

GMS NEWS

GMS News
Weeks 10-18 Early Summer 2009



Comparing species which emerge in two recording quarters is not easy because of early and late emergence. The annual count will tell a more accurate story. But in the South-east region late emergence is not a factor in the decline of Common Swift with just 94 individuals from 28 gardens this year compared with 207 from just 13 gardens in 2007.

Introduction and UK situation**Norman Lowe**

Since Dave decided to take some holiday, I've been drafted in to digest all the results for the whole of the UK and Ireland and write the report. And a big task it is, too. I've made a few slight changes to the report (apologies, Dave) and I'd be glad of people's thoughts on these. So, please write in and tell us what you think.

Firstly, since this is a comparison of species across the whole scheme, I've confined my report to those species that have been recorded in all the areas. This means that I won't be including species such as Flame, Peppered Moth, Garden Grass-veneer and Elephant Hawk-moth since (as far as I can see) these are not recorded in all areas.

The following tables show the commonest species in the British Isles. These are the species recorded in all areas and scoring an average of more than 2 moths per garden. As usual Heart and Dart is well ahead of all the other species for early summer, but as discussed later on, this wasn't the case in every area. And many of you will be surprised to see some of the species in the table are actually quite rare in your area.

The commonest moths recorded throughout the British Isles

Position	Area	Total - 224 gardens	Mean per garden
	No. of gardens		
1	Heart and Dart	10790	48.17
2	Dark Arches	3589	16.02
3	Flame Shoulder	2918	13.03
4	Riband Wave	2288	10.21
5	Common Marbled Carpet	1975	8.82
6	Buff Ermine	1873	8.36
7	Light Brown Apple Moth	1870	8.35
8	Large Yellow Underwing	1806	8.06
9	Bright-line Brown-eye	1800	8.04
10	Brimstone Moth	1739	7.76
11	Straw Dot	1508	6.73
12	White Ermine	1296	5.79
13	Small Magpie	1295	5.78
14	Common Footman	1287	5.75
15	Snout	1067	4.76
16	Middle-barred Minor	836	3.73
17	Garden Carpet	798	3.56
18	Spectacle	736	3.29
19	Light Emerald	723	3.23
20	Poplar Hawk-moth	607	2.71
21	Scalloped Hazel	533	2.38
22	Fan-foot	506	2.26

Differences across the British Isles

So what are the differences for these 22 species between the areas? For those amongst you who like rows and rows of numbers, the Table below shows the mean number of moths in each area. If you don't like numbers, ignore the table and just read the words! Most of you will be familiar with the area abbreviations but anyway, here they are:

- CI Channel Islands
- CY Cymru, sometimes also known as Wales
- EE East of England
- EM East Midlands
- IR Ireland
- NE North East England
- NW North West England
- SC Scotland
- SE South East England
- SW South West England
- WM West Midlands
- YH Yorkshire and Humberside

Species frequencies by area 2009

	CI	CY	EE	EM	IR	NE	NW	SC	SE	SW	WM	YH	Total
Heart & Dart	67.17	33.13	40.21	96.63	9.25	33.63	7.44	1.45	82.42	64.88	51.61	28.31	48.17
Dark Arches	72.67	7.00	13.21	30.32	4.00	10.88	1.44	3.18	46.42	14.12	8.93	13.92	16.02
Flame Shoulder	28.00	15.87	9.58	16.26	8.13	1.13	3.00	2.18	15.11	29.27	7.57	8.77	13.03
Riband Wave	11.17	4.00	9.00	18.32	3.38	3.75	2.44	1.09	22.84	11.30	12.84	6.54	10.21
Common Marbled Carpet	8.83	7.74	2.04	7.11	10.88	4.63	2.94	3.09	9.89	18.82	11.18	4.15	8.82
Buff Ermine	30.17	12.00	7.21	4.74	6.13	0.63	1.75	0.27	5.53	18.03	5.82	8.62	8.36
Light Brown Apple Moth	17.67	3.00	5.96	10.42	14.50	17.50	2.63	0.00	11.53	10.12	9.93	5.08	8.35
Large Yellow Underwing	21.50	11.48	5.75	5.42	1.75	9.88	2.50	3.09	5.68	16.12	5.57	9.23	8.06

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Bright-line Brown-eye	32.00	3.74	5.29	15.21	3.13	2.25	1.00	0.64	9.42	12.42	7.98	7.69	8.04
Brimstone Moth	11.50	7.65	3.38	8.00	9.50	7.50	2.00	4.18	6.37	9.58	10.80	10.38	7.76
Straw Dot	2.33	3.61	3.88	9.05	1.63	0.75	1.69	1.36	8.16	16.85	6.52	6.69	6.73
White Ermine	27.67	6.00	4.88	1.58	4.50	0.38	0.63	4.55	6.53	12.18	4.64	1.23	5.79
Small Magpie	9.17	3.00	6.71	10.79	2.13	1.38	1.00	0.36	8.53	7.00	6.55	5.85	5.78
Common Footman	8.50	1.78	10.88	19.63	0.75	0.38	0.81	0.18	8.11	3.15	5.32	3.46	5.75
Snout	4.17	4.43	3.13	4.53	2.38	2.50	2.25	2.64	3.32	5.58	6.48	11.00	4.76
Middle-barred Minor	5.33	2.09	1.54	7.68	3.00	3.25	0.38	2.45	4.53	2.12	6.32	4.31	3.73
Garden Carpet	4.67	2.17	2.08	5.32	3.25	6.00	0.56	1.73	4.05	4.73	4.34	3.31	3.56
Spectacle	3.50	2.70	3.38	4.21	3.13	0.88	0.50	4.09	1.84	5.09	3.48	3.92	3.29
Light Emerald	4.33	3.87	2.58	2.21	2.00	1.63	3.00	3.09	5.37	3.55	3.02	3.15	3.23
Poplar Hawk-moth	5.83	4.22	2.79	1.53	1.38	2.75	0.31	5.18	1.37	3.58	2.70	1.62	2.71
Scalloped Hazel	2.00	2.61	0.17	2.68	5.25	3.88	0.56	2.00	0.68	2.39	3.89	3.00	2.38
Fan-foot	1.50	1.61	1.33	3.79	2.88	2.38	1.06	1.55	1.68	2.06	3.34	2.54	2.26

For each species I've shown the highest mean figure in red and the lowest in blue. Even without looking at the moth species themselves it is immediately obvious that the Channel Islands have recorded the greatest number of highest means and NW England the lowest. Two areas (Ireland and NE England) recorded both a "maximum" and a "minimum" and two areas, Wales and the West Midlands, recorded neither, arguably bearing out Dave's suggestion that the West Midlands area can claim to be reasonably representative of the British Isles as a whole.

Some species showed big variations in numbers across the areas. For example Heart and Dart was 66.4 times commoner in the "red" area than in the "blue"; other high ratios were: Dark Arches 50.6, Bright-line Brown-eye 50.3, Buff Ermine 48.3, White Ermine 73.8 and, highest of all, Common Footman 108.0. Light Brown Apple Moth wasn't found in Scotland. Some of these ratios may be because species have a limited distribution, so perhaps for example Common Footman is relatively scarce in the north. But others seem more difficult to understand.

Other species seemed to be recorded in much more consistent numbers. The ratio for Common Marbled Carpet was 9.2, Brimstone Moth 5.8, Snout 4.9, Fan-foot 3.6 and Light Emerald only 3.3. Based on these results it would seem that in 2009 at least these species were spread quite evenly across the whole area.

Remember that a high figure isn't in itself more interesting than a low one and the NW England figures are just as valuable and interesting as those from the Channel Islands. And even though Common

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Footman was recorded in low numbers in Scotland and Scalloped Hazel almost as rarely in the East of England, these figures contribute to an overall average.

So why were the numbers of some species so variable across the area and others more evenly spread in 2009? As usual, if you'd like to contribute to this debate, write to us at the Newsletter.

Comparisons with previous years

How do the figures compare with last year? For the British Isles as a whole we can only show figures for this year and last, whereas 4 areas, West Midlands, SE England, East England and Wales have been recording for 3 years and so we can see how the numbers have changed since 2007.

For the British Isles I've taken last year's Top 10 and compared them with the figures for this year. In the table below, all those that have increased are shown in black and those that have decreased are in red. In fact all but 3 increased in 2009 and of those that fell, the figures for Large Yellow Underwing might be explained by its flight period, which is just beginning by Week 18. So that leaves just 2 decreases, Light Brown Apple Moth (which some of you may not be too worried about) and Shuttle-shaped Dart. Of the remainder, Dark Arches, Common Marbled Carpet and Flame seem to have done particularly well.

Changes from the 2008 Top 20

Name	Mean per garden		% change
	2008	2009	
Heart and Dart	40.52	48.17	18.88
Flame Shoulder	11.09	13.03	17.46
Light Brown Apple Moth	10.01	8.35	-16.60
Large Yellow Underwing	9.58	8.06	-15.84
Dark Arches	7.93	16.02	102.05
Flame	6.11	10.58	73.16
Brimstone Moth	6.09	7.76	27.48
Shuttle-shaped Dart	5.97	4.35	-27.14
Buff Ermine	5.76	8.36	45.17
Common Marbled Carpet	4.78	8.82	84.46

Looking at individual areas the picture is even more complicated. For the 4 areas where figures are available since 2007, Heart and Dart has gone down in numbers in 3 of the 4 areas, especially Wales, but has increased slightly in SE England, where catches generally seem to have gone up. On the other hand the numbers recorded from E England have gone down for most species. Differences from year to year of some species, such as Large Yellow Underwing are probably due in part to earlier or later flight periods and a better understanding will probably have to wait for the end-of-year figures.

Area changes 2007 to 2009

Common Name	% change 2007 to 2009			
	WM	SE	EE	CY
Heart and Dart	-56.09	3.73	-58.69	-84.52
Flame Shoulder	70.45	285.34	-10.18	5.79
Light Brown Apple Moth	1.97	102.57	-45.83	-7.69
Large Yellow Underwing	-58.2	-66.1	-85.06	32.09
Dark Arches	7.36	167.08	65.1	-29.15
Flame	30.59	98.92	11.67	2.38
Brimstone Moth	118.53	143.07	55.53	42.24
Shuttle-shaped Dart	-31.11	66.05	-56.59	-46.32
Buff Ermine	25.93	132.19	-32.44	-15.78
Common Marbled Carpet	167.51	162.46	53.5	96.43

Species lists

Whilst these results are interesting I wonder if we could get even more value from them if we had a more standardised species list? Perhaps we could all agree on a core “British Isles” list which would form the basis of overall results and statistical analysis, then add more species that are of especial interest in our own areas. This would possibly mean that some “core” species would not be recorded at all in some areas, but this result is itself of great value. In any case, I’m sure that most recorders find that some of the species on their “Common Moths” list do not occur in their gardens.

Again, what do you think? Should we discuss this at our AGM for 2010?

First half in Scotland.

Heather Young, GMS regional co-ordinator.

Scotland has not enjoyed the prolonged spells of warm sunny weather experienced by other parts of the British Isles, and my trap has often been full of soggy egg-trays, caddis flies and, for a few weeks, many thousands of dead midgies – at least there’s an up-side!

With 14 sets of results returned (a few delayed entries were added to the 11 sent off to HQ), I can report that the *Orthosia* species still occupy the top three spots in the cumulative charts, but for how much longer – I’ll hazard a guess that the Large Yellow Underwing may make a strong challenge by the end of Q3.

The additional information alters slightly the Scottish top 20 for Q2 as reported in the overall summary, with the Diamond-back Moth nipping in ahead of the Poplar Hawkmoth to take third place, largely due to a major influx into Anne-Marie’s coastal garden in Anstruther, Fife. The same garden seems popular also with Heart & Dart, allowing it to appear at Number 9, meaning Peppered Moth and Middle-barred Minor drop out of the chart. Interestingly, the appearance of Light Brown Apple Moth in Anstruther justifies its inclusion in the Scottish list (in anticipation of a continued range expansion from NE

England). Other than a slight reshuffling of the minor places, the top 20 moths for Quarter 2 are as reported.

Cumulatively, Early Tooth-striped remains at Number 4, but our highest new entry, coming straight in at Number 5, is rather surprisingly the Map-winged Swift, occurring in 10/14 gardens, with a bumper crop for Lewis in Killiecrankie. Common Swift, despite its name, was recorded in only two gardens,



Map-winged Swift © Heather Young

but perhaps a few more may yet turn up. Clouded-bordered Brindle was a close second over the quarter, occurring in the same number of gardens as the Map-winged Swift, but a little more evenly-spread, although neither cropped up in the far north or in Glasgow. The Chestnut remains at Number 7, but a new entry at Number 8 is the previously-mentioned Diamond-back Moth, just ahead of the ever-popular Poplar Hawkmoth, appearing in 10/14 gardens across the country, and even turning up on Scott's Glasgow balcony (Scott should receive a special award for persistence – how many other people had to wait until Week 16 to record their first GMS moth?). Silver-ground Carpet rounds off the cumulative top ten, seemingly common

throughout, although not reported from Douglas's Castle Douglas garden (Dumfries & Galloway). Bubbling under are the Brimstone Moth, Mottled Beauty (more common in the north) and White Ermine (more numerous in the south).

An interesting distribution pattern for the top-20 species Garden Grass-veneer (*Chrysoteuchia culmella*) is emerging, from Anstruther at the mouth of the Forth estuary and following the river to my own Bridge of Allan garden (well almost!), with Mark in Linlithgow and Bob in Fallin also recording them, but no-one else.

Notable other records made during the course of the GMS include a new confirmed VC record of Rufous Minor, second VC record of Scarce Prominent and first VC record of July Belle for 30 years (all by Mark in Linlithgow (VC84)). Christine in Rosehall, Sutherland continues to trap some rather spectacular species, including the 'Nb' Saxon pictured below. My own GMS efforts have recorded several 'local' species, including another July Belle, but I will have to wait for my county moth recorder to cast a knowing eye over them before I can claim anything outstanding. 'Local' species trapped in Aboyne by Harry and / or Margaret include Small Magpie, Clouded Buff, Pale Prominent and Buff-tip.



The Saxon © Christine Blanco



Clouded Buff © Harry Scott

All the above may be common further south, with the exception of the Saxon, but very exciting for us!

Hopefully we will eventually have a summer here (OK, the last weekend in May was a belter!), and I look forward to reporting on what turns up in Q3 – what price on bucket-loads of Large Yellow Underwings? Happy moth-ing.

East Midlands Overview

Roger Freestone, East Midlands GMS Co-ordinator

GMS recording in the East Midlands is only in its second year and has expanded from 6 recorders in 2008 to 25 registered for 2009. The East Midlands area covers VC32 (Northamptonshire), VC53 (South Lincolnshire), VC54 (North Lincolnshire), VC55 (Leicestershire with Rutland), VC56 (Nottinghamshire), and VC57 (Derbyshire).

The split of recorders is such that Leicestershire dominates as can be seen from Figure 1 below. This is a reflection on the enthusing talk that Dave Grundy gave to the Leicestershire Entomological Society earlier this year which resulted in the recruitment of extra VC55 recorders.

It would be great if we could recruit more recorders for 2010 and get a more even split across the East Midland’s VCs, so if you anyone knows of any moth-ers who would like to contribute to the GMS then please ask them to contact me at roger@freestone500.freerve.co.uk and hopefully we can increase our recording at a similar level that was achieved this year!

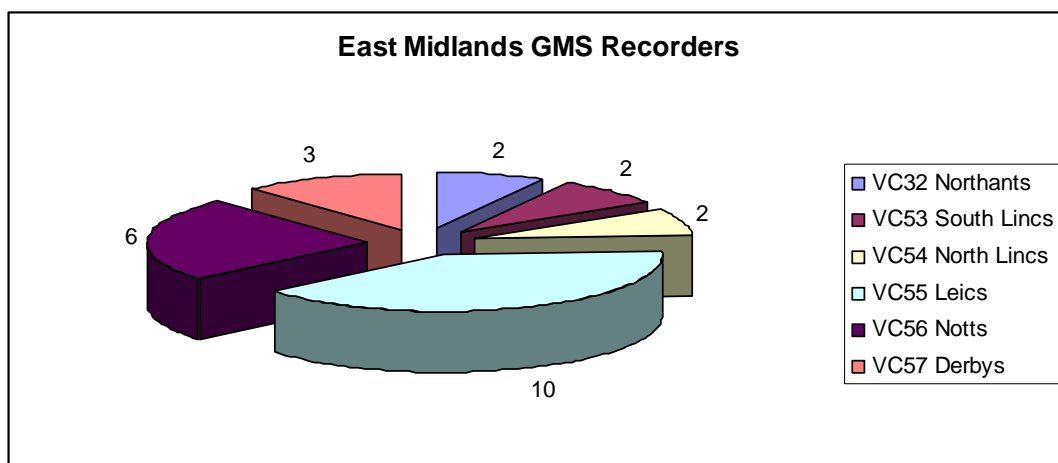


Figure 1: Distribution of East Midlands Recorders 2009

Summary of East Midlands Results for Weeks 10 to 18

We have received 19 sets of records out of 25 for Weeks 10 to 18, which is up by 2 compared to Weeks 1 to 9 and is a very pleasing response. We understand that it is not always possible to get data back in such a short time for the interim reports, and thanks to all those recorders who returned their data.

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It is not possible to make any comparisons of these data with previous years so the data is presented as received and I will make no attempt to make any particular comments. The data that is generated by the GMS will be used in the future to look at trends to aid our understanding of what is happening to garden moths in the East Midlands and nationally.

However, I thought it might be interesting for GMS recorders and especially EM recorders to see what else has happened in the region during weeks 10 to 19. Table 1 is a summary of the received data and some of these data are visually displayed in charts below.

	East Midlands	VC53 & VC54	VC55	VC56	VC57	VC 32
No. of Returns	19	3	7	6	3	0
Total No. of Moths	9,274	1,860	3,743	2,964	709	N/A
Average/Garden	509	620	535	494	236	N/A
Maximum	1,553	1,124	971	1,553	301	N/A
No. of "Nothing"	3	2	0	0	1	N/A
No. of Species	169	113	141	135	95	N/A

Table 1: 2009 East Midlands Data Summary: Weeks 10 to 18

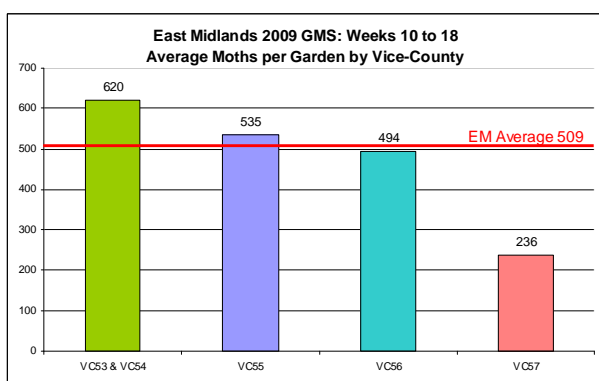


Figure 3: Average Moths Recorded per Garden County

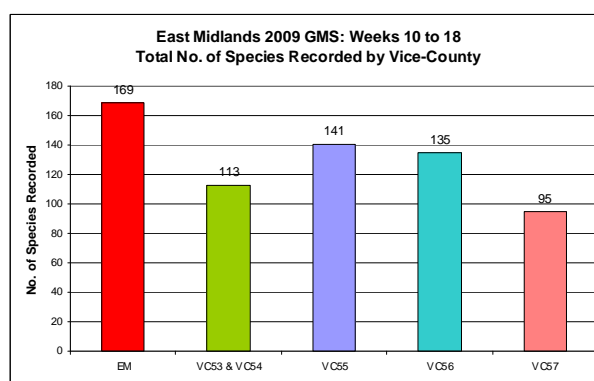


Figure 4: Total Species Recorded per Vice County

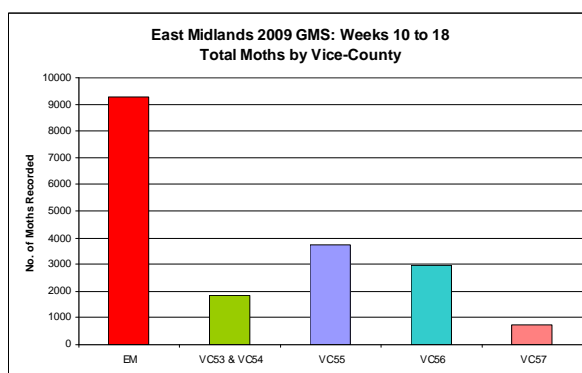


Figure 5: Total Moths Recorded per Garden

No regional article is complete without a “Top Twenty” of moths recorded and this one is no exception. Table 2 presents the Top Twenty moths by number recorded during Weeks 10 to 18.

	Common Name	Total Moths	Ave Records per Garden	Maximum Recorded	% of Gardens Recorded
1	Heart & Dart	1,836	101.4	293	100%
2	Dark Arches	576	31.0	171	95%
3	Rustic Shoulder-knot	431	23.9	116	89%
4	Common Footman	373	20.6	206	89%
5	Riband Wave	348	19.2	58	100%
6	Flame Shoulder	309	17.2	84	95%
7	Garden Grass-veneer	298	16.6	261	32%
8	Bright-line Brown-eye	289	16.1	56	84%
9	Flame	277	15.4	88	79%
10	Willow Beauty	223	11.4	27	95%
11	Small Magpie	205	11.3	54	95%
12	Light Brown Apple Moth	198	11.0	43	74%
13	Straw Dot	172	9.6	42	74%
14	Brimstone Moth	152	8.4	24	84%
15	Middle-barred Minor	146	8.1	51	74%
16	Common Marbled Carpet	135	7.5	49	79%
17	Clouded Silver	115	6.4	57	68%
18	Elephant Hawk-moth	115	6.3	25	89%
19	Common Wainscot	107	5.9	51	47%
20	Large Yellow Underwing	103	5.7	10	84%

Table 2: 2009 East Midlands “TopTwenty”: Weeks 10 to 18

With such limited data, results can be easily skewed by a single dataset as can be seen by the appearance at No. 7 of Garden Grass Veneer. Garden Grass Veneer was only recorded by six recorders but John Clarkson recorded a total of 256 in his VC56 Southwell garden; he recorded 220 of these during week 17!!! This demonstrates how important it is to look carefully at recorded data to understand what the data actually tells us and not just take it on face value.

With the exception of Garden Grass Veneer the rest of the Top 10 presents no other surprises. However, Common Wainscot reached No. 19 in the “Top Twenty” but was only recorded in 9 gardens and of the total 107 recorded; Angela Davies recorded a total of 51 in her VC55 garden and recorded the grand total of 23 during Week 15!

East Midlands “Golden Garden”

On delving further into the data it appears that Pamela Carter of Stamford in VC53 has the “Golden Garden” in the East Midlands where she recorded the most moths, the highest single species count and the most species recorded during Weeks 10 to 18. I am sure we are all jealous of her garden.

- Moths recorded: 1,124
- Highest single species recorded: 254 Heart and Dart (60 in Week 16)
- No. of species recorded: 93

Due to the tight turn round to get this article written, I believe the above is a reasonable interpretation of the received data but I am aware some errors may have crept in.

Finally a big thank you again to all recorders who returned their records which has enabled me to have a play with the data but more importantly this data has been included in Dave Grundy’s more rigorous analysis of records across all regions of the GMS.

Roger Freestone, East Midlands GMS Co-ordinator
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South-east region top twenty weeks 10-18 Malcolm Bridge and David Gardner

David and I share the co-ordination of the south-east region and we would like to thank the twenty nine colleagues from whom we have received GMS data for weeks 10-18. This has enabled me to produce a top twenty for the region and to show, where available, comparisons with 08 and 07. When Dave Grundy returns from China I will ask him to return some 07 and 08 data so that I can compare more fully the performance of GMS moths this year with the two preceding years. I’ve only just learned (thanks to Norman Lowe) how easy it is to compile a regional summary. The many N/As in the columns can be easily filled when I recover 07 and 08 data and the weeks 18-27 summary should be more insightful. Where full data is at hand it would appear that Heart and Dart, Dark Arches, Common Marbled Carpet, Flame and Brimstone are experiencing currently their best year of the three years of GMS in the South-east. Light Brown Apple and Shuttle-shaped Dart have slipped back from a 2008 high. These comments are to be treated with caution but my general feel for 2009 is one of guarded optimism.

SE Region Top Twenty one moths wks10-18 (28 gardens)	Total	Mean (28 sites)	'08 mean (22 sites)	'07 mean (13 sites)
Heart and Dart	2863	102.25	55.27	79.46
Green Oak Tortrix	1408	50.29	N/a	N/a
Riband Wave	727	25.96	N/a	N/a
Dark Arches	689	24.61	17.77	17.38
Garden Grass Veneer (C.culmella)	682	24.36	N/a	4.23
Heart and Club	561	20.04	N/a	N/a
Inlaid Grass Veneer (C. pascuella)	476	17.00	N/a	N/a
Treble Lines	457	16.32	N/a	N/a
Willow Beauty	420	15.00	N/a	7.15

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Light Brown Apple (postvittana)	369	13.18	20.05	5.69
Flame Shoulder	304	10.86	11.50	3.92
Common Footman	301	10.75	N/a	N/a
Common Marbled Carpet	296	10.57	8.09	3.77
Flame	247	8.82	5.91	2.54
Elephant Hawk	234	8.36	N/a	N/a
Brimstone moth	234	8.36	7.45	2.62
Diamond-back (P. xylostella)	230	8.21	N/a	N/a
Small Magpie (E. hortulata)	220	7.86	N/a	N/a
Pale Mottled Willow	209	7.46	N/a	N/a
Straw Dot	207	7.39	N/a	N/a
Shuttle-shaped Dart	183	6.54	11.59	5.23

Some moths which have slipped out of the top twenty such as Large Yellow Underwing (218/13 gardens in '07 but 133/28 in '09) have yet to run their course. My initial feeling that the apparent decline reflected a later emergence in 2009 than 2007 (probably true) has been rather undermined throughout July by continuing low numbers in my own traps. One or two per trap is all that's showing by late July in SE London. Late emergence is not a factor in the decline of Common Swift with just 94 individuals from 28 gardens this year compared with 207 from just 13 gardens in 2007. Later emergence may be a factor in the apparent decline of Bright-line Brown-eye with 133 individuals from 28 gardens this year compared to 198 from 13 gardens in 2007. I am mindful that 2007 followed the last good summer that we enjoyed in recent years and that a longer sequence of data is necessary for valid comparisons to be drawn.

Early summer report from Wales – Norman Lowe

Here are the results from the 23 recorders that have sent in their records for the Early Summer, Weeks 10-18. The table below shows that as usual at this time of year the Heart and Dart is the commonest moth by far, but this year was only just over twice as common as the runner-up moth, the Flame Shoulder, whereas in some previous years such as 2007 it was more than 10 times as common.

Rank	Species	No.
1	Heart & Dart	762
2	Flame Shoulder	365
3	Flame	291
4	Buff Ermine	276
5	Large Yellow Underwing	264
6	Small Square-spot	239
7	Elephant Hawk-moth	202
8	Common Marbled Carpet	178
9	Brimstone Moth	176
10	Silver-ground Carpet	169
11	Dark Arches	161
12	Buff Arches	141
13	White Ermine	138

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14	Brown Silver-line	132
15	Mottled Beauty	126
16	Peppered Moth (Light)	125
17	Clouded-bordered Brindle	114
18	Triple-spotted Clay	105
19	Double Square-spot	102
19	Snout	102

I thought that I'd compare this year with 2007 and 2008 to see what differences we picked up and the results are quite striking as you can see in the Table below. Compared with last year all species showed increases except Heart and Dart and Large Yellow Underwing, but in 2007 this started flying particularly early which caused the higher number recorded in the period. In comparison with 2007, Heart and Dart decreased by a whopping 85%. Other species showing decreases over this period were Garden Grass-veneer which was at Number 2 in 2007 with 17.3 moths per garden but didn't make the Top 20 in either 2008 or 2009. And Hebrew Character was at Number 3 in 2007 and Number 4 last year but again doesn't feature this year, presumably because its flight season was a bit earlier this year. Also the Ermines do seem to be continuing there slow downward drift.

On the other hand there are some huge percentage increases including Buff Arches, which seems to have had a spectacular year, and Clouded-bordered Brindle, followed by Triple-spotted Clay and Double Square-spot.

Species	No.	No. per garden			% Change 2008- 2009	% Change 2007-2009
		2009	2008	2007		
Heart & Dart	762	33.13	43.8	214.0	-24	-85
Flame Shoulder	365	15.87	12.1	15.0	31	6
Flame	291	12.65	6.3	9.8	101	29
Buff Ermine	276	12.00	7.2	14.3	68	-16
Large Yellow Underwing	264	11.48	12.7	8.7	-10	32
Small Square-spot	239	10.39	5.2	2.1	102	389
Elephant Hawk-moth	202	8.78	1.5	4.3	471	107
Common Marbled Carpet	178	7.74	2.9	3.9	168	97
Brimstone Moth	176	7.65	3.4	5.4	124	42
Silver-ground Carpet	169	7.35	2.8	4.7	165	56
Dark Arches	161	7.00	6.5	9.9	8	-29
Buff Arches	141	6.13	0.5	0.4	1126	1433
White Ermine	138	6.00	3.8	8.1	59	-85
Brown Silver-line	132	5.74	4.1	6.6	39	-13
Mottled Beauty	126	5.48	4.1	7.9	33	-31
Peppered Moth (Light)	125	5.43	3.0	3.9	81	39
Clouded-bordered Brindle	114	4.96	1.5	0.3	230	1552
Triple-spotted Clay	105	4.57	1.5	0.5	204	813
Double Square-spot	102	4.43	1.0	0.8	327	454
Snout	102	4.43	1.9	2.1	135	111

In summary, most species have shown increases this year apart from a few whose flight periods span the border between our Spring and early Summer reports. However, the Ermines seem to be drifting

downwards and Heart and Dart has suffered a massive decline although, as reported elsewhere in this newsletter, this does not seem to have occurred to any great extent elsewhere. Can anyone think why this might be? Equally, why should other species such as Buff Arches become so abundant in comparison with previous years?

Heathland moths at a garden moth trap by Paul R Wheeler

One of the ironies of the Garden moth scheme is how we get most excited about non-GMS moths we find in our moth traps. Accounts of Alder Kitten and Kentish Glory in GMS news inspire us to keep running our lights. The moths I regularly look forward to are heathland specialists turning up in my garden. I live only 1km from Chobham Common NNR, the largest tract of heathland on the Bagshot beds outside the New Forest- Dorset area. This geological formation gives nutrient poor, acid sandy soils. After two poor years, 2009 is looking up with first ever sightings of Beautiful Brocade, Striped Wainscot and the enigmatic Goat Moth in my garden trap. These moths provided the motivation to write an article.

The table shows the moths that have made the flight of at least 1km from the NNR to my garden. Nearly all have been recorded more on the NNR, even though I run the trap only on average 4 or 5 times a year on the NNR and about 40 times a year in my garden. The maximum values are independent of how often the trap is run, so long as it is done during the flight period, but the values are low and they represent a very small sample. Some species are actually quite well represented in the garden and may use heathers, etc that are grown as garden plants. You can see why I suggested True Lovers Knot as a GMS species. I've seen the caterpillars of Beautiful Yellow Underwing moths on heathers in gardens 6 miles from heathland. Actually, the heathland once extended for miles further than the areas that remain in the north-west corner of Surrey where I live: the urban sprawl that covers Woking to Woodham was all once wild heath, and the Beautiful Yellow Underwing is happily holding on. There are a lot of other moths, commonest on good quality heathland, that nevertheless inhabit this wider area- Fox, Emperor, Scalloped and Pebble Hook Tips, Streak, Grey Birch, Scarce Footman, Marbled White Spot are all examples and regular visitors to my garden moth trap.

BF no.	Species	gdn ever	NNR ever	gdn max	NNR max
752	<i>Aristotelia ericanella</i>	6	76	3	10*
856	<i>Anarsia spartella</i>	3	4	3	2
1117	<i>Ancylisunguicella</i>	1	1	1	1
1442	<i>Pempelia palumbella</i>	15	37	3	5
1443	<i>Pempelia genistella</i>	3	15	1	8
162	Goat Moth	1	1	1	1
1665	Grass Emerald	2	13	2	3
1670	Small Grass Emerald	1	6	1	1
1701	Dotted Border Wave	2	13	1	4
1831	Ling Pug	3	12	1	4
1846	Narrow-winged Pug	31	65	6	6
1905	Horse Chestnut	7	28	2	5
1970	Grass Wave	1	24	1	5
2040	4- dotted Footman	3	38	2	15

2085	Archers Dart	1	0	1	0
2118	True Lovers Knot	155	509	14	98
2132	Neglected Rustic	19	6	5	3
2135	Heath Rustic	1	8	1	2
2157	Beautiful Brocade	1	3	1	1
2196	Striped Wainscot	2	16	1	3

* higher count during a walk- 50 disturbed from heather during day

A select few have made one or very few chance visits to my garden trap- see 1s, 2s and 3s ever. The Archers Dart is unusual in that I have never seen it on the NNR so its appearance in my garden was unexpected. Moths do fly- of course- and it could have been from anywhere. I have even got downland- associated species such as Dark Umber and there are the classic migrants such as Straw Underwing and The Gem for which there are no records of residence.

I can't be a complete moth-ing couch potato though. There is still a good list of moths for which visits to Chobham Common NNR have been required. These include Purple-bordered Gold, Chevron, Bordered Grey, Small Chocolate Tip, Dark Tussock, Silvery Arches, The Anomalous, Marsh-Oblique barred and the sundew-eating plume *Buckleria paludum*... and there are others I've never seen in the garden, such as Plain Wave, Silky Wave associated with rough ground generally. Field work is good and setting up the moth trap with woodcock and nightjar calling, expecting specialists and rarities not just in ones and twos, and wondering if you're going to see something new to you, is still a bit special.

“It all started when.....” from Pat Parminter, Worcestershire.

It all started when my friend and colleague from the Worcestershire Wildlife Trust. Mike Averill, invited me to go to an Entomology Day at Heightington Village Hall. I had a really interesting day with some fascinating talks, one of which was by Dave Grundy about the Garden Moth Scheme.

I've been interested in natural history since childhood, many years now, but I have never undertaken any really serious species recognition work, however I was keen to have a go, thinking I knew quite a lot about moths. How wrong can you be!!

Well I volunteered and set about getting a moth trap. The ones on sale were very expensive so I thought I would make my own. I bought a large plastic storage box and some sheets of Perspex, an MV lamp and ballast from a local electrical supplier and my husband set about putting it all together, he is good at making things.

All set up in our long narrow suburban garden and raring to go on the first GMS night, it all actually worked and after watching it for a couple of hours, seeing only one moth fly right past it, I went to bed wondering if it would still be working in the morning. It was and I had caught just two moths, a twin spotted Quaker and a lead coloured drab, neither of which did I immediately recognise. Oh dear what was I letting myself in for!

By the third week I saw a few moths round the light but noticed there was a very small gap between the top edge of the box and the Perspex slides where a small moth escaped, cotton wool to the rescue, “That should stop them!” said I. It did but the small moths got tangled up in it and were impossible to identify so I tried foam rubber the next week that works much better.

After struggling with several new species each week, every spare moment was used to study the two fairly basic reference books I have. I scanned pictures of all the moths on the GMS list onto my computer and arranged them in order of their flight periods, “current moths” and “future moths”, this gave me less to go through each week and as each one's time passed it was transferred to another file

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called “past moths.” Every spare moment was spent looking through these photographs trying to remember some of the names.

I knew I had a steep learning curve to achieve but by learning a few at a time my knowledge has increased dramatically and I have found my copy of “Collins Complete British Insects” by Michael Chinery, (good photographs/useless index), the “Ukmoths” web site and the friendly, helpful, GMS members web site, invaluable for sorting out the ones that I can’t identify. I have tried to take a photograph of each new species I have seen, some not very good, so that I have a record of my own but there are those that “Got Away” like a Broad bordered Yellow Underwing and several Pugs. Now I am able to identify all but the very tiny micros by the end of the day and have even managed to get nearly all of them out of the bathroom by nightfall!

I have seen some really beautiful moths, quite new to me, and I’ve even been able to keep records of all the non-GMS species too!

Thanks to all the people on the web site that have helped with tips and advise, I’m having a really great time doing something useful.

“Hello Fellow Mothers,” writes Joan King from Telford

I have just joined the weekly GMT count this year after butterfly chasing for many years for Butterfly Conservation and my own pleasure, but the last few years it had become a painful tramp for my knees, so when I heard I could stay at home and the moths would come to my garden it sounded like a great way to continue watching wild life.

So I contacted Tony who is a butterfly man and comes to our Telford butterfly group and he got me organised by sorting my computer so I could get the records on my machine and as I have neighbours who can be funny, a light in my garden all night seemed to be pushing my luck. He came up with the ultra violet bulb light (I think I may be a guinea pig for this light). A blue glow in my garden didn’t mean the Martians had landed I informed the girls next door.

So all set up what would be lurking in my bushes, Big Book said there were 1,600 different moths to find. March 6th came and all set up for the night, dog didn’t like the strange being in his garden but he has got used to it now. Early next morning I was up with the sun rise, a few moths had arrived, what were they, one was Angle Shades a photo taken of others and sent to Tony, Strange names arrived Quakers and Hebrew Characters, a lot to learn but fun in identifying my garden visitors, luckily not too many so I could learn on the job with my camera and newly acquired tripod I had identifiable pics. of my moths.

May came and numbers went up, the tip in your magazine about having small egg boxes or cutting the trays to 6 or 4 sizes, has made trapping moths to identify and photograph them by getting them in pots one at a time much easier, I have found 500 ml yoghurt preferably clear ones a good size to trap them in then decant them into a smaller pot when they have calmed down.

Altogether I am having fun and wait each week to see who is next to add to the growing list of species who have passed through my garden. There seem to be new ones every time + some ones I have seen before so the photos were less this week than last so not so many queries for Tony, I shall have to get to grips with the chat web site but it seems a bit daunting to talk to people over this medium as I am not too good on the internet, I have mastered e-mails and attachments and putting my garden birds on the BTO website, another learning process to master, this old dog is learning more new tricks!

I hope to meet you all some time perhaps on your web site soon.

Thanks for the challenge. I am enjoying it.



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Last words

In addition to recording GMS moths many of our contributors record all the moths which appear in their gardens. I would like to include a piece in the next GMS News of “New to your region” moths, that is moths which have started appearing since the start of this new century. In London and parts of Surrey, for example, Small Ranunculus, Tree-lichen Beauty, Toadflax Brocade, Hoary Footman and Jersey Tiger have started appearing regularly in a number of parts of the area. (Yes, Cameraria ohridella, the Horse Chestnut Leafminer – first rec Wimbledon Common 2002, as well) I would like to feature some of the moths which have done similarly in your area.

Finally, what are the odds that when Dave Grundy returns from China that he will have persuaded Chinese mothers to become the first overseas branch of GMS?

Malcolm Bridge co-editor GMS News