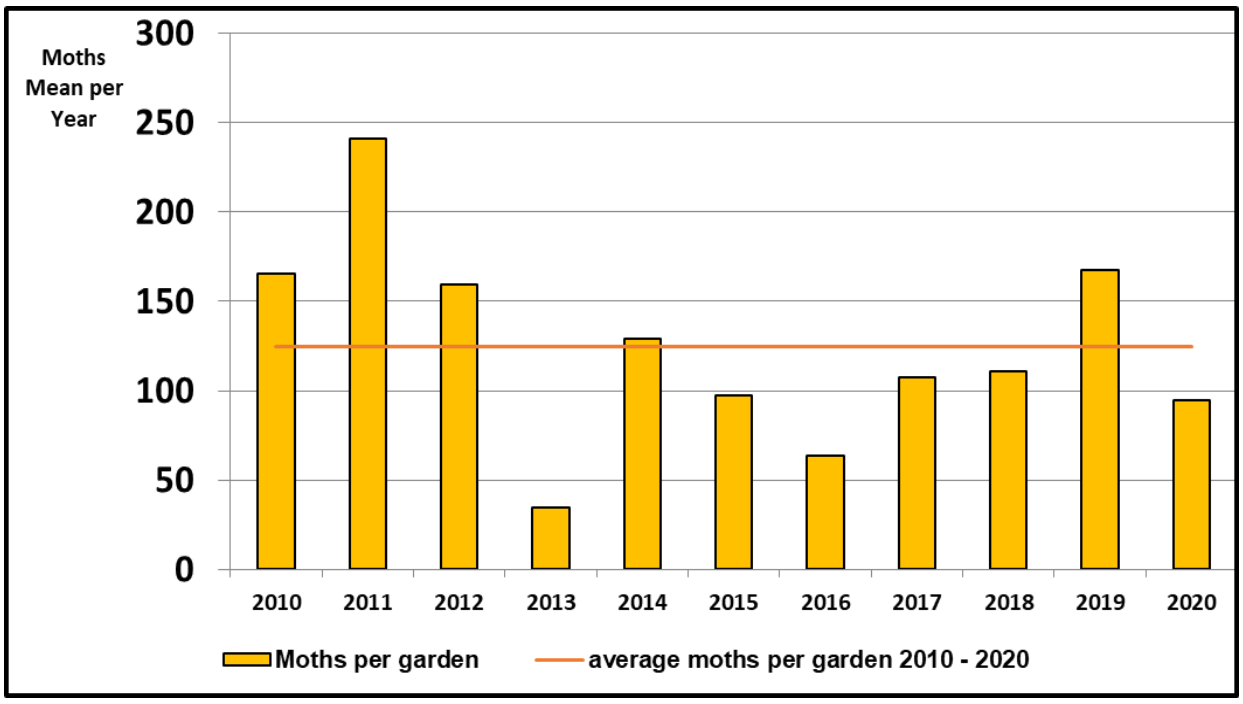
And we finish our articles with the puzzle section, this time featuring Moth Spiral No.3

Overview GMS 2020 1st Quarter – Evan Lynn

Before writing this report I had a premonition that moth numbers would not be as high as last year's first quarter. My own catches had been poor and then Norman, in his Welsh report, mentioned that the numbers were well down compared to last year.

Yearly Comparisons
My fears were partially allayed when comparing this quarter with those since 2010 which showed some even worse years (Fig. 1) but, even then, they still show an apparent gradual decrease in moth numbers. Comparison solely with last year is interesting but gives little information on long term trends.

Fig 1. GMS 2010 - 2020 Q1. Mean Quarterly Moth Numbers

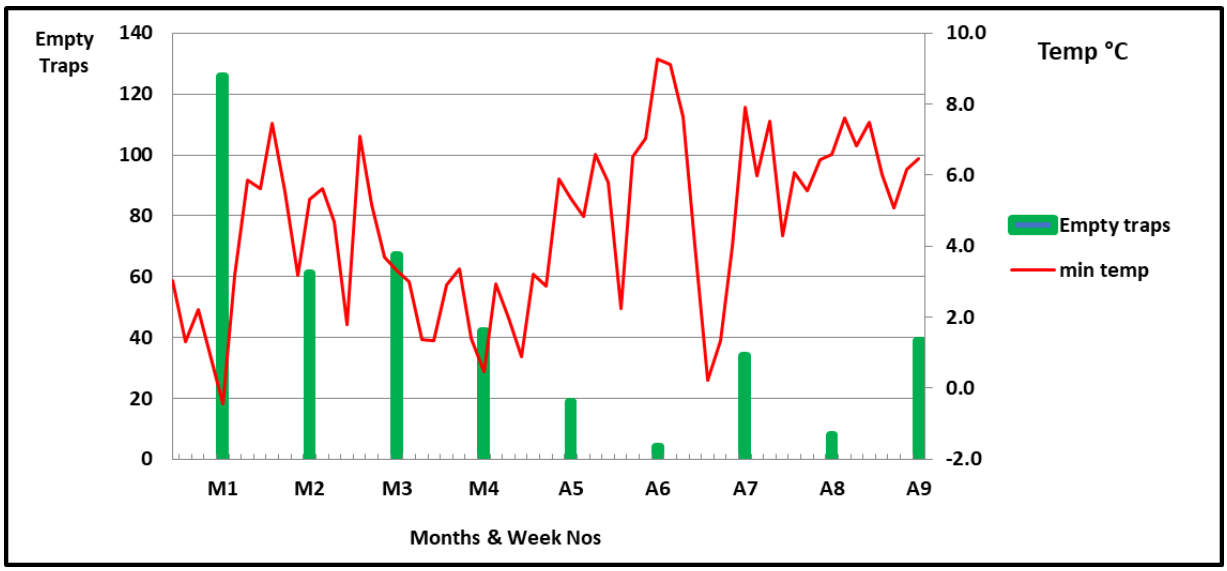


Following on from one of the wettest February months on record, March came in like a lion. After a period of windy, showery weather it became more settled as the jet stream moved southwards allowing high pressure to dominate. However, Scotland was the exception with over 100 mm of rain falling on Skye in the middle of March.

The weather continued to improve in April with many areas experiencing long periods of low rainfall and sunny weather. There were of course some extremes with 38 mm of rain falling on Portsea, Hampshire on the 18th and temperatures dropping to -7°C in Aberdeenshire on the 19th.

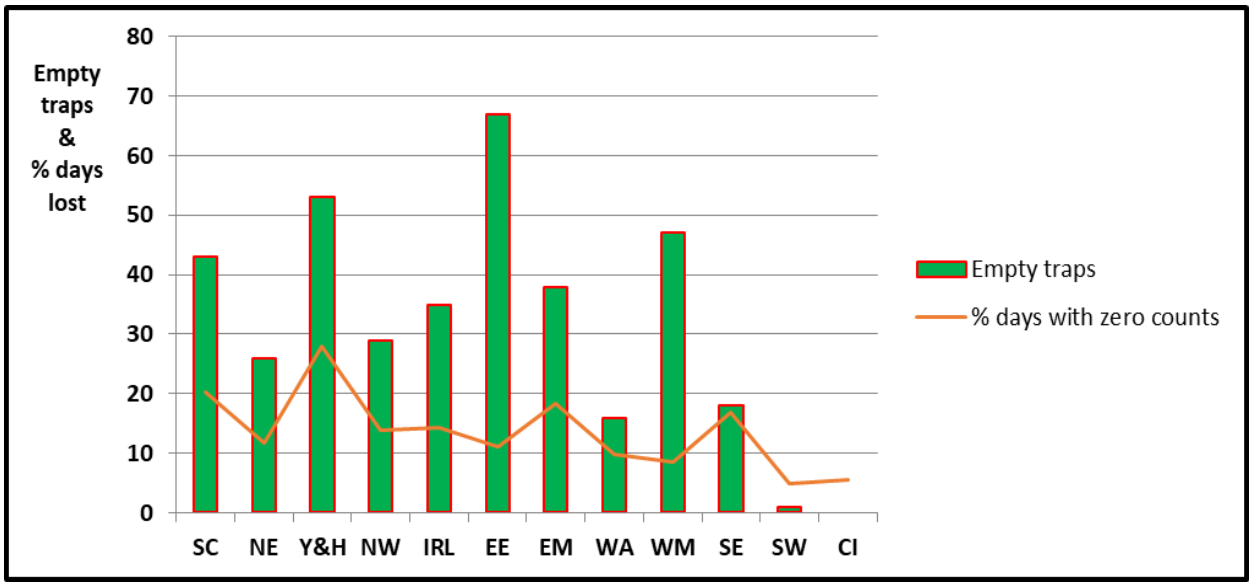
Inevitably, the initial low temperatures resulted in a high number of empty traps (Fig. 2) which gradually dropped until Week 7 when the temperatures plummeted again and then again in Week 9 following a smaller dip before temperatures rose in May.

Fig 2. GMS 2020 Q1. Average Minimum Temperature and Empty Traps



All regions suffered empty traps to some degree, due possibly to differing exposures to the wind and low night time temperatures. Figure 3 shows the number of empty traps and the percentage of days with zero counts in each region.

Fig 3. GMS 2020 Q1. Number of Empty Traps & Percentage of Days in Each Region



Interestingly Yorkshire and Humberside, although not in the top echelon for empty traps, appears to suffer the worst in percentage days with zero counts, but this is probably because they only have 16 recorders. Although there were empty traps throughout the whole quarter, week one was the worst (Table 1) and if the Channel Islands were affected then it must have been bad!

Table 1. GMS 2020 Q1. Weekly Number of Empty Traps in each Region

Week	SC	NE	Y&H	NW	IRL	EE	EM	WA	WM	SE	SW	CI
1	13	12	4	16	13	13	23	13	3	8	7	1
2	10	5	4	12	6	3	9	4	1	3	4	0
3	9	4	3	10	0	7	10	10	3	9	2	0
4	4	0	3	2	1	6	11	3	2	8	2	0
5	2	0	3	4	1	2	1	0	2	3	1	0
6	0	0	1	0	1	0	0	0	1	1	0	0
7	2	2	4	2	3	4	5	3	2	7	0	0
8	1	0	1	1	2	0	2	0	0	1	0	0
9	2	3	4	6	2	0	6	5	2	7	2	0

Perhaps these figures can be explained by the following Met Office charts showing days of ground frost and hours of sunshine for March and April (Figs. 4&5)

Fig 4. Days of Ground Frost for March & April 2020 (with permission of the Met Office)

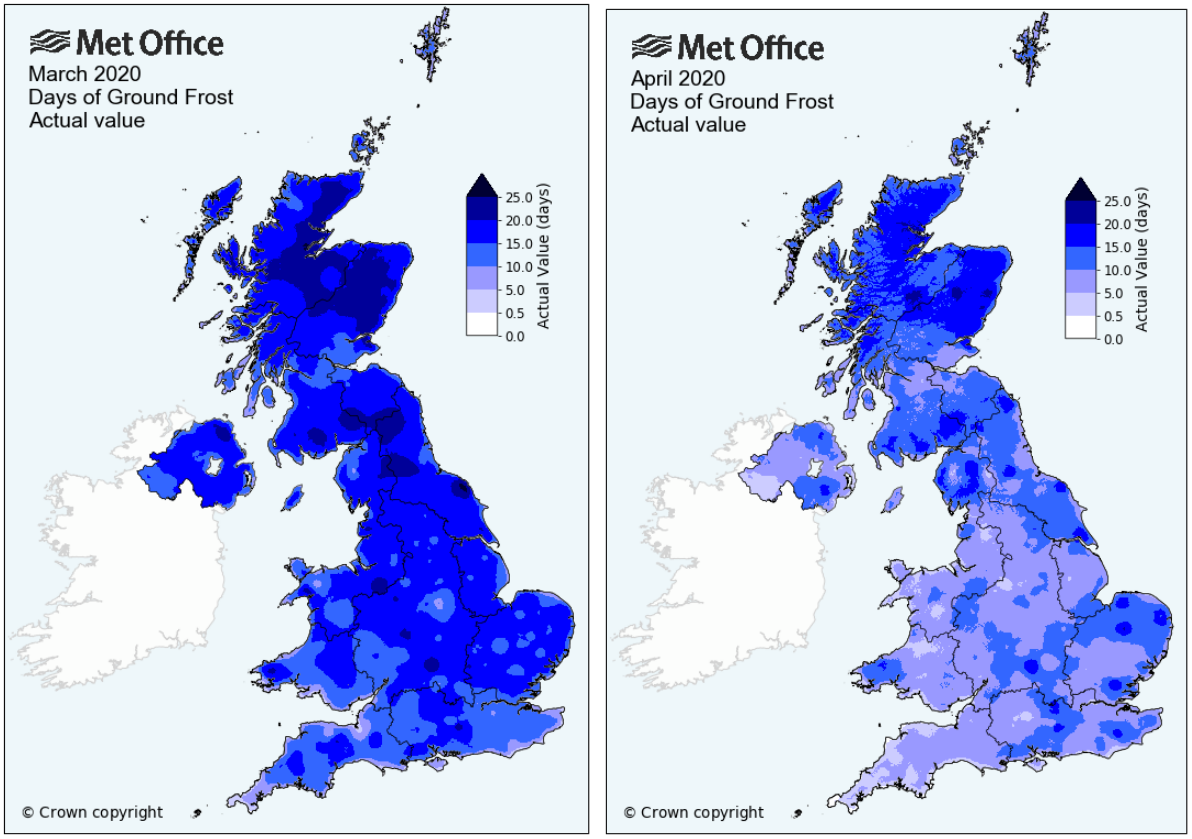
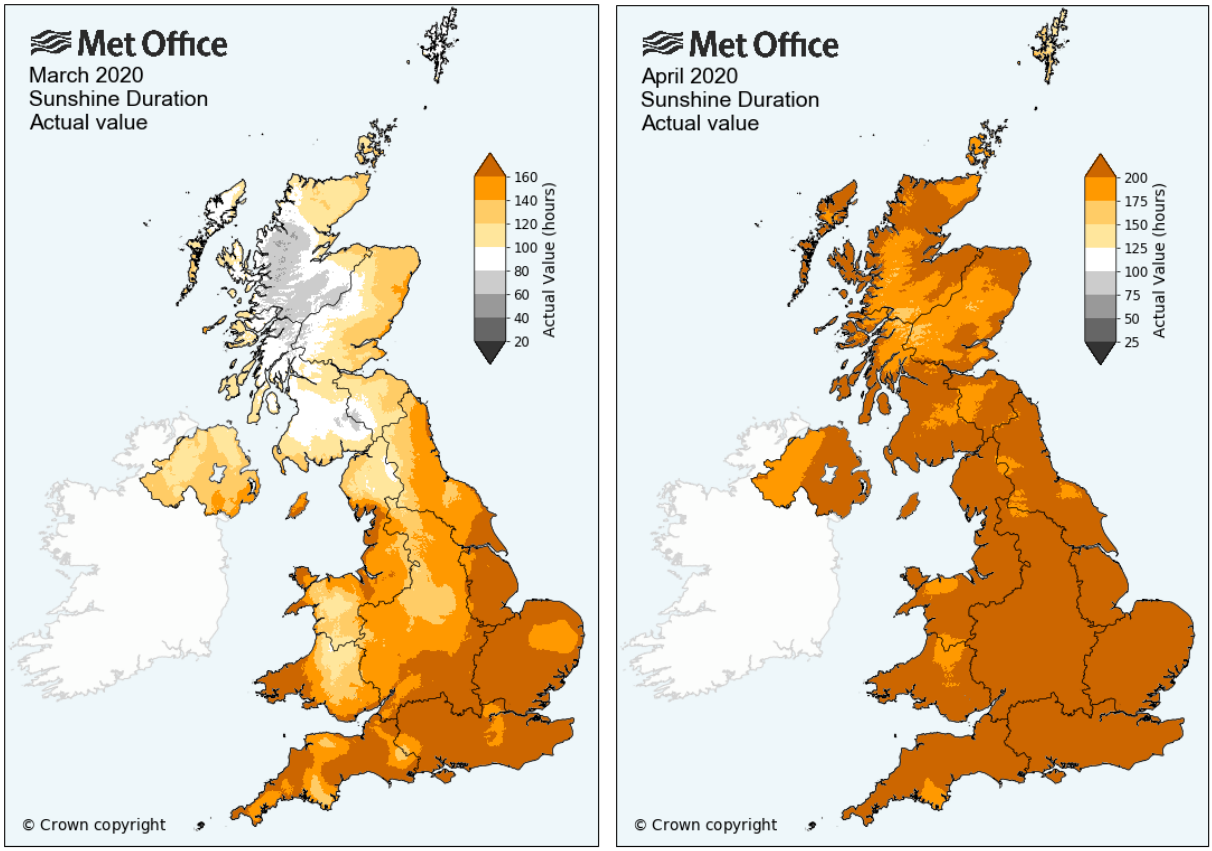


Fig 5. Hours of Sunshine for March & April 2020 (with permission of the Met Office)

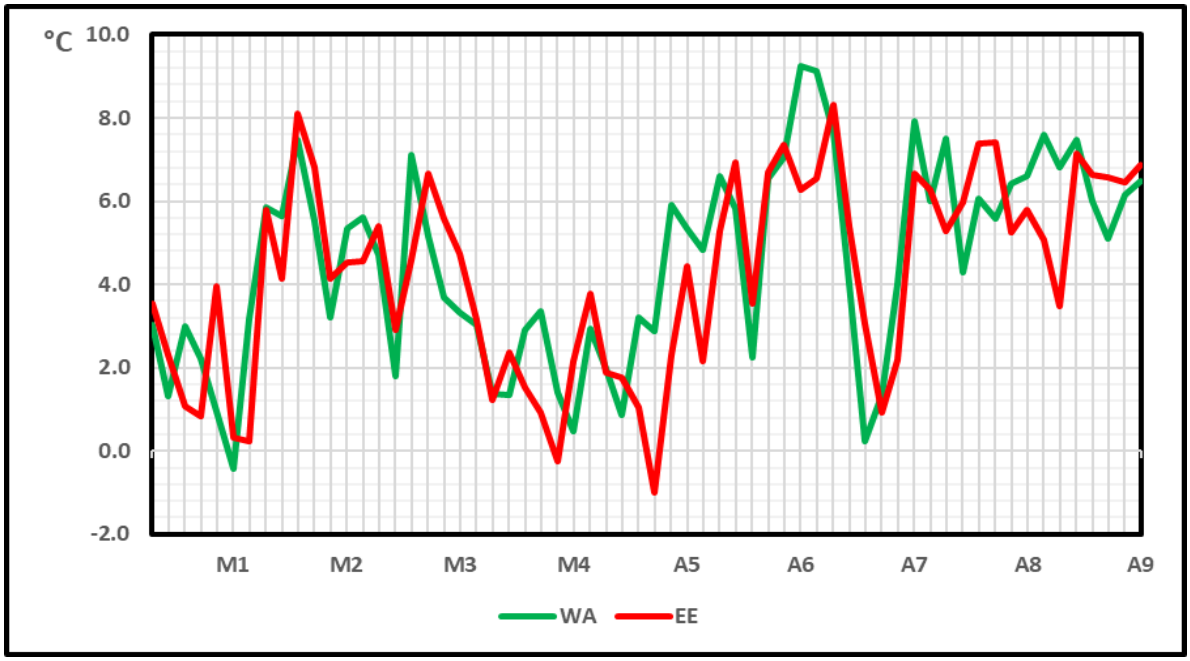


While many people have welcomed the lack of aircraft in the skies, please spare a thought for the meteorologists trying to produce accurate weather forecasts. Before the restrictions on aircraft movements, many atmospheric measurements, called AMDAR (Aircraft Meteorological Data Relay), were taken from commercial aircraft. These observations record the height, pressure, temperature, wind speed, wind direction and humidity of the air at various levels which are then fed into the computer models. The observations start at take-off and finish on landing while the cruising data records upper air measurements in remote locations where manual observations are impossible. Commercial shipping also plays a part by releasing air balloons at regular intervals. Satellites can monitor winds but are unable to sample temperature profiles etc. Therefore, if you have grumbled about some of the vagaries in recent weather forecasting, blame the virus!

Regional Comparison

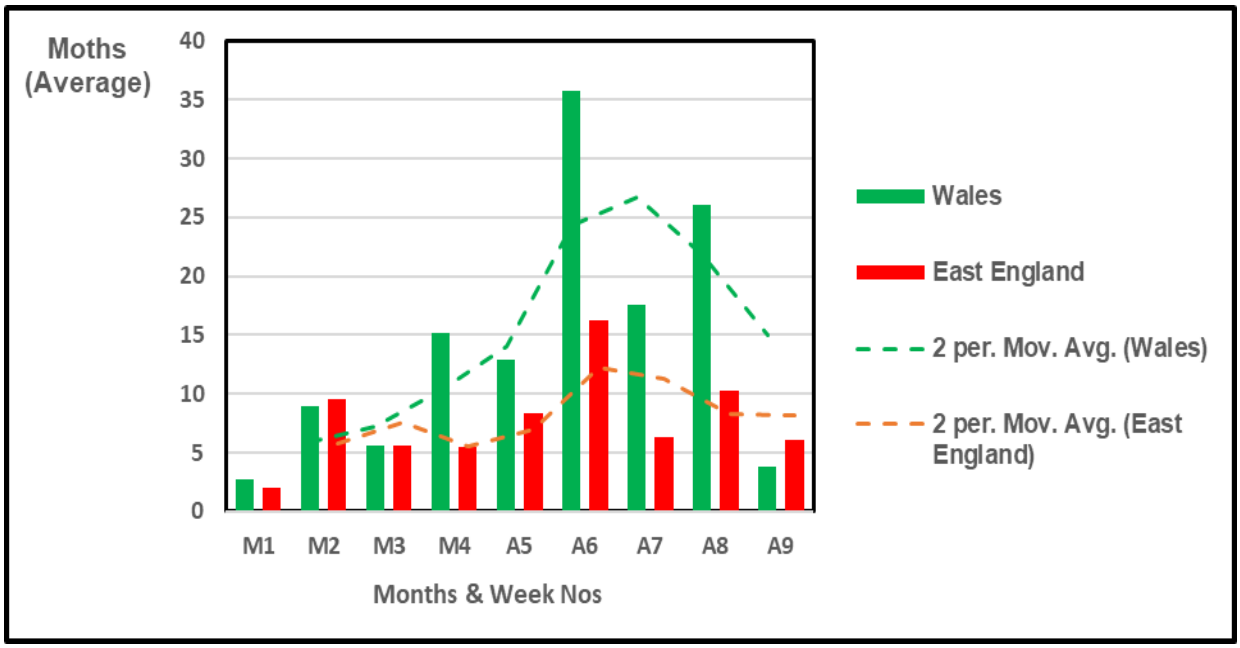
This month I am comparing Wales and the East of England which are on opposite sides of the country, controlled largely by very different sea areas. Wales is moderated by the warmer south westerly winds while the East of England has to endure the cold easterlies.
With a few notable exceptions the temperatures of the 2 regions are reasonably similar (Fig. 6).

Fig 6. GMS 2020 Q1. Minimum Temperatures in Wales and the East of England



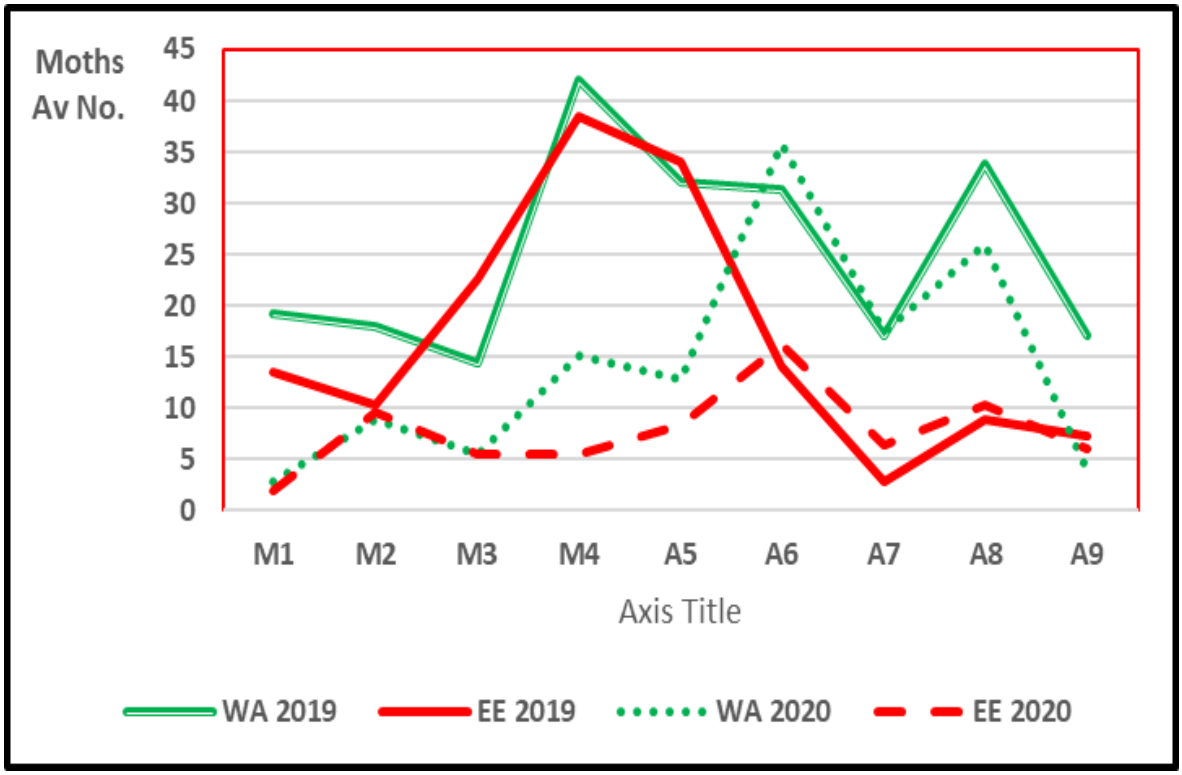
The catches of the two (Fig 7) generally follow the same pattern but with much lower recorded moth numbers in the East of England. The rolling or moving averages of both regions show the variations for each week.

Fig 7. GMS 2020 Q1. No. of Core Moths Caught in Wales and the East of England



As mentioned earlier, 2019 was an exceptional year and Figure 8 demonstrates this showing the 2019 data as solid lines and 2020 ones as dashed lines.

Fig 8. GMS 2020 Q1 - Average No. of Core Moths Caught in Wales and the East of England 2019 & 2020



Statistics

If one looks at Table 2 on its own, one might be justified in thinking that "all is not well in the State of Denmark". Certainly, it is a case of spot the successful moths! Only the Muslin Moth has reached the dizzy heights of plus one and all of the *Orthosia* species apart from the Powdered Quaker have taken a hit. This is also reflected in the catching frequency section which shows the number of gardens visited, with the Twin-spotted Quaker having the dubious distinction of being the least seen with a drop of 68 gardens.

Table 2. GMS 2020 Q1 - Top 20 Core Species

Position		Top 20	*Mean Per Trap*			Catching frequency		
2019	**2020**	Species	**2019**	**2020**	Change	**2019**	**2020**	Difference
2	**1**	Hebrew Character	45.2	29.3	-15.9	325	**325**	0
1	**2**	Common Quaker	49.6	15.5	-34.1	342	**316**	-26
4	**3**	Small Quaker	14.8	7.4	-7.4	269	**253**	-16
3	**4**	Clouded Drab	16.2	6.8	-9.4	312	**259**	-53
5	**5**	Early Grey	6.2	4.8	-1.3	299	**274**	-25
21	**6**	Muslin Moth	0.9	2.4	1.6	123	**183**	60
7	**7**	Brindled Beauty	2.4	2.1	-0.3	130	**124**	-6
9	**8**	Double-striped Pug	2	1.7	-0.2	160	**163**	3
13	**9**	Lt Brown Apple Moth	1.4	1.3	-0.1	134	**135**	1
15	**10**	Powdered Quaker	1	1.2	0.1	116	**118**	2
6	**11**	Twin-spotted Quaker	3.5	1.1	-2.4	199	**131**	-68
16	**12**	Shuttle-shaped Dart	1	0.9	-0.1	114	**133**	19
20	**13**	Early Thorn	0.9	0.9	0	135	**132**	-3
28	**14**	Brimstone Moth	0.5	0.9	0.4	66	**100**	34
10	**15**	Oak Beauty	1.8	0.7	-1.1	176	**116**	-60
14	**16**	March Moth	1.2	0.7	-0.6	133	**94**	-39
12	**17**	Chestnut	1.5	0.6	-1	129	**71**	-58
26	**18**	Lunar Marbled Brn	0.6	0.5	-0.1	80	**76**	-4
24	**19**	Streamer	0.7	0.4	-0.2	113	**85**	-28
34	**20**	Least Black Arches	0.3	0.3	0.1	45	**49**	4
			346 Gardens	355 Gardens				

However, as mentioned earlier, the spring quarter last year was exceptional and comparisons between these two quarters may lead to incorrect conclusions in the overall state of moth numbers. Perhaps a clearer picture could be drawn when comparing with that of 2018, more typical of the previous years (Fig 1). Even so it still shows a gradual decline in the overall numbers of moths.

Again, the *Orthosia* species have not done well with the Common Quaker showing the largest fall and the Muslin Moth still the best. A number of species have also dropped in numbers but not to the same drastic extent.

Table 3. GMS 2020 Q1- Top 20 Core Species comparing 2018, 2019 & 2020

Position			Top20	Mean Per Trap			Change		
2018	2019	2020	Species (2020)	2018	2019	2020	'18 to '19	'19-'20	'18-'20
1	2	1	Hebrew Character	29.5	45.2	29.3	15.7	-15.9	-0.2
2	1	2	Common Quaker	29.4	49.6	15.5	20.1	-34.1	-13.9
4	4	3	Small Quaker	7.5	14.8	7.4	7.3	-7.4	-0.1
3	3	4	Clouded Drab	12.2	16.2	6.8	4	-9.4	-5.4
5	5	5	Early Grey	4.3	6.2	4.8	1.8	-1.3	0.5
32	21	6	Muslin Moth	0.1	0.9	2.4	0.7	1.6	2.3
10	7	7	Brindled Beauty	1.8	2.4	2.1	0.7	-0.3	0.4
6	9	8	Double-striped Pug	2.2	2	1.7	-0.2	-0.2	-0.5
19	13	9	Lt Brown Apple Moth	0.5	1.4	1.3	0.9	-0.1	0.8
16	15	10	Powdered Quaker	0.8	1	1.2	0.3	0.1	0.4
8	6	11	Twin-spotted Quaker	1.9	3.5	1.1	1.6	-2.4	-0.9
57	16	12	Shuttle-shaped Dart	0	1	0.9	1	-0.1	0.9
12	20	13	Early Thorn	1.5	0.9	0.9	-0.6	0	-0.6
45	28	14	Brimstone Moth	0.1	0.5	0.9	0.5	0.4	0.8
9	10	15	Oak Beauty	1.9	1.8	0.7	-0.1	-1.1	-1.2
7	14	16	March Moth	2.1	1.2	0.7	-0.9	-0.6	-1.5
11	12	17	Chestnut	1.5	1.5	0.6	0	-1	-1
20	26	18	Lunar Marbled Brwn	0.5	0.6	0.5	0.2	-0.1	0.1
23	24	19	Streamer	0.3	0.7	0.4	0.3	-0.2	0.1
42	34	20	Least Black Arches	0.1	0.3	0.3	0.2	0.1	0.3
				332 Gardens	346 Gardens	355 Gardens			

Table 4 shows the top 10 moths for each region. Everywhere the Hebrew Character maintains top position with the Common Quaker in second place despite its reduction in numbers compared with last year (Table 3). Also, in the top 20, the Brimstone Moth had moved up to 14th place, but it appears that this was due largely to catches in the Southwest and the Channel Islands.

Table 4. GMS 2020 Q1- Top 10 Regional Core Species

Scotland (25)	Mean	North East (25)	Mean	North West (45)	Mean
Hebrew Character	56.1	Hebrew Character	46.7	Hebrew Character	24.5
Common Quaker	23.9	Common Quaker	14.7	Common Quaker	15.3
Clouded Drab	16.0	Small Quaker	10.0	Small Quaker	9.7
Red Chestnut	4.4	Clouded Drab	7.6	Early Grey	4.3
Early Grey	3.8	Mottled Grey	5.3	Clouded Drab	3.0
Brindled Beauty	3.6	Red Chestnut	3.3	Brindled Pug	2.5
Early Tooth-striped	2.8	Early Grey	2.8	Twin-spotted Quaker	1.6
Small Quaker	2.5	Powdered Quaker	2.5	Double-striped Pug	1.3
Yellow Horned	2.3	Twin-spotted Quaker	2.0	Early Thorn	1.3
Powdered Quaker	1.8	Brindled Pug	0.7	Light Brown Apple Moth	1.0
Yorks & Humber (16)	Mean	Ireland (23)	Mean	East of England (37)	Mean
Hebrew Character	20.3	Hebrew Character	53.0	Hebrew Character	15.9
Common Quaker	15.8	Common Quaker	25.1	Common Quaker	13.9
Small Quaker	9.0	Clouded Drab	18.8	Small Quaker	8.1
Clouded Drab	6.8	Early Grey	10.3	Muslin Moth	5.5
Early Grey	4.1	Early Tooth-striped	4.3	Early Grey	4.2
Powdered Quaker	0.9	Powdered Quaker	3.2	Clouded Drab	3.8
Shuttle-shaped Dart	0.8	Red Chestnut	2.8	Shuttle-shaped Dart	2.1
Common Plume	0.8	Early Thorn	2.2	Common Plume	1.4
Brindled Pug	0.6	Small Quaker	2.2	Light Brown Apple Moth	1.2
Twin-spotted Quaker	0.6	Double-striped Pug	2.1	Double-striped Pug	1.2
East Midlands (41)	Mean	West Midlands (21)	Mean	Wales (45)	Mean
Hebrew Character	13.7	Hebrew Character	26.0	Hebrew Character	39.2
Common Quaker	9.8	Common Quaker	20.7	Common Quaker	16.0
Small Quaker	6.6	Small Quaker	18.0	Clouded Drab	11.6
Clouded Drab	4.1	Clouded Drab	4.8	Small Quaker	10.6
Early Grey	3.8	Brindled Pug	4.0	Brindled Beauty	7.8
Common Plume	2.8	Early Grey	3.4	Early Grey	6.5
Muslin Moth	1.9	Muslin Moth	3.3	Brindled Pug	4.7
Double-striped Pug	1.8	Brindled Beauty	1.9	Red Chestnut	2.8
Light Brown Apple Moth	1.2	Double-striped Pug	1.5	Muslin Moth	2.6
Shuttle-shaped Dart	1.1	Light Brown Apple Moth	1.2	Early Thorn	1.6
South East (33)	Mean	Southwest (43)	Mean	Channel Islands (2)	Mean
Hebrew Character	10.5	Hebrew Character	30.7	Hebrew Character	43.5
Common Quaker	8.1	Common Quaker	14.8	Common Quaker	33.5
Small Quaker	4.4	Early Grey	6.4	Light Brown Apple Moth	10.5
Clouded Drab	4.2	Muslin Moth	6.2	Waved Umber	9.0
Brindled Pug	3.0	Brindled Pug	5.4	Double-striped Pug	8.5
Early Grey	2.0	Double-striped Pug	4.0	Early Grey	5.5
Muslin Moth	1.9	Clouded Drab	4.0	Brimstone Moth	5.0
Brindled Beauty	1.8	Brimstone Moth	4.0	Early Thorn	5.0
Double-striped Pug	1.8	Light Brown Apple Moth	3.6	Oak Beauty	4.5
Light Brown Apple Moth	1.6	Brindled Beauty	3.3	Least Black Arches	4.5

All the hours and recording completed by the recorders are summarised in Table 5. 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 45 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 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.

Table 5. GMS 2020 Q1 - Regional Statistics

Region	Gardens	Moths	Moths	Moths		Moth Trap Nights		
		Total	Mean	Min	Max	Possible	Actual	Percent
SC	25	3163	127	13	237	225	212	94
NE	25	2586	103	11	425	225	221	98
Y&H	16	1036	65	11	156	144	97	67
NW	45	3459	77	6	316	405	380	94
IRL	23	3290	143	5	548	207	202	98
EE	37	2629	71	7	327	333	315	95
EM	41	2346	57	14	242	369	366	99
WA	45	5868	130	12	454	405	387	96
WM	21	2129	101	10	392	189	186	98
SE	33	1832	56	4	233	297	280	94
SW	43	4892	114	17	322	387	374	97
CI	2	382	191	101	281	18	18	100

Weekday Trap Nights							
Night	Tues	Wed	Thurs	Fri	Sat	Sun	Mon
Days	42	42	151	2300	366	115	46
Percent	1	1	5	75	12	4	2

Table 6 expands on the total number of moths caught by each recorder, divided up into 3 arbitrary size classes: 95 had lots (over 100), 249 had middling numbers (10 to 100) and 7 had few (less than 10). On inspection it seems rather odd that in two regions, East England and East Midlands, all the recorders had “middling” catches. There will be a variety of reasons behind the differences, including geographical location (coastal/inland, upland/lowland etc), local habitat, light pollution and different micro-climates such as wind or frost hollows.

Having no street lights, the weather is the dominant factor for our trap in mid Wales and we achieved only 160 moths, which was a fall from 180 last year.

Table 6. GMS 2020 Q1 - Moth Catches per Recorder

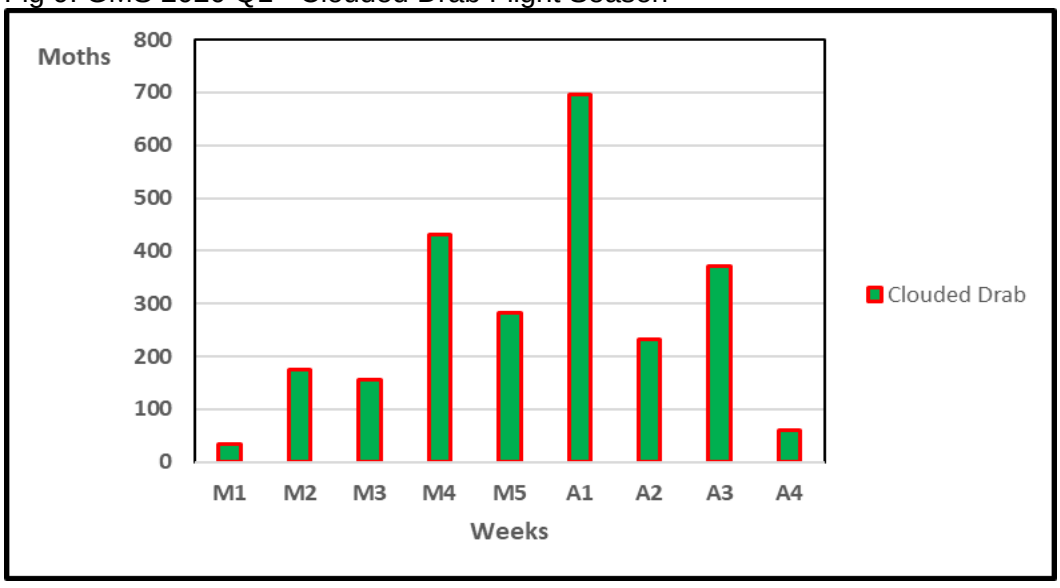
Regions/Catches	SC	NE	Y&H	NW	IRL	EE	EM	WA	WM	SE	SW	CI
Recorders	25	25	16	45	23	37	41	45	21	33	43	2
More than 100 moths	4	9	3	11	13	0	0	25	6	1	21	2
Between 10 and 100	22	16	13	30	9	33	41	20	15	30	20	0
Less than 10	0	0	0	4	1	0	0	0	0	2	0	0

Clouded Drab

The chosen moth for this quarter is the Clouded Drab – *Orthosia* (straight line) *incerta* (uncertain). It is extremely variable, displaying polymorphism with several distinctly different forms. However big the catch it may be hard to find two exactly alike. It has the shape of the *Orthosia* genus but the outermost crossline is paler and slightly irregular almost always with small dark blotches at the leading edge, one third of the way along and at the trailing corner. These are less obvious on dark examples (see photo).

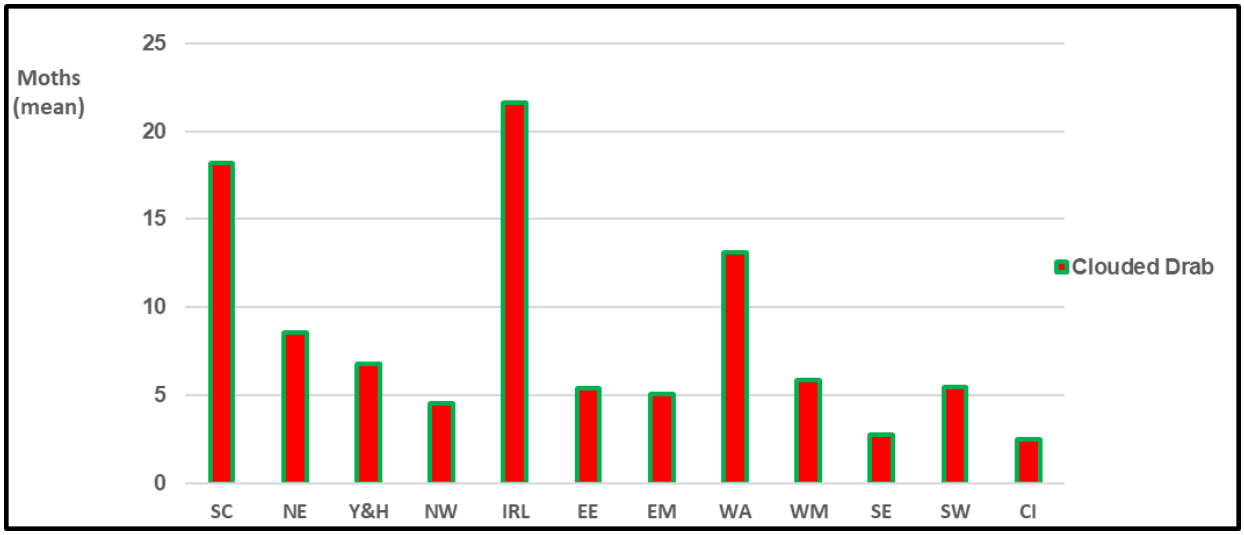
Its flight season is March to the end of April (Fig 9) and the larvae are polyphagous, feeding on a wide range of broadleaved trees. It is most abundant in woodland but occurs in many habitats with trees and shrubs, including gardens.

Fig 9. GMS 2020 Q1 - Clouded Drab Flight Season



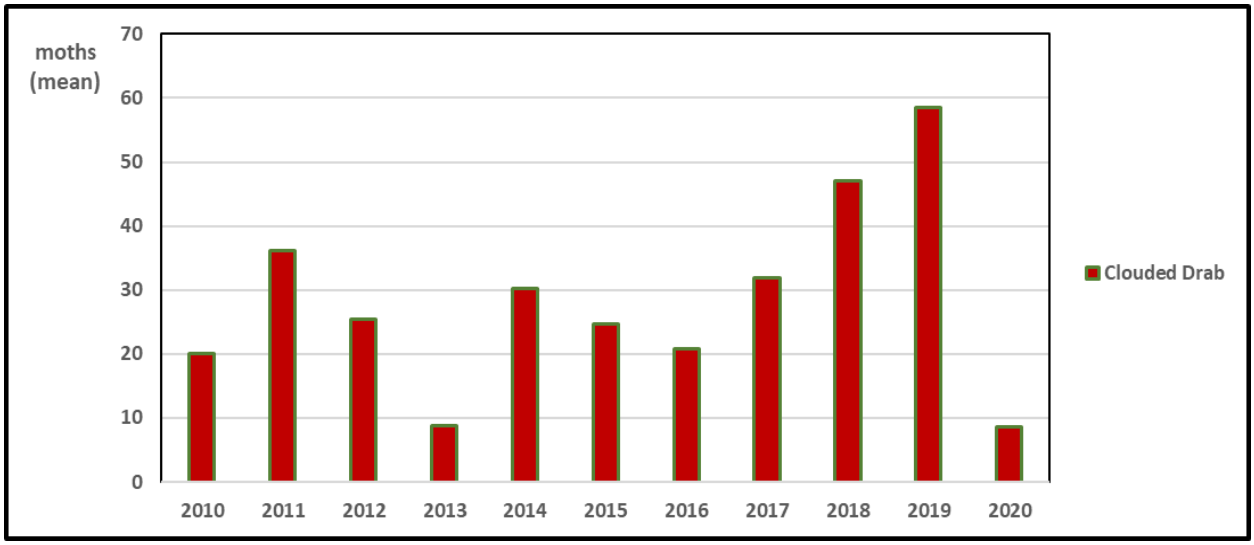
It is found in all regions and in 2020 was most abundant in Scotland, Ireland and Wales (Fig 10)

Fig 10. GMS 2020 Q1 - Regional Distribution of the Clouded Drab



As mentioned earlier, the Clouded Drab, amongst others, has not had a good year with its numbers well down compared with previous years (Fig 11).

Fig 11. GMS 2020 Q1 - Average Abundance of the Clouded Drab – 2010-2020



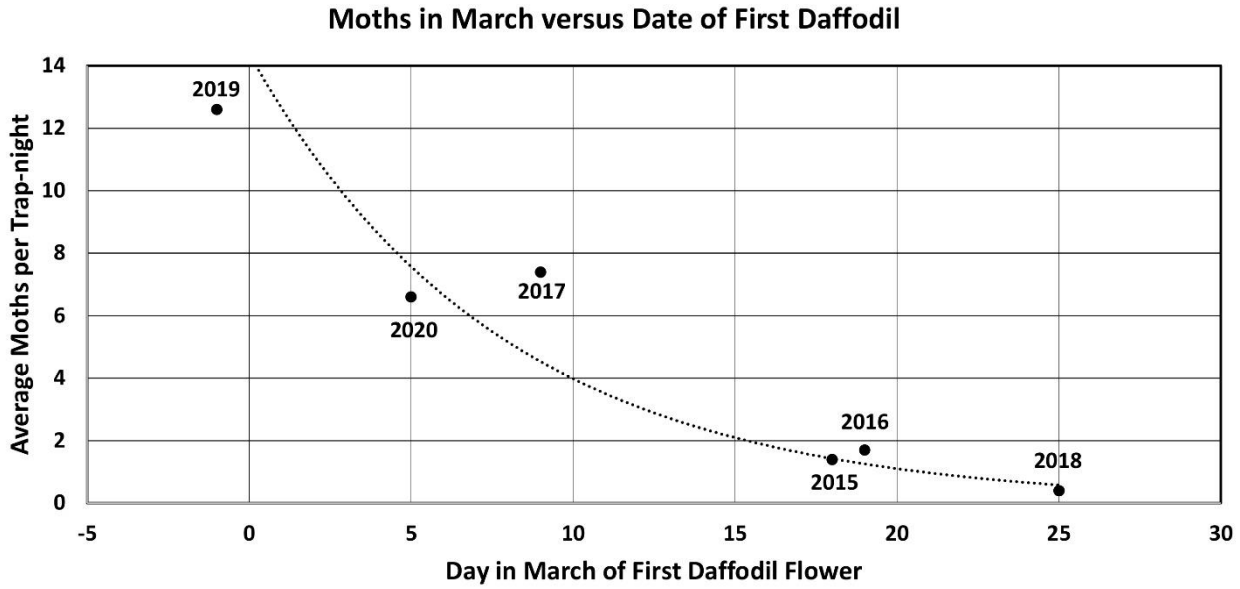
Although it is one of the commoner spring moths this does not necessarily mean that it is found in everyone's garden. Table 5 shows the number and proportion of recorders in each region that caught the Clouded Drab, the proportion varying from two-thirds in NW and SE England to all gardens in Yorkshire & Humberside and the Channel Islands.

Table 7. GMS 2020 Q1 - Clouded Drab Recording success by Region

Regions	**SC**	**NE**	**Y&H**	**NW**	**IRL**	**EE**	**EM**	**WA**	**WM**	**SE**	**SW**	**CI**
Clouded Drab	22	22	16	30	20	26	33	40	17	22	32	2
Total recorders	25	25	16	45	23	37	41	45	21	33	43	2
% C D recorders	88	88	100	67	87	70	80	89	81	67	74	100

Do Moths like Daffodils? – Don Matthews

I have been noting the timings of spring bulbs in my West Fife garden for fourteen years and recording moths in the garden for the last six of those. I have seen substantial variations in the timing of Spring (that's natural local Spring rather than the standardised designation used for statistics) and also substantial variations in the numbers of moths trapped in March (the month when my garden moth numbers usually recover from the winter lull). In April of this year there were also several postings in the GMS Facebook group on this year's early moth numbers versus those for last year. I therefore thought I would look at how my average trap count in March has varied with the timing of the first open Daffodil flower, also a feature of March.



First-daffodil timings during these six years varied from 27 February to 25 March - almost a full month - the tardiest being the 'Beast from the East' year of 2018. Although there is a substantial (and not-unexpected) amount of scatter in the data, there appears nonetheless to be a distinction between 'early' and 'late' Springs in the moth numbers as well as the flowers.

I am forced to conclude that, at least in my garden, **moths like daffodils!**

On a more serious note, I find it interesting that both spring moths and spring bulbs appear to respond similarly to climate-related influences and cues. While the individual influences of temperature, sunshine and rainfall are probably complex, the overall effects of early and late springs seem to be similar for two very different forms of natural life.

I wonder whether any other GMS participants record this type of phenology in their gardens as well as the moths? (*Any information or views? - Editor*)

Adapting a Skinner trap for adverse weather conditions – Mark Pewtress

I use a 15w Actinic Skinner trap. This is a good all-weather trap, able to withstand the weather conditions we experience here in John o' Groats. The advantage of using an actinic bulb as a light-source is that the bulbs can be run without the need to keep them protected from the elements. As with all outside electrical equipment, the moth trap is connected to the mains via an RCD.

In windy conditions I set the trap on the ground in a spot where it is sheltered from the wind by both the house and the few bushes we have. The trap is placed on a wooden pallet to prevent

water ingress. On calmer nights, I place the trap on a table where it has uninterrupted views across the moorland.

I have made some alterations to the basic design of the Skinner trap to aid its functionality in this part of the world. With the wind being an almost constant factor here, I find the use of clamps essential to prevent the Perspex sheets from flapping about.

To enable trapping on wet nights, it is necessary to prevent moths from drowning in the bottom of the trap and limit having to deal with soggy egg trays. Many people use various forms of rain shields (from Perspex sheets to umbrellas) but, with the wind often blowing the rain in horizontally, these shields do not prove very effective here: I also believe that any form of rain shield would add an extra barrier for the moths to negotiate before entering the trap. My answer to this is to fix a plastic tray (part of a shower-base plinth) so that it covers the base of the trap directly underneath the opening between the Perspex sheets.

Drainage holes are then drilled through the side of the trap to permit water to escape from the tray. When positioning the trap, I sit it on a slight angle to enable the water to run out.

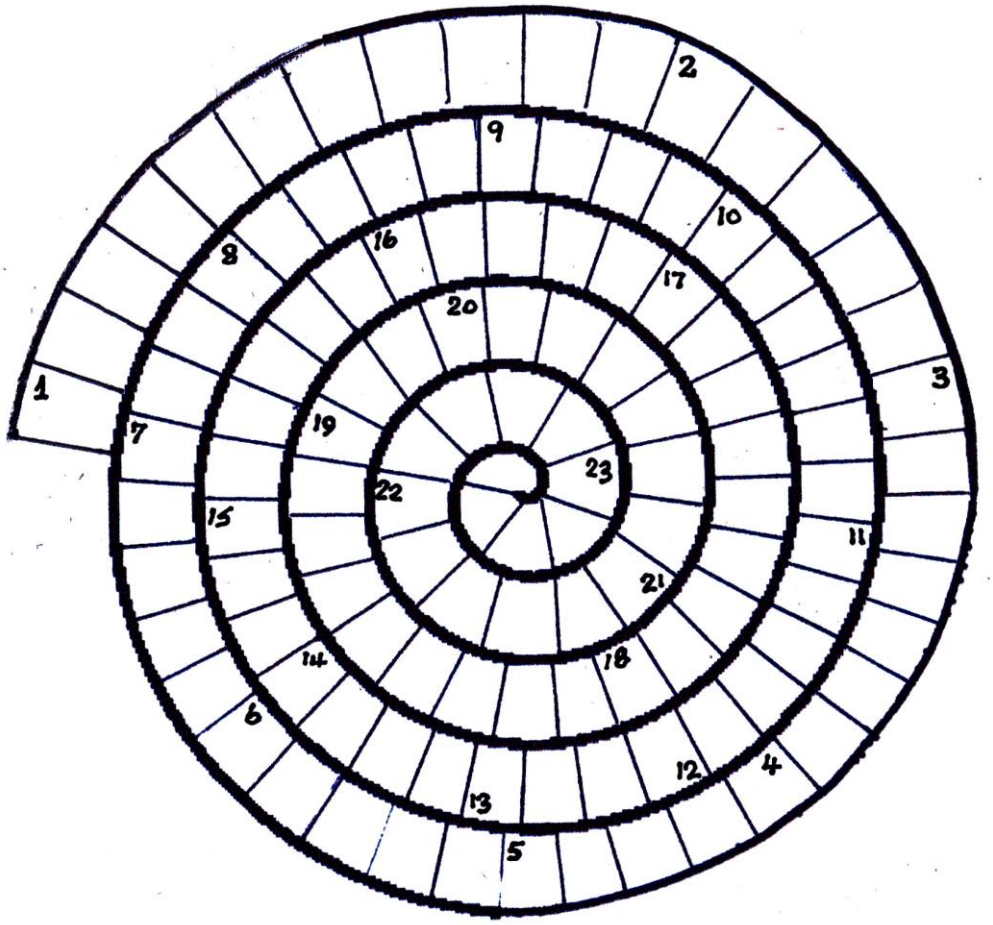
To prevent open water from lying in the tray, I use sponges. My trap is almost always dry on the inside and the problem of soggy egg trays is eliminated.

The tray and sponges dictate the positioning of the egg trays in which the moths can settle.

Puzzle Corner - Nonconformist (in lockdown)

Moth Spiral No.3

As usual the answers are names or part-names of our British moths, mostly in the vernacular, but not all. The names overlap but not always at the same point in each word.



1. Not joining in with the main-stream then. Who, me??
2. A plume, but not feather-winged and could be seasonal.
3. A foreigner perhaps, but it's a real marvel.
4. A departing gesture from whole West Sussex? No it's the East.
5. More than a score of these, but not found in many places.
6. A moorland species once known to be prominent in the Orient.
7. Is this moth extinct or a cherished immigrant?
8. Christmas fire-side treat that, if equine, could be kept on a string.
9. Whoops, it's flown between my legs again!
10. Don't think of the tinge, pay attention to this dyslectic pyramid moth?
11. Sounds as though number two is genetically set against open spaces.
12. Finally taking in the East, but still not the greatest.
13. Attributed to Cromwell, Oliver. Warts and all.
14. Don't throw in the towel, show some national pride in this species.
15. To win your stripes you must let dosh rule your thoughts.
16. Could weasel its way into contact with Royals and judges.
17. Small moth with a capital outlook. Och Aye!
18. Generic name and foodplant of species with clunkey shoe.
19. Sounds a bit of an inferior characteristic for several moths.
20. From six wings to four would need what may be a re-mishap for this species.
21. Could use fine cotton wings for flight?

22.Ran backwards to the rank for this slender description.
23.Could distinguish number sixteen or a floor covering.

Crossword 12 solution

Have fun and keep well.

Tailpiece

In my starting editorial I wondered whether in the “new normal” conditions we might have to consider replacing the Annual Conference with a webinar. But on a more local level there’s no reason why people shouldn’t organise their own meetings via Zoom or one of the various equivalents. After all, we had two successful local conferences last year. So if anyone wants to organise something, please contact your Area Co-ordinator, or let Stephen or me know.
And of course if you have anything for the next newsletter do get in touch with 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 1500 ‘Likes’!

Facebook Group - https://www.facebook.com/groups/438806469608527/ - currently with over 2350 Members (not all active GMS participants) – open membership – 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 - https://www.facebook.com/groups/GMS.Moth.ID.Help/.

You can also find us on Twitter @GardenMoths and Instagram at https://www.instagram.com/gardenmothscheme/.

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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.