GMS News

Late Summer 2017

Weeks 19-27

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Editorial – Norman Lowe

Last month I mentioned that Heather Young wished to step down as National Co-ordinator and asked for volunteers to take over some or all of her duties. I am very pleased to be able to tell you that Helen and Stephen Passey have volunteered to take over the coordination of the Garden Moth Scheme from the start of the 2018 season. Helen will be the National Coordinator and take on the general running of the scheme, and Stephen will be Database Manager responsible for the flow of data by collating the records and maintaining the GMS MapMate database.

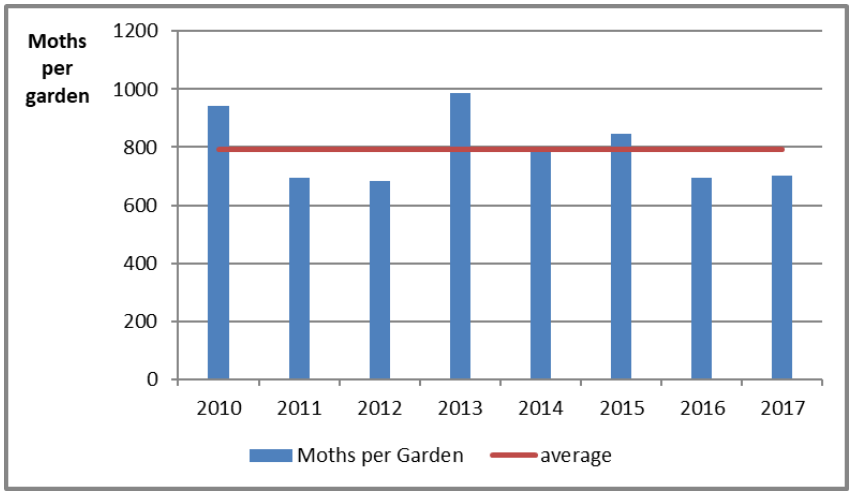
Once more, thank you to everyone who has contributed material for this newsletter and again we have a good variety of articles. Evan's analysis includes a look at Ireland and the Channel Islands, where we have only one recorder. He also looks in more detail at two species, Large Yellow Underwing and Dingy Footman. But I did notice one observation that I thought was of especial note, concerning a recorder getting very few moths. Whilst no doubt disappointing to the recorder (everyone wants to get lots of moths), their result is extremely interesting. IF YOU ARE A RECORDER WHO GETS FEWER MOTHS THAN AVERAGE, PLEASE TAKE IT FROM ME THAT YOUR RESULTS ARE VERY VALUABLE. DON'T GIVE UP!

Other articles include adventures from a Yorkshire September; an account of the Northern Arches in Cumbria; and some extremely good advice from NE England on coping with the difficulties associated with starting moth trapping – readers will no doubt have their own techniques for overcoming some of the difficulties described here. And of course there's a new puzzle from our regular Nonconformist.

Overview GMS 2017 3rd Quarter – Evan Lynn

This has not been the most productive quarter for moths as shown (Figure 1) with the mean number of moths per garden being on a par with the three poorest years (2011/12/16) while being well below that of the three best years (2010/13/15). This is reflected by its position below the average line calculated from these eight years.

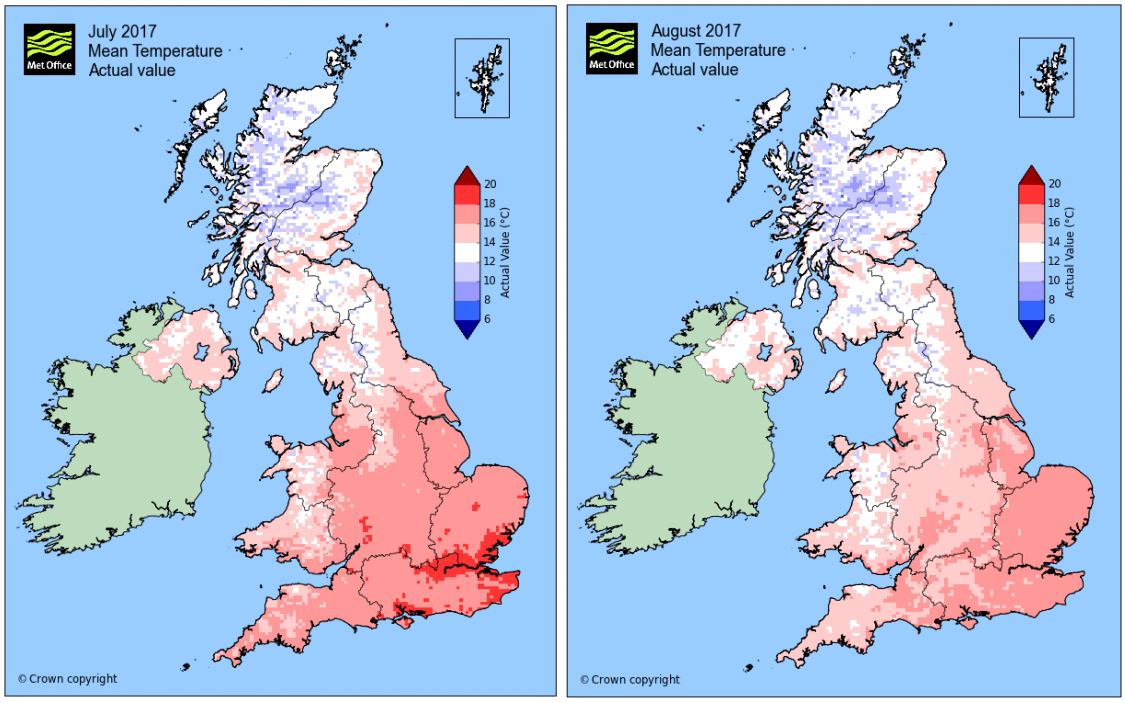
Figure 1. GMS 2010 - 2017 Q3. Mean Quarterly Moth Numbers



Temperature

The July and August temperatures could be described as varied with early July enjoying warmer weather in the south before temperatures started to drop below average. There were periods of heavy rain in the second half of July and much of August probably enhanced by the remnants of the hurricanes and tropical storms that caused devastation in the Caribbean. The temperatures dropped at the end of August with London, at only 15°C, experiencing the coldest August day since 1950.

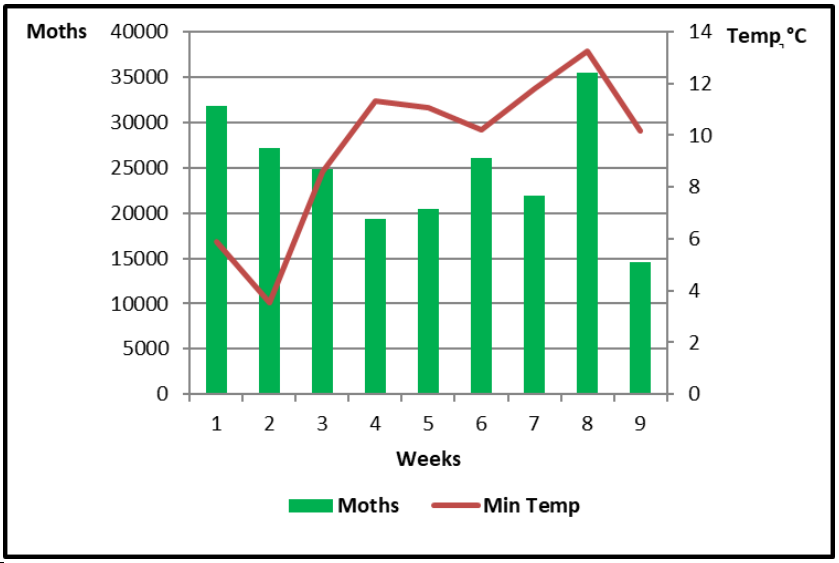
Figure 2. Mean Temperatures for July & August 2017 (with permission of the Met Office)



The mean temperatures in Figure 2 reflect this summary. In July, the southeast sweltered while the lowlands and eastern Scotland enjoyed comfortable temperatures. In August however, the south cooled whereas Scotland showed only a slight lowering of temperature.

In this quarter only seven empty traps were reported throughout the whole GMS region, probably due to the relatively high night time temperatures as shown in Figure 3; the temperature drop in week 2 could have accounted for two northerly recorders reporting empty traps. However other factors, full moon and wind, for example, may also have influenced the number of moths being trapped.

Figure 3. GMS 2017 Q3. Minimum Night Temperatures and Moth Numbers



Regional Comparisons

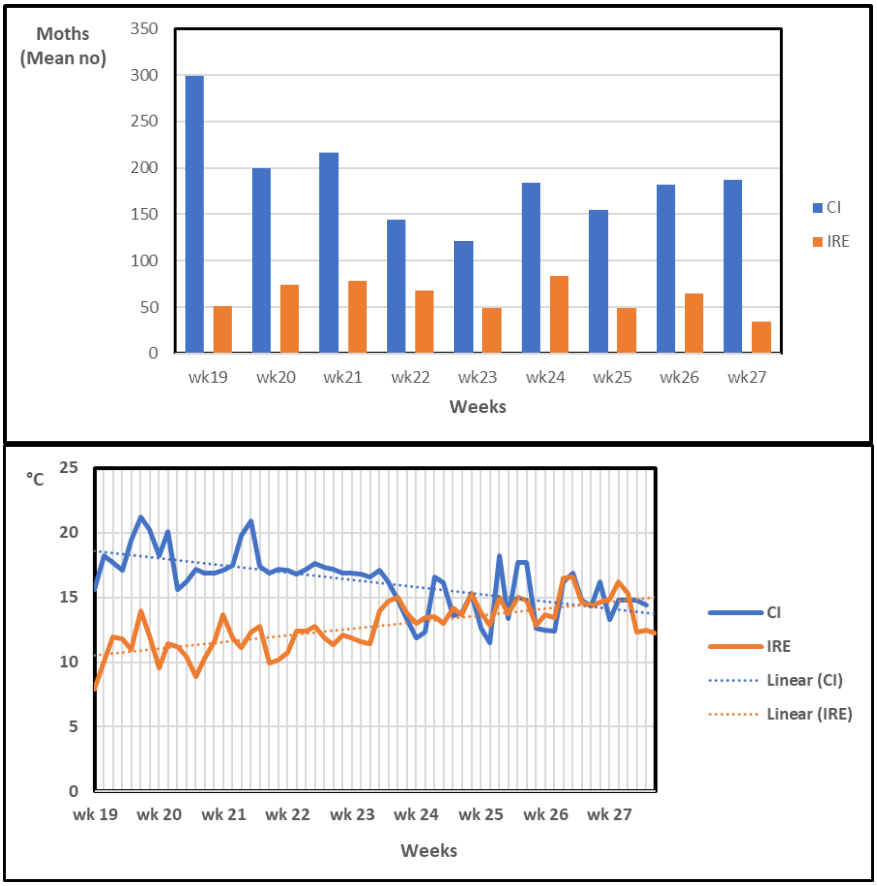
In accordance with my usual practice of selecting two trapping regions with clear climatic differences, this quarter I have chosen to compare two often overlooked regions – the Channel Islands and Ireland.

The Channel Islands Region is represented by Alderney, a windswept island with a maritime climate moderated by a branch of the North Atlantic Drift. It also has a frequent continental influence that can bring cold spells in winter and hot, humid weather in summer, whereas Ireland is wholly maritime, also moderated by the North Atlantic Drift, but subjected more to the full brunt of the Atlantic storms.

For the temperature graph, Alderney has a conveniently situated weather station while for Ireland the temperatures are a compilation of 19 weather stations. For the moth histogram, there is only one recorder on Alderney but 24 on Ireland but the mean function attempts to bring the number of moths being caught down to a level playing field. With only one moth trap operating throughout the whole of the Channel Islands one has to consider whether the records from this one trap are representative of the Region as a whole (But one recorder is a lot better than none! – Ed). Even so, bearing in mind whatever limitations the paucity of moth traps may impose on the variety of moths caught, the figures below are impressive.

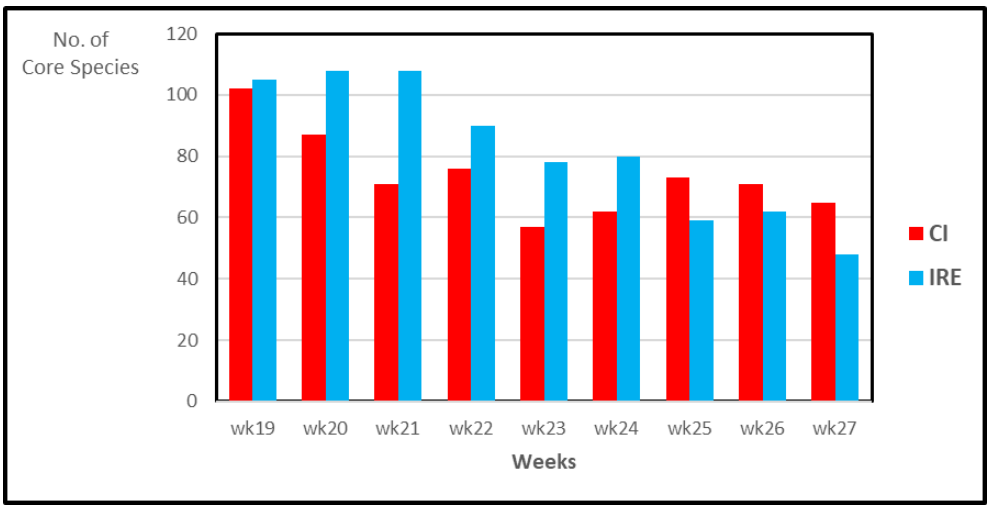
There are considerable differences in core moth numbers between the two regions despite a gradual convergence of temperatures. It is possible that warm easterly winds off the continent may supplement the resident Alderney moth populations.

Figures 4&5 July & August 2017 Mean Moth Catches & Mean Daily Temperature comparison for Alderney and Ireland



When total numbers of moth species are considered, for most of the period the number in Ireland exceeded that in Alderney, as would be expected since more traps were sampling the area. However, as shown in Figure 6 below, from week 25 the reverse happens even though the mean temperature had fallen in Alderney and risen in Ireland. This may perhaps be a result of the after effects of the hurricane season in the Caribbean bringing in migrants.

Figure 6 GMS Q3 Comparison of Core Species in Channel Islands and Ireland



Statistics

The moth numbers have shown only a minimal improvement from last year's 3rd quarter with a rise in mean numbers from 693 to 702 (see Figure 1 above). The top 20 (Table 1) reflects this with upwardly mobile species including Large Yellow Underwing, Square-spot Rustic, Dingy Footman and Straw Dot. These last two in fact have established a foothold in the top 20 having languished at numbers 24 and 21 last year. The downward species include Flame Shoulder, Common Rustic agg., Garden Grass-veneer, Mother of Pearl and Common Footman.

Table 1 GMS Q3 2017 Top 20 Species

Position		Species	Mean per trap		Mean change	2017	
2016	**2017**		2016	**2017**		No of records	Max per trap
1	**1**	Large Yellow Underwing	129.3	**153.7**	24.4	2256	426
2	**2**	Common Rustic agg.	26.9	**25.7**	-1.2	1442	121
10	**3**	Garden Grass-veneer	23.5	**22.5**	-1	754	373
8	**4**	Setaceous Hebrew Character	22.8	**22.3**	-0.5	787	267
9	**5**	Dark Arches	21.4	**21.9**	0.5	1246	147
4	**6**	Lesser B-b Yellow Underwing	20.5	**21.6**	1.1	1267	91
7	**7**	Uncertain/Rustic agg.	19.4	**18.9**	-0.5	890	71
5	**8**	Flame Shoulder	18.5	**16.3**	-2.2	1096	98
17	**9**	Mother of Pearl	14.9	**14.7**	-0.1	936	192
12	**10**	Light Brown Apple Moth	14.5	**14.6**	0.1	1021	102
20	**11**	Common Footman	13.6	**14.3**	0.7	578	95
11	**12**	Riband Wave	12.3	**13.3**	1	1041	39
13	**13**	Brimstone Moth	11.6	**13.1**	1.4	1088	59
6	**14**	Agriphila straminella	10.8	**12.1**	1.3	651	243
3	**15**	Square-spot Rustic	10.1	**11.8**	1.6	719	63
14	**16**	Lesser Yellow Underwing	9.1	**11.7**	2.6	933	50
15	**17**	Agriphila tristella	8.9	**9.2**	0.3	652	60
18	**18**	Willow Beauty	6.9	**8.6**	1.7	974	55
21	**19**	Straw Dot	6.5	**8.4**	1.9	701	60
24	**20**	Dingy Footman	6	**8.3**	2.2	539	101
	317	Gardens 2017					
	340	Gardens 2016					

The rise of the Dingy Footman was not consistent throughout the whole GMS region as shown in Table 2

Table 2 GMS Q3 2017 Total Regional Distribution of the Dingy Footman

Region	SC	NE	Y&H	NW	IRL	EE	EM	WA	WM	SE	SW	CI
Recorders	17	22	16	41	24	33	31	36	24	42	30	1
Dingy Footman	1	0	89	135	0	365	233	747	253	211	572	21

Turning now to regions, Table 3 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. It can be seen that Large Yellow Underwing was most numerous everywhere apart from the East of England and the Channel Islands.

Table 3 GMS Q3 2017 – Top 10 Regional Core Species

Scotland (17)	Mean	North East (22)	Mean	North West (41)	Mean
Large Yellow Underwing	169	Large Yellow Underwing	318	Large Yellow Underwing	250
Dark Arches	34	Dark Arches	35	Common Rustic agg.	27
Lesser Yellow Underwing	28	L B-b Yellow Underwing	29	Dark Arches	21
L B-b Yellow Underwing	27	Lesser Yellow Underwing	22	L B-b Yellow Underwing	21
True Lover's Knot	23	Common Rustic agg.	21	Lesser Yellow Underwing	15
Dotted Clay	22	Smoky Wainscot	20	Flame Shoulder	14
Antler Moth	21	Common Footman	13	Garden Grass-veneer	13
Smoky Wainscot	16	Square-spot Rustic	10	Common Footman	13
Common Rustic agg.	15	True Lover's Knot	7	Riband Wave	13
Square-spot Rustic	13	Antler Moth	7	Mother of Pearl	12
Yorks & Humber (16)	Mean	Ireland (24)	Mean	East England (33)	Mean
Large Yellow Underwing	208	Large Yellow Underwing	87	Set Hebrew Character	66
Common Rustic agg.	32	Common Rustic agg.	47	Large Yellow Underwing	65
Light Brown Apple Moth	30	L B-b Yellow Underwing	29	Garden Grass-veneer	61
Common Footman	25	Dark Arches	23	Uncertain/Rustic agg.	35
Garden Grass-veneer	25	Square-spot Rustic	23	Mother of Pearl	33
Dark Arches	22	Smoky Wainscot	22	Common Rustic agg.	31
L B-b Yellow Underwing	19	Lesser Yellow Underwing	16	Dark Arches	23
Lesser Yellow Underwing	17	Small Square-spot	14	L B-b Yellow Underwing	22
Agriphila straminella	15	Light Brown Apple Moth	13	Vine's Rustic	21
Riband Wave	13	Dotted Clay	11	Flame Shoulder	18
East Midlands (31)	Mean	West Midlands (24)	Mean	Wales (36)	Mean
Large Yellow Underwing	193	Large Yellow Underwing	165	Large Yellow Underwing	143
Set Hebrew Character	36	*Agriphila straminella*	39	Flame Shoulder	41
Light Brown Apple Moth	32	Common Rustic agg.	28	Dingy Footman	21
Dark Arches	31	Set Hebrew Character	24	Brimstone Moth	21
Riband Wave	25	Garden Grass-veneer	23	Common Footman	18
Common Rustic agg.	24	Light Brown Apple Moth	22	Set Hebrew Character	17
Uncertain/Rustic agg.	23	Dark Arches	21	Common Rustic agg.	17
Mother of Pearl	21	L B-b Yellow Underwing	20	L B-b Yellow Underwing	15
Willow Beauty	20	Brimstone Moth	20	Small Phoenix	14
Brimstone Moth	20	Uncertain/Rustic agg.	18	Dark Arches	13
South East (42)	Mean	South West (30)	Mean	Channel Islands (1)	Mean
Large Yellow Underwing	62	Large Yellow Underwing	109	Small Fan-footed Wave	40
Uncertain/Rustic agg.	39	Garden Grass-veneer	44	L B-b Yellow Underwing	40
Set Hebrew Character	32	Uncertain/Rustic agg.	30	Brimstone Moth	39
Garden Grass-veneer	29	L B-b Yellow Underwing	27	Riband Wave	35
Riband Wave	22	Common Rustic agg.	27	Common Rustic agg.	34
Vine's Rustic	20	Common Footman	25	Buff Footman	30
Common Rustic agg.	19	Flame Shoulder	25	Rusty-dot Pearl	29
Common Footman	17	Brimstone Moth	24	Diamond-back Moth	27
LL B-b Yellow Underwing	17	Mother of Pearl	23	Least Carpet	26
Brimstone Moth	17	Set Hebrew Character	20	Light Brown Apple Moth	23

When looking at the status of core species it can be of some value to look at the percentage number of moths as shown in Figure 7. The pie chart shows the number of Core species in each category ranging from more than 500 such as the Dark Arches to only one as represented by the Pine Beauty. In fact around more than 500 individuals were recorded for one third of all core species recorded and between 100 and 500 for another third.

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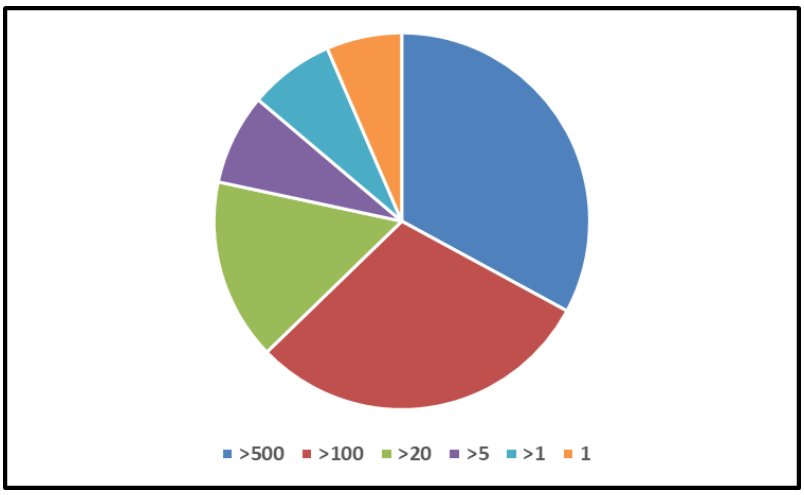
FIG 7 GMS 2017 3rd Quarter - The Comparative Abundance of the 212 Core Species Caught



While this pie chart shows the total for the GMS area, Tables 4a -4c break it down into regions. Table 4a shows the total number of core species recorded per region while Table 4b shows the number of species in each frequency class. The last class (1) is the number of species that are caught by only one recorder in that region, say Scotland for example, but may have been caught by recorders in other regions. Finally, table 4c shows the number of singletons in each region. These are the ones caught only once in the whole scheme this quarter and are listed in Table 5 together with the region in which they were caught and their flight season according to Waring.

Table 4 GMS 2017 3rd Quarter - Number of Core Species per Distribution Class for the 12 GMS Regions

Table 4a
Regional

regions	species
SC	141
NE	148
Y&H	176
NW	176
IRL	149
EE	174
EM	178
WA	181
WM	162
SE	177
SW	168
CI	131

Table 4b
Frequency Classes

50+	10 to 49	5 to 9	2 to 4	1
32	45	25	28	11
31	48	21	34	14
32	62	31	33	18
63	62	22	18	11
45	52	24	19	9
78	48	12	25	11
63	57	20	25	13
74	59	16	16	16
53	49	28	21	11
74	60	14	19	10
60	68	13	18	9
0	45	43	32	11

Table 4c
Singletons

GMS 1's present
0
0
3
0
0
0
4
1
0
0
0
0

Table 5 List of the GMS Singleton Moths caught in the 3r[d] Quarter

Species	**Region**	**Wk No.**	**Flight Period**
Chestnut	WA	9	September to May
Dark Chestnut	Y&H	1	October to February
Green-brindled Crescent	EM	3	September to November
Grey Shoulder-knot	Y&H	1	September to April
Lunar Underwing	EM	3	September to April
November Moth agg.	Y&H	9	September to November
Pine Beauty	EM	8	March to May
Red-line Quaker	EM	9	September to November

The records received from the twelve GMS Regions for the quarter are summarised below (Table 6). The minimum value of three in the North East may show problems of siting the trap rather than a total lack of moths. This unfortunate recorder is situated along a busy main road with excessive street lighting.

Although Friday is the official or preferred trap day for the week, three nights either side are acceptable as everyone has a life to live apart from mothing.

Table 6 GMS Q2 2017 – Regional Statistics

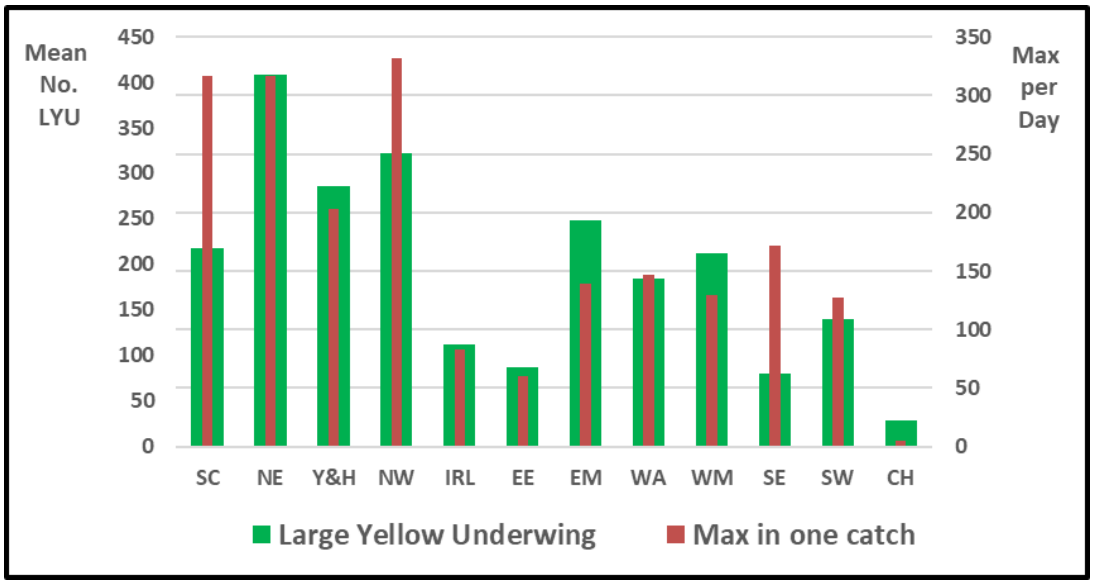
Region	Gardens	Moths	Moths	Moths		Moth Trap Nights		
		Total	Mean	Min	Max	Possible	Actual	%
SC	17	10018	589	261	1501	153	142	93
NE	22	14769	671	3	2482	198	179	90
Y&H	16	11651	728	120	1518	144	136	94
NW	41	26003	634	185	2214	369	340	92
IRL	24	13414	559	64	2193	216	200	93
EE	33	27708	840	36	2286	297	278	94
EM	31	24770	799	153	1862	279	263	94
WA	36	22616	628	121	1560	324	299	92
WM	24	16955	706	89	2331	216	201	93
SE	42	29382	700	46	2494	378	350	93
SW	30	22699	757	135	1910	270	262	97
CH	1	1688	1688	n/a	n/a	9	9	100

Night?	Tues	Wed	Thurs	Fri	Sat	Sun	Mon
Days	59	90	263	1571	397	174	105
Percent	2	3	10	59	15	7	4

Large Yellow Underwing

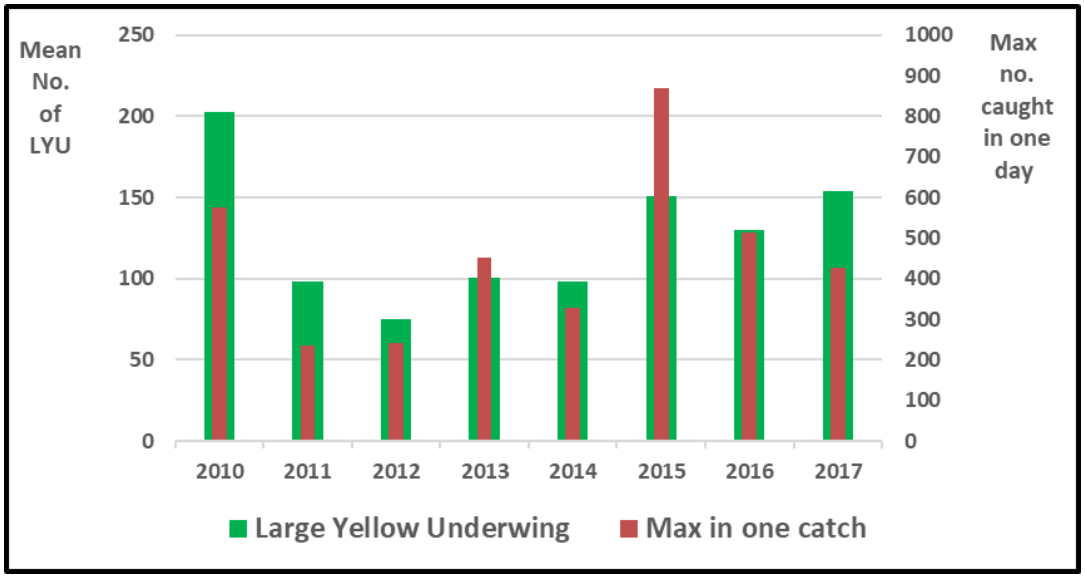
This month's outstanding moth is the Large Yellow Underwing which increased from last year's mean of 130 moths to 156 this quarter. Figure 8 shows the mean number of moths caught per region together with the maximum number caught in one trap. It can be seen that at least one recorder in each of three regions found over 300 of these moths in one trapping. It was also interesting to see that two recorders in Scotland and the Northeast caught identical maximum numbers of moths albeit in weeks 33 and 34 respectively. My congratulations and commiserations to all recorders who found their traps full of these moths.

FIG 8 GMS 2017 3rd Quarter – Number of LYU per region & the Maximum Number Caught in One Catch



Looking at the past seven years (Fig 9), 2017 compares favourably with earlier years exceeded only by 2010.

FIG 9 GMS 2017 3rd Quarter – Number of LYU 2010 – 2016 & the Maximum No Caught in One Catch.



An unusual 34 days of September - David Baker

Although I had intended to concentrate on the calendar month of September 2017 I must add the previous four days as being very unusual for me and include an honorary September day. Adjacent to my moth trap on the morning of the 28th August was a beautiful moth which I recognised as being either the Large or Small Ranunculus. On measuring it was found to be a Small Ranunculus which had recently, from 2010 onwards, extended its northern range only as far as the Rotherham/Doncaster area. It now appears that I may well have recorded the most northerly sighting of this moth to date and here's hoping that our more northerly members also record it in the near future.

Now, on to the real September!. On the 6th I emailed my friend Dave Laughlin at nearby Askham Bryan and sent an image of an aberrant Garden Carpet, almost devoid of its usual black costal markings. In return he sent an image of a Green Carpet recorded on the 3rd with the standard black costal markings blended to form a single black patch.

On the 10th I found a very pale looking micro on the window pane adjacent to my trap. My initial thought was *Acleris variegana* but I could not find an image to suit in either Manley or Sterling and Parsons. Eventually I turned to a digital copy of an older book by Bradley, Tremewan and

Smith which uses text and illustrations from The Ray Society 1973. It turns out that my thoughts were correct and it was “an uncommon form *(f. argentana,* Sheldon*)* apparently most frequently found in the North of England”. So, some of the old books are still very valid.

All this is nothing to do with our repaired river bridge, surely!

Things then settled down, the weather cooled, and I wasn’t even getting the expected autumnal moths. It wasn’t until the 26th when I recorded my latest ever Light Emerald followed by a Willow Beauty and Ruby Tiger on the 28th of the month.

The weather had certainly warmed up again, into the 14 degree mark, and obviously encouraged the later generations of these species to move around. So, that was it then!

But no, just after the usually cool Friday GMS recording night we had a warmer Saturday and resting on the outside of the moth-trap was the same Light Emerald (wing apex damaged) and a pale looking geometer. Under inspection, and better light, it turned out to be a later generation Engrailed moth. Certainly my latest sighting!

Our Yorkshire readers may well find this article in both the GMS Newsletter and the BC Yorkshire Argus magazine. Either way don’t forget that membership of both groups is always easily available and all will be welcomed.

Beginning Moth Trapping; Lessons Learnt – Anne Donnelly

I'd never heard of the GMS until my local Environmental Records Centre forwarded an e-mail from Mike Cook, the regional co-ordinator for the North East. I told Mike that I'd been idly looking for a second-hand moth trap. It's not that I'm too mean to buy new (honest!), but I didn't want to get something and then find that I wasn't interested and stick it in a cupboard to gather dust!

Anyway, Mike thought it was unlikely that I'd find a second-hand trap but he would ask around. Amazingly Barry Robinson said that yes, he had a spare trap and that if I promised to use it I could have it. If I didn't enjoy moth trapping I could pass it on to someone else or give it back to him. As his fee for facilitating the deal Mike asked me to submit a summer's worth of data to GMS. Mike and his wife Christina kindly delivered the trap one Saturday morning in February and explained how to use it. So I was all set to begin trapping.

When I began I knew the name of three moths - Silver Y, Angle Shades and Hebrew Character. Of the three I could probably recognise only the Angle Shades. Now, after a season of GMS I've managed to trap every week of the season and I've learnt a few lessons along the way!

Don't worry when the trap is empty
I possibly picked one of the worst springs to start moth trapping. I hardly saw any moths during the first few weeks. Despite the regular postings on the Facebook group saying what a bad year it was and how few moths were about I was seriously starting to think that I was doing something wrong. I knew that the light was on and I didn't think that there was much else that could go wrong but surely there should be some moths! Other people started to get moths and still I didn't have any - or perhaps one - and there were weeks when I did think of giving up. But finally there was a week with a couple of moths and then five! At least when there are none there's no worry about trying to identify them.

They don't look like the pictures in the book!
What fun I had trying to identify the moths once they arrived! I'm not a "visual learner" so identification is not always easy for me. Even with some quite straight-forward birds I have to learn little tricks to help me remember them. But I thought that moths might be easier than birds. I'd just compare the moth with the picture in the book and at least I'd have the moth in front of me rather than a fleeting glimpse of a bird as it flew off.

But there were times when I'd compare my moth with every single picture in the book and still not find a match. When I asked on the Facebook group there was always someone willing to help and once I had a name I could look at the book again and find that it still didn't look like its picture! Luckily both the Northumberland Moths and the UK Moths websites include pictures of variations of many species so I was eventually able to satisfy myself that the identification was correct.

Don't expect to pot up all the moths

I didn't know much about moth trapping when I started. I did know that you put the moths into little pots while you identified them. Also that you could put them into the fridge to keep them cool and dark so they wouldn't be too active. Although I didn't rush out to buy lots of pots I did save some little plastic tubs from coleslaw, etc. so I was prepared for a few moths. Obviously that was fine at the start. I think I even got to the point of having about a dozen in pots in the fridge. This got to be a bit of a problem as Saturday is my usual shopping day and I was struggling to find room in the fridge for food amongst the moths! Finally I realised that if I knew what it was there was really no need to catch it and put it into a pot. I could just make a note of it and release it again. So I got my fridge back!

Don't worry about moths escaping

When Mike and Christina delivered the trap they explained the trapping process and one of the things that Christina said was not to worry if moths escaped. That's easy to say but it's still rather distressing when a moth is battering itself against the kitchen window trying to escape. Once I started to get a few active moths - the Large Yellow Underwings were by far the worst - I started emptying the trap next to the back door. That way if something gets free and I can't get it into a pot I can simply open the door and set it free. It's also turned out to be quite useful for releasing various flies that are in the trap.

Be prepared

The number of times I've started to empty the trap and found that I haven't got a vital piece of equipment - my glasses are in the living room or the camera is on the other side of the kitchen. I've got a pot ready to put the moth in but no lid to put on the pot. I'm gradually learning what I need and putting it all ready next to the trap before taking the lid off.
I am also remembering to make sure the camera is on the correct setting before I start. An out-of-focus photo taken of a moth using landscape mode is not going to help identification!

Don't open the trap next to a sink full of washing-up water!

Before I started opening the trap next to the back door I used to stand it on the kitchen bench. This was easier as it meant I wasn't crawling around the floor. Actually I've found this moth-trapping business involves quite a lot of crawling around as I often have to get on my hands and knees to photograph a moth on the wall near the trap.

Anyway when the influx of Diamondback moths arrived it was probably my first experience of having a few moths to cope with at once. And, being small, they were quite lively. I'd left a dish full of water in the sink right next to the trap and a couple of them decided to try swimming. I had to be pretty quick to rescue them and now one of the first things I do before I check the trap is empty the sink. I don't want any more waterlogged moths!

Don't release moths when there are sparrows waiting to chase them

Once I realised that I didn't need to pot all the moths I started simply releasing them as soon as I'd identified them. It didn't seem fair to keep them indoors when they could spend the day resting on a bush in the garden. Then the Large Yellow Underwings appeared and some of them were a bit lively. They didn't want to rest on a bush; they wanted to fly free and soar away above the house. I've a healthy population of House Sparrows visiting the garden and they certainly liked the look of those moths. I never saw them catch a moth but it was a close thing.

So I decided I needed to keep the moths indoors until dusk and the sparrows have gone to roost. Someone mentioned on Facebook that they put the moths into a large box so that's what I started doing. Anything that I've identified either goes into a cardboard box with some egg boxes to rest on or stays in the trap. Once it's getting dark the box and the trap go back outside and the moths can leave when they're ready. Some of the lazier ones are still there the next morning!

The moths will wait
The recommended GMS night is Friday and that makes perfect sense - people are more likely to have more time for moths if they're not going to work that day. But I like to do my supermarket shopping early on a Saturday morning - I hate being in the shop when there are lots of people around. So I found myself rushing to get the trap emptied and moths in pots before going out. Then I realised that if I simply noted the moths outside the trap and on the walls nearby I could cover the trap and put it in a cool, shady place until later in the morning when I could empty it at my leisure. Much less stressful for me - and probably the moths.

There's bound to be someone who can identify your moth even from a dodgy photo
I always tried to identify the moths myself and I'm quite pleased with my success. Identification is often difficult for me. But there are a lot of similar looking moths and there were quite a few that I wasn't sure about. Even though some of my photos were very poor there was always someone on the GMS Facebook group who was happy to help me out with identification.

Don't waste your time looking at pages of December-flying moths in June
There were a few times that I confidently identified a moth and then looked at the text to find that it was completely the wrong time of year for it to fly. I was already using the Northumberland Moths website to narrow down my search to moths found in the region but I learnt to check the flying period too.

All in all for a complete beginner it's been a successful year. I've trapped every week and contributed data to the GMS – even when all I had was an empty trap. I've discovered that there are lots of different moths using my garden – I had no idea there would be so many species out there. I even had a Poplar Hawkmoth – though not on a GMS night!

Huge thanks must go to Barry Robinson and Mike & Christina Cook for starting me off. To **everyone** who contributes to the GMS Facebook group for their advice, identification tips and photos – sometimes I recognised a moth simply because someone else had posted images of theirs. And to everyone who contributes to the Northumberland and UK Moths websites – the photos and maps on there are invaluable in helping me identify my catches

Northern Arches in Cumbria – Rob Pickett

On the morning of 8th July I retreated to the greenhouse as usual to process the night's GMS catch. With a minimum overnight temperature of 9.6 degrees expectations were low and indeed the catch was quite a small one (51 moths of 26 species). In amongst them was one that I couldn't immediately place and so I potted it for later inspection. This was a rare occasion on which my wife joined me for my morning catch and this nearly resulted in disaster as, on trying to get a closer look at the moth in question, she inadvertently set it free! After much frantic arm waving and general mayhem, we managed to get it safely potted again before it could escape through the open door.

At first glance the moth resembled a very small, very dark Dark Arches, but with orange cross-lines and a shaggy looking thorax. The only moths that sprung to mind were Dark Brocade (which I'd had occasionally before) and Northern Arches. Given that the latter had only ever

been recorded from one site in England, I was inclined to dismiss that possibility. On examination alongside *Waring and Townsend* I further convinced myself that it couldn't be Northern Arches as it wasn't a good match for the drawing there. However, I reserved my right to change my mind later and put it in the fridge!

I didn't have time to give it more thought for the next couple of days but it kept nagging away at me so eventually I took a photo and posted it on the county moth group page to get some second opinions. Our county recorder also thought it was worth investigation, so off it went to Scottish expert Roy Leverton who finally confirmed it as Northern Arches! Just shows it pays to persevere if you're not sure!

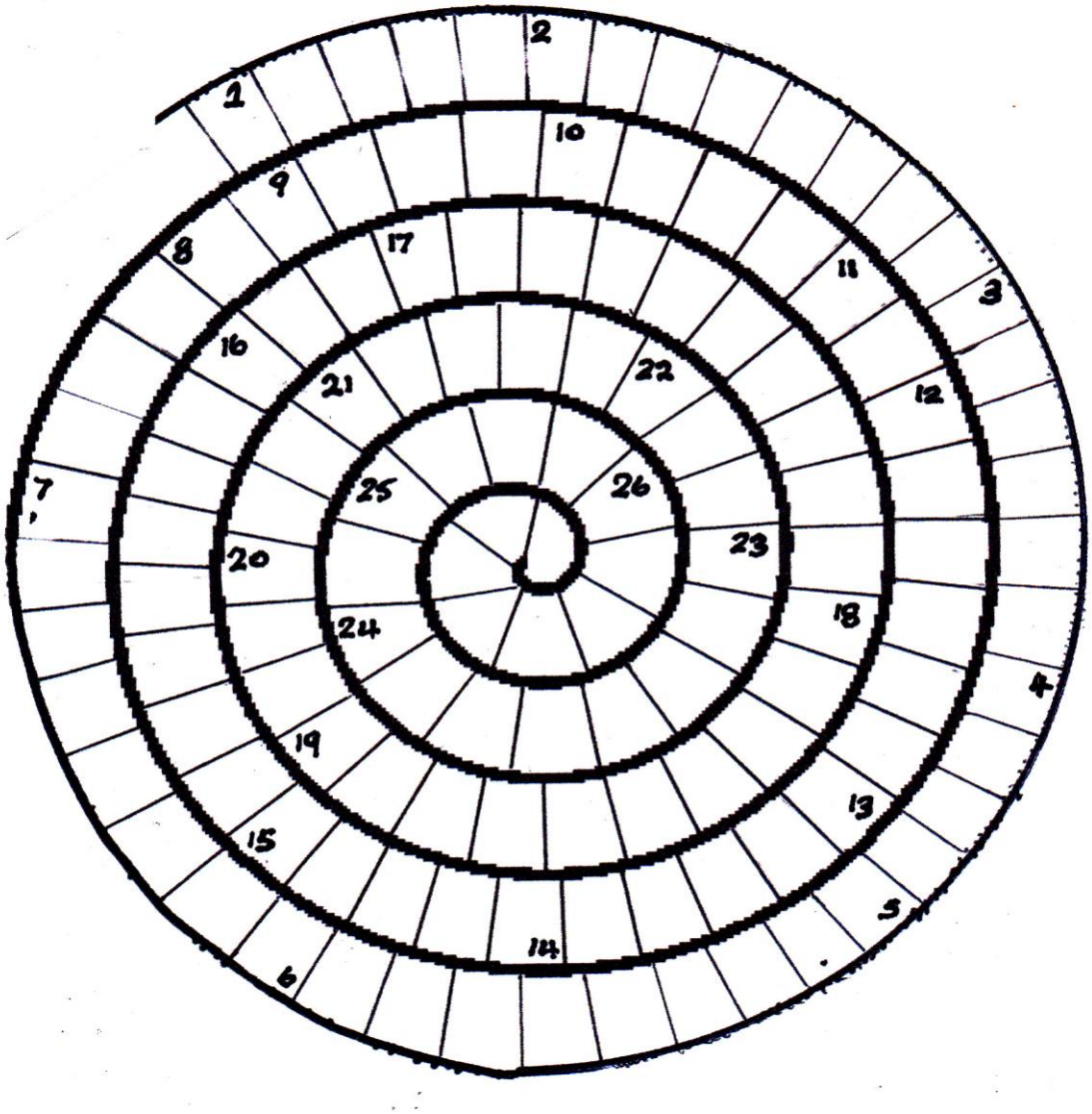
Although Northern Arches is found widely in upland areas in Scotland, the only previous records in England were all from one site in Northumberland (singletons in 1992, 1993 & 2005 and three in 2016, all at Belling Burn, NY694912). So, our little garden is the second English site which is a bit of a surprise! The moth is usually found in upland moorland above 200m a.s.l. and is thought to feed on grasses.

Our garden is at about 80m a.s.l. and although there is a small area of rough grassland nearby, it is certainly not likely looking breeding habitat. It is not a known migrant so it's interesting to wonder where it might have come from. The nearest moorland above 200m a.s.l. is about 6km away and the known Northumberland site about 35km. It must be lurking in other upland locations in Cumbria and Northumberland, waiting to be discovered!

Just goes to show what can turn up if you consistently trap the same site for a long time (this is my 4th GMS year). It helps retain the motivation to keep going!

Moths in a spin - Nonconformist

Identifying moths often gets me into a spin, how about you?



Try to complete the spiral by answering the following clues... Good luck!

(Editor's note. some words start with just the last letter of the previous one; others more than one, sometimes the last two and sometimes the last three. You can work this out from the word length at the end of each clue. I didn't and got very Uncertain and Confused!)

1. A far eastern character. 7
2. Bristly, but of different background to his predecessor. 9
3. A floored inebriate 8
4. ... but surely not in this fur coat ? 6
5. A captured floor covering in Cumbria? 7,6
6. Generic name of grassland moth suggesting stone-bearing. 10
7. Could be the fruit favoured by a fast-mover or a servant perhaps. 6
8. Brilliant item..... 3
9. ... could be this colour! 7

10. Species with an arboreal derivation.. 5
11. Complexion of an under-aged specimen? 4
12. As with 10 this may score high in woodlands. 8
13. Perhaps buff is a follower of this grade of tint? 7
14. Small dog under an umbrella... 6
15. ...where another small dog came from, och ay? 9
16. Barrier to local country-folk! 5
17. One skilled in measuring the earth. 12
18. An early settler in sunglasses! Is this what Sal needs. Agh not likely! 5,6
19. No. 9 could have come from this county... 5
20. ..... or even been banished from another. 5
21. Was this rare visitor in “Jaws” with it’s lute etc. ?? 7
22. Bull, but definitely in the recent records. 6
23. Hand out a keep away notice three times 6,3
24. .... banish to a western island with a large rug... 7
25. ..... and send on to a desolate moorland place to meet No 3. 7
26. Small species which chose our final resting place. 8

Crossword No. 8 solution by Nonconformist

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

Tailpiece - Norman Lowe

Am I alone in thinking that the moths have become noticeable by their absence recently? In the first 5 weeks of the Autumn Q4 period I've racked up a grand total of 89 GMS moths, compared with 1289 in the full Q3, 809 in Q2 and even 319 in the Spring Q1. Is anyone else finding the same? Send your thoughts on this or anything else to me at norman@enviro-consulting.com

Stop Press. Just had 65 moths of 17 species in my trap!

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 1000 'Likes'!

Facebook Group - https://www.facebook.com/groups/438806469608527/ - currently almost 2000 Members (not all active GMS participants). Membership is open to all and the GMS recording forms, instructions and useful micro-moth identification guides are available in the Files section.

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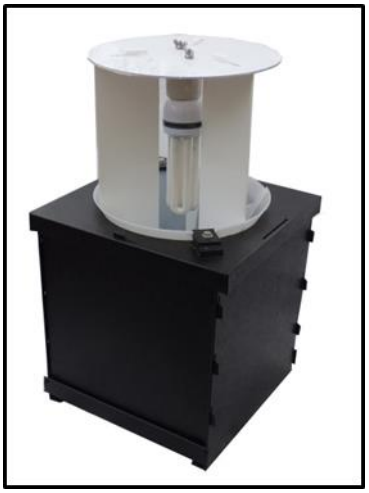

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