



GMS NEWS

Weeks 1-9

Spring 2011

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Lime Hawk f. brunnea

Scheme overview for spring 2011– Norman Lowe

Here are the results for the whole of the GMS for spring 2011. Once again the numbers of recorders contributing to this analysis have gone up, to 306 compared with 261 for the same period last year.

The commonest moths recorded throughout the British Isles

The following table shows the results for the commonest species in the British Isles for spring 2011, Weeks 1-9. This time I've included all the core species with a total of over 150 moths.

	Name	2011		2010	% increase/ decrease
		306 gardens		261 gardens	
		Total	Mean per garden	Mean per garden	
1	Hebrew Character	19706	64.4	32.5	49.53
2	Common Quaker	19216	62.8	30.6	51.27
3	Small Quaker	8174	26.7	23.8	10.90
4	Clouded Drab	7400	24.2	18.1	25.15
5	Early Grey	2203	7.2	6.8	5.55
6	Twin-spotted Quaker	1880	6.1	4.0	34.89
7	Shuttle-shaped Dart	1477	4.8	0.5	89.64
8	Chestnut	918	3.0	3.5	-16.67
9	Muslin Moth	877	2.9	0.5	82.55
10	Double-striped Pug	790	2.6	1.0	61.27
11	Powdered Quaker	771	2.5	1.3	48.40
12	Brindled Beauty	752	2.5	1.5	38.96
13	Early Thorn	719	2.3	1.6	31.91
14	Brimstone Moth	611	2.0	0.2	89.98
15	March Moth	585	1.9	2.1	-9.85
16	Oak Beauty	503	1.6	1.5	8.75
17	Twenty-plume Moth	411	1.3	0.4	70.22
18	Shoulder Stripe	403	1.3	0.8	39.26
19	Streamer	339	1.1	0.4	63.89
20	Dotted Border	315	1.0	1.3	-26.29
21	Flame Shoulder	304	1.0	0.3	69.80
22	Lunar Marbled Brown	275	0.9	0.2	77.75
23	Light Brown Apple Moth	230	0.8	0.2	73.39
24	Satellite	176	0.6	1.0	-73.86

How do the figures compare with last year? In the last column I've shown for each species the percentage increase since last year in black and those that have gone down in blue. As you can see, 20 species have increased since last year and only four have decreased, and that could well be that these four species, all of which either over-winter or fly in early spring, were over their peak flight period by the time we started the main GMS this year.

Differences across the British Isles

So what are the differences for these 20 species between the areas? The table below shows the mean number of moths per garden in each area. Most of you will be familiar with the area abbreviations but anyway, here they are again:

CI Channel Islands	CY Wales	EE East 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 Yorks & Humberside

Species frequencies by area spring 2011

		SW	EM	WM	IR	SC	CI	SE	YH	CY	EE	NE	NW
1	Hebrew Character	71.6	30.7	59.9	105.4	98.0	33.0	28.8	73.8	100.3	36.1	65.2	69.5
2	Common Quaker	65.0	31.7	71.9	61.4	69.0	56.1	74.1	78.1	74.6	47.1	43.0	49.5
3	Small Quaker	41.5	8.8	29.9	7.2	8.3	0.7	49.6	12.2	35.9	21.7	1.5	14.4
4	Clouded Drab	12.5	23.9	23.9	60.4	25.4	4.7	11.8	49.2	41.7	17.6	26.7	20.2
5	Early Grey	9.5	4.7	3.4	11.1	1.4	28.7	5.0	8.2	11.5	8.3	2.0	4.3
6	Twin-sp Quaker	8.6	1.9	6.9	9.7	3.1	1.6	4.2	2.2	14.5	3.0	0.7	4.0
7	Shuttle-shaped Dart	6.7	2.7	4.4	0.0	0.0	20.0	9.9	0.6	1.2	9.5	0.7	3.1
8	Chestnut	3.5	0.3	0.9	2.6	11.9	0.4	2.0	1.2	5.0	2.2	0.8	3.2
9	Muslin Moth	6.7	1.3	3.0	1.0	0.0	3.9	1.6	0.0	5.1	2.4	0.2	0.2
10	Double-striped Pug	4.5	1.9	1.1	1.1	0.3	10.4	4.2	0.6	1.5	1.7	3.3	2.4
11	Powdered Quaker	2.4	1.2	2.6	6.0	1.2	0.7	1.4	3.1	3.4	2.7	4.3	3.1
12	Brindled Beauty	2.6	0.7	5.4	0.1	2.8	0.0	0.7	0.1	8.0	0.8	0.0	0.0
13	Early Thorn	3.4	1.3	2.0	5.5	0.3	7.9	0.7	2.4	2.8	0.7	1.5	3.2
14	Brimstone Moth	5.8	0.5	1.3	0.4	0.0	8.6	1.5	0.0	2.0	0.7	0.0	0.1
15	March Moth	2.6	0.2	1.5	7.1	2.1	0.1	1.8	0.6	2.2	1.6	1.3	1.0
16	Oak Beauty	3.3	0.4	1.6	2.6	0.7	1.0	1.4	0.4	2.7	0.7	0.5	0.5
17	20-plume Moth	1.7	1.5	2.2	0.2	0.3	4.3	0.9	0.9	1.8	0.2	2.0	0.8
18	Shoulder Stripe	1.4	0.5	1.4	0.7	0.9	0.1	0.2	1.6	4.1	0.3	1.2	1.4
19	Streamer	1.4	0.3	0.8	0.4	0.4	0.0	0.4	2.1	2.8	0.6	1.5	1.4
20	Dotted Border	1.9	0.3	0.4	1.6	0.8	1.9	0.4	0.9	2.3	0.2	0.0	0.7
21	Flame Shoulder	2.4	0.3	0.9	0.9	0.1	2.6	0.6	0.2	1.3	0.5	0.0	0.3
22	Lunar Mbled Brown	1.8	0.3	1.1	0.6	0.1	0.0	0.8	0.1	1.8	0.4	0.2	0.4
23	Lt Brn Apple Moth	2.0	0.3	0.3	0.0	0.0	7.7	0.7	0.1	0.2	0.0	0.0	0.0
24	Satellite	0.5	0.5	0.7	17.0	1.3	0.6	0.3	1.2	0.6	0.5	17.0	0.6

The highest mean-per-garden figures are shown in red and the lowest in blue. This spring most areas recorded the highest mean numbers for one or more species, only EM, WM, EE and NW failing to record a maximum. And most areas also recorded the lowest mean numbers for one or more species, only SW, WM and CY failing to record a minimum. This means that in the West Midlands, not a single one of these species was present in either lower or higher numbers than anywhere else. They must be a very representative group of gardens in the West Midlands!

Again, I've produced a table of regional Top 10s showing apparent regional variations by using different colours, this time brown for the northern and western species and green for the southern and eastern. As you can see, there's less evidence of a geographic split since the Top 10s for all areas are dominated by the "Spring Big 6", Hebrew Character, Common Quaker,

Clouded Drab, Small Quaker, Twin-spotted Quaker and Early Grey. It's interesting that across the board Hebrew Character and Common Quaker occupied the top two places apart from the SE where Hebrew Character was pushed into third place by Small Quaker. Clouded Drab was third in 7 regions and fourth in 4 but wasn't in the Top 10 at all in the Channel Islands. Early Grey, by contrast was in the Top 10 everywhere but in Scotland.

North West	Mean	Scotland	Mean	North East	Mean
Hebrew Character	69.54	Hebrew Character	98	Hebrew Character	65.2
Common Quaker	49.46	Common Quaker	69	Common Quaker	43.0
Clouded Drab	20.15	Clouded Drab	25.4	Clouded Drab	26.7
Small Quaker	14.38	Red Chestnut	17.45	Red Chestnut	4.8
Red Chestnut	7.96	Chestnut	11.9	Powdered Quaker	4.3
Early Grey	4.31	Small Quaker	8.25	Double-striped Pug	3.3
Twin-spotted Quaker	4.04	Early Tooth-striped	4.4	Water Carpet	2.7
Early Thorn	3.15	Brown Silver-line	3.15	Twenty-plume Moth	2.0
Chestnut	3.15	Twin-spotted Quaker	3.1	Early Grey	2.0
Shuttle-shaped Dart	3.08	Brindled Beauty	2.8	Streamer	1.5
Ireland	Mean	Yorkshire & Humber	Mean	East England	Mean
Hebrew Character	105.4	Common Quaker	78.1	Common Quaker	47.1
Common Quaker	61.4	Hebrew Character	73.8	Hebrew Character	36.1
Clouded Drab	60.4	Clouded Drab	49.2	Small Quaker	21.7
Early Grey	11.1	Small Quaker	12.2	Clouded Drab	17.6
Twin-spotted Quaker	9.7	Early Grey	8.2	Shuttle-shaped Dart	9.5
Small Quaker	7.2	Powdered Quaker	3.1	Early Grey	8.3
March Moth	7.1	Early Thorn	2.4	Twin-spotted Quaker	3.0
Powdered Quaker	6.0	Red Chestnut	2.4	Powdered Quaker	2.7
Early Thorn	5.5	Twin-spotted Quaker	2.2	Muslin Moth	2.4
Small Phoenix	3.1	Streamer	2.1	Chestnut	2.2
Wales	Mean	West Midlands	Mean	East Midlands	Mean
Hebrew Character	100.3	Common Quaker	71.9	Common Quaker	31.7
Common Quaker	74.6	Hebrew Character	59.9	Hebrew Character	30.7
Clouded Drab	41.7	Small Quaker	29.9	Clouded Drab	23.9
Small Quaker	35.9	Clouded Drab	23.9	Small Quaker	8.8
Twin-spotted Quaker	14.5	Twin-spotted Quaker	6.9	Early Grey	4.7
Early Grey	11.5	Brindled Beauty	5.4	Shuttle-shaped Dart	2.7
Brindled Beauty	8.0	Shuttle-shaped Dart	4.4	Double-striped Pug	1.9
Red Chestnut	5.2	Early Grey	3.4	Twin-spotted Quaker	1.9
Muslin Moth	5.1	Muslin Moth	3.0	Twenty-plume Moth	1.5
Chestnut	5.0	Powdered Quaker	2.6	Muslin Moth	1.3
South West	Mean	Channel Islands	Mean	South East	Mean
Hebrew Character	71.6	Common Quaker	249.9	Common Quaker	74.1
Common Quaker	65.0	Hebrew Character	56.1	Small Quaker	49.6
Small Quaker	41.5	Early Grey	33.0	Hebrew Character	28.8
Clouded Drab	12.5	Shuttle-shaped Dart	28.7	Clouded Drab	11.8
Early Grey	9.5	Double-striped Pug	20.0	Shuttle-shaped Dart	9.9
Twin-spotted Quaker	8.6	Brimstone Moth	10.4	Early Grey	5.0
Shuttle-shaped Dart	6.7	Early Thorn	8.6	Double-striped Pug	4.2
Muslin Moth	6.7	Lt Brown Apple Moth	7.9	Twin-spotted Quaker	4.2
Brimstone Moth	5.8	Least Black Arches	7.7	Chestnut	2.0
Double-striped Pug	4.5	Waved Umber	7.3	March Moth	1.8

Of the other species, Red Chestnut was much in evidence in the north and west, where we are wondering why it isn't a core species. Perhaps one for our next review of the core species list! And Shuttle-shaped Dart was commoner in the south and east, with an outlier in the NW.

Only 22 32 species appear in one or more "Top 10" lists, as shown below. This is presumably because of the dominance of the Spring 6 which take up a total of 66 of the total of 120 places in the 12 Top 10s.

Species	No. areas in top 10	Species	No. areas in top 10
Hebrew Character	12	Chestnut	5
Common Quaker	12	Early Thorn	4
Early Grey	11	Brindled Beauty	3
Clouded Drab	11	Streamer	2
Twin-spotted Quaker	10	March Moth	2
Small Quaker	10	Brimstone Moth	2
Shuttle-shaped Dart	7	Waved Umber	1
Muslin Moth	7	Water Carpet	1
Red Chestnut	5	Small Phoenix	1
Powdered Quaker	5	Early Tooth-striped	1
Double-striped Pug	5	Brown Silver-line	1

WANTED: MORE VOLUNTEERS FOR GMS – Dave Grundy

We know that you're already doing an incredible amount of valuable work for GMS, just by running your garden moth trap once per week and recording them all on your recording form and for that we're incredibly grateful. But can some of you maybe help a bit more with the running of this voluntary organisation run by volunteers for volunteers?

Have you got spare time to help out with the organising of GMS? As we get more successful and attract more recorders to GMS then the organisation work to help it all to run smoothly gets more and more. So you're hard working area coordinators need more help. Could that be you helping them?

There are all sorts of ways that you might be able to help. Could you help out your area coordinator by covering some counties for them to spread the workload? All you need to do is to send out friendly chatty emails from time to time asking for forms and questionnaires etc, check in the recording forms and then send out newsletters. Or maybe you have particular types of skills that could help us? Would you be able to write regular newsletter articles or send in photos? Can you maybe help us more with redesigning our popular website, or maybe helping the chatsite with moth ID or GMS advice? Are you good at checking recording forms - we need more help with this overwinter and with data entry at the year end. Can you help with data entry because you're good at MapMate? How about the Annual Report and AGM could you help with organising or running them? Or maybe you can help in some other way, let us know how you can help us? Get in touch with your area coordinator and let them know how you might be able to help and we'll get you involved.

Regional Co-ordinators meeting 8th May reported by David Gardner

Introduction

What is this all about? Well in order to improve communication and co-ordination of GMS across a big geographical area, meetings between co-ordinators were needed. The first was based in the English Midlands where motorways converge. The plan was to look at the way GMS is currently run and how it might be improved into the future as described below in comments rather than a report.

Comments

Okay it was a pub lunch then a meeting and of course pre lunch discussion was about moths and the fun of finding an apparently easy to get to location. Very good representation was present and what a nice bunch of folk they all turned out to be.

We felt that as Regional Co-ordinators we must tighten up on our checking of the spreadsheets before they reach Dave Grundy, only fair really. As an example, we have a cunning plan to resolve the problem of not knowing if a recorder does really know micro moths but did not see any, or does not do them yet.

Recorders can further help by doing the dates and nothing seen boxes as asked for; it all speeds up the processing and helps voluntary co-ordinators continue to be willing to be involved. In checking spreadsheets just before I wrote this I had to change both dates and nothing boxes as well as back fill addresses and similar from earlier spreadsheets, all avoidable errors.

Questionnaires may need to be resent if a recorder has been active for many years as gardens and their surroundings do change with time. Trees are lost, infilling occurs, street lighting changes even flowers and shrubs change in a garden. Obviously a new trap, more powerful or a design change like Skinner to Robinson would show up in the records. Naturally you will have realised this is about a standard base for the records to be viewed from, but simply cleaning the moth trap light could change the results. Putting a netted frame around your trap would make a huge difference, 30% increase on the garden trap tested, so such a change, even if it is netting for raspberries and currents close to the trap would need to be registered.

How do you like the website? We hope that after reading this you will have a special looksee and let us know if there is anything you would like added or changed. If it was easy to do so, would you be happy to send news into the website? Regarding the Chatsite, a bit of house keeping may be in order! We also discussed various aspects of security on emails

Just to remind you:

The website address is www.gardenmoths.org.uk and

The chatsite is at <http://tech.groups.yahoo.com/group/Gardenmoths/>

I agreed to join a small e-team to discuss the use of our dataset by others, basically as I am a trustee of a county recording centre. The speed our records become manageable data that yields news is the key aspect and we may feel able to do reports or have a service level agreement with organisations such as DEFRA and NE who want virtually live information. This may give them a background control from which to deduce the effectiveness of grants via the normal site surveys of farms and reserves. We are not looking for an income per say, just tick over and enhancement funds to make the scheme bigger and better over time. While on the subject of moving records about can I remind you to send all you moth records to your

local county moth recorder. http://www.mothscount.org/uploads/CMR_List which gives you the choice of county or vice county based pdf.

Should we target recruitment of recorders in areas of geology or weather that are currently not well covered, or just be pleased with any volunteers that approach us? You may not know but the West Midlands are about three weeks ahead of East Kent in early May, not something I could glean from books only friends in the GMS; of course by early June Kent is well ahead. Should we include weather in the scheme; if grant aid could get a number of home weather stations would you be interested; or do you have one already!

As the scheme grows we may need to start expanding the coverage by county or even vice county based co-ordinators. As ever, West Midlands has already got there, so we know it works and with local people doing the co-ordination more volunteers can be found other than by articles and advertising. I should make it clear that we have excellent Regional co-ordinators who do not live in that patch at all so it is really all about workload and people as usual. Of course if you would like to help out by dealing with your county please do tell us.

Another way local recorders can help is inputting the data into the central program, spreadsheet by spreadsheet forwarding the wad to Dave Grundy; naturally help will be offered to get you started and you can always contact us to to discuss items or certain spreadsheets!

In fact we can go further than this and offer other important roles. How about being the person who runs the Winter GMS, completely, as a stand alone item with back up and help of course. Why not, after all it is no way as big as the Summer scheme and many weeks are zero too. Would you like to share the role with another person who may live hundreds of miles away? Computers have made a huge difference to the central recording side of things and imagination seems to be the only barrier now. We considered that the Questionnaires could also be hived off to be a role for one or more people. It will be easier to do something special with the data that way, as in the main Dave Grundy has rather a lot to do!

Mothing – a wonderful hobby – Douglas Methven

For more than 20 years now I have been contributing a weekly wildlife article to my local newspaper, covering everything from plants to birds and one set of creatures has been conspicuous by its absence – moths. Not any more!

A couple of years ago I was introduced to them by fellow Scottish Wildlife Trust member Malcolm Lindsay, who had moved to them from a lifelong passion for butterflies. I was mildly interested until he offered me the use of a Robinson trap to see what turned up in my back garden.

That first morning when I looked inside was the clincher. I had nine different species, none of which I had ever seen before. I had to get a book. The next time was even better with 21 species. Armed with the book, I was delighted to discover that they all had wonderfully evocative English names like Heart and Dart, Spectacle and Flame Shoulder. I was hooked. For the next couple of summers, I had sporadic use of the Robinson (which for a beginner I found a bit daunting at times, through sheer weight of numbers) and soon my garden list went

over the hundred species mark. This fact alone I found absolutely incredible, given the size of my garden.

Last Christmas, I was given a 40w Actinic bucket style trap, which is why I am now involved in my first GMS. I have installed it on a shelf in a lean-to, which was built on the back of my shed for logs. When in use I simply plug it in and roll up a tarpaulin blind, which keeps it hidden during the day. As well as egg boxes inside the trap, I also spread some round the bottom of the bucket in its alcove, often catching things like Pine Beauty which are reluctant to go into the trap.

At the time of writing, my garden list has reached 146 so I'm quite confident of breaking 150 by the end of the first quarter. (A couple of nights ago I had 6 new ones in one go!)

Highlights of the quarter so far are probably Dark Sword Grass and Pine Beauty, which I had never seen before.

Nothing is a wonderful hobby which is probably looked on by outsiders as a bit geeky, like train spotting, but once you get started, there's no going back. It's the new bird watching!

Pine Beauty pic.



A brief review of one garden over the eight years of the GMS

By Alan Prior

Having completed the full eight years of GMS recording I thought it may be worth having a look at what the data has produced for my garden so far.

Of the 236 species on the GMS list, 207 have been recorded in my garden although 43 have not been found on GMS nights, with 29 never being recorded at all. Unsurprisingly, 2007 was the worst year for both species and quantity recorded with 2006 being the best. It just shows what a warm summer can produce as opposed to a miserable wet one! However, one species that appeared to revel in the damper conditions was Large Yellow Underwing.

In 2007 it topped my list for the first time, displacing Light Brown Apple Moth, which had held the title for the first four years. Light Brown Apple Moth regained the No. 1 spot in 2008 before Large Yellow Underwing returned to the lofty position for the last two years.

However, the number of Large Yellow Underwing were significantly down in 2010, possibly due to it being a generally dry year. The numbers still didn't reach the low of 2005 when it was only my fourth most common GMS moth. So I don't think we need to 'panic' about it disappearing just yet! Light Brown Apple Moth numbers were also significantly down in 2010 and they did reach an eight-year low figure. This was probably down to the cold winter of 2009/10. They also had the latest emergence date I've recorded. It will be interesting to see how Light Brown Apple Moth does in 2011 after the freezing spell of weather that ended 2010. Will its numbers be reduced further or, if we have a milder spell, recover to previous levels? It could be that with the cold spell coming earlier than the previous year it will get hit harder or maybe it won't affect it quite so badly-stay tuned!

Heart & Dart has been relatively consistent with it being in the top three for six of the eight years. Its only real blip was after the wet year in 2007 as it only made No. 11 in 2008 with numbers being at the low end of the scale. It did rebound to fourth in 2009 and last year it was my No. 1, if I included all and not just GMS recording nights, having had its second best year of the eight. It doesn't appear that you can keep Heart & Dart down for long!

Riband Wave has been another consistent performer always being in the top eight with a peak of third.

The scheme has also seen the remarkable rise of Ruddy Streak in the garden. From nowhere it sneaked into the top twenty in 2007 and then rose to No. 15 the following year. However, its numbers have rocketed and it reached No. 5 in 2009 and last year slid up another place to No. 4! The cold winter didn't seem to affect this species like it appears to have done with Light Brown Apple Moth. Why? If you can tell me –we'll both know!

There are five species that regularly make my top twenty but are not in the GMS. They are *Blastobasis adustella*, *Mompha subbistrigella*, *Pandemis corylana*, *Dipleurina lacustrata* and Uncertain. With some of these being difficult to identify it's unsurprising that they are not part of the scheme. Although, when the core list was set I wonder whether it would have been worth adding an aggregate for Uncertain/Rustic seeing as most of the other common aggregate species seemed to make the list!

As I record my garden moths almost every night of the year I looked at how the GMS fared in comparison. I was staggered to find that if I added all my GMS nights records for the eight years together and then multiplied them by seven how close they came to the actual figure I had counted over the same period. For example: - Heart & Dart recorded on GMS nights over the eight years totalled 729. When multiplied by seven = 5103. Heart & Dart recorded over the same period but recorded seven nights a week totalled 5265. Less than 170 individuals difference over eight years. Square-spot Rustic on GMS nights $597 \times 7 = 4179$ – continuous recording =4124. Only 55 different! Lastly, Lesser Yellow Underwing $356 \times 7=2492$ – continuous recording 2533! This 'formula' may only work with species that have large numbers recorded, but it's a good sign that the bigger and longer the GMS continues to become, the more accurate a picture of our common moths can be gained.

It could also mean that I don't have to record my commoner species more than once a week and then after eight years I can just multiply them by seven and I'll be pretty close to knowing what I'd have had to count over that period!! (Only joking!) If someone could tell me why this 'formula' seems to work I would be grateful!

Overall I conclude the GMS is generally a good indicator of the status of the common moths within range of the garden and any differences between recording once a week and every

might appear to be relatively insignificant within the wider scheme. Keep on recording—it really counts!



A species very much on the rise in South Birmingham
656 Ruddy Streak (*Tachystola acroxantha*) 2nd June, 2010 (Photo A.Prior)

Introducing Moths to Children - by Nikki Gardner

I was a Youth & Community worker for 18 years and have been 'mothing' for 9. Having seen the excitement of my young nieces at the sight of my night's catch, I was keen to introduce more children to moths in the hope that some will maintain this as a hobby into adulthood.

I spoke to members of the Dorset Moth Group who had been part of a pilot project in 2008 aimed at introducing moths to a number of schools.

In May 2009 I gave my first 'Introduction to Moths' session at a community education Farm's Spring Open Day. I set my Robinson trap at the Farm the night before and then kept the moths caught cool until the Open Day started. It was great fun with children and parents amazed at their variety of shape and colour!

I then contacted two local Primary Schools and ran a similar event but using my Actinic trap as well as MV in the school grounds. Fortunately I 'mothed' at home the night before as the caretaker had tuned the mains electric off so there were no moths! Fortunately I had plenty from my catch!

At a local community education project I am now part of their Summer Fair activities having 'mothed' there for a couple of summers. I also show moth to some of their school groups. This year I have ran sessions with two primary schools, both community education projects previously mentioned and a fund raising event for the Garden Trust. I have received enquiries from the Exeter Deaf Academy and a primary school in Plymouth. I hope to run sessions for them next summer. Butterfly Conservation have kindly donated copies of their various moth, butterfly and caterpillar handouts which the children and teachers alike find very informative and colourful.

If anyone would like to discuss this further please do not hesitate to telephone me (Tel: 01647 252600) and I would be very keen to hear from anyone doing similar work.

I enjoyed the moth sessions with 3 local primary schools and a few with local community education groups. Unfortunately this year I have not organised any such nothing events although I am sure will be asked to do some with local community groups. I think I need to put together some publicity as I am not sure of the best way to attract primary schools. The teachers and pupils alike very much enjoyed the sessions which fitted well with their 'bugs and beasties' topics.

If any of you GMS mothers have any ideas of how best to attract primary schools I would be very interested.



My shot is taken a few days ago in great weather. My garden is in a housing estate on the edge of Tadcaster with open fields only 100 yards or so away. My back garden is surrounded by about 20 others forming a large oval of mixed planting. I have apple, hazel, birch, ornamental elm, hawthorn, rowan and buddleia all within a small area and the neighbouring gardens have a large variety of trees and shrubs. The trap stands on a patio area in front of the dining room. To date I have recorded 543 species since 1999.

David Baker – Tadcaster , Yorkshire

Some views of GMS gardens sent to Dave Grundy – do you recognise yours?



We trap in a mature garden which has:
Apple, Pear, Plum, Bird cherry, Ornamental cherry, Beech and Walnut trees in or close by.
We have Leylandii, Buddleia (white and purple), Honeysuckle, Winter Jasmine, Sedums and a thriving nettle patch.
To the front of the house runs the River Derwent “Sea Cut” and to the rear a mature woodland of mixed broad leaved trees which has been established for over 80 years.

We are on the borders of the North York Moors National Park, just below Raincliffe Woods which leads into Forge Valley.
So far we have trapped 422 species. - Oh and the greenhouse needs fixing!
Jax (Westmoreland)



Early emergence – some observations

By Les Finch

Recently, I've noted many references to the early emergence of moths this year, and this has prompted a bit of research.

By way of background, apart from annual sojourns to IOS in the autumn, I trap nightly(actinic only) in my small suburban garden in VC22. With, usually, 350 plus nights trapped each year, local first flight dates are considered reasonably representative.

Noted below are first flight dates for all those species recorded in the garden this year(to 25 April) which have been also been recorded in at least five of the previous six years. Mean first flight dates of all such species for the years 2005-2010 are shown in comparison to this year's dates.

B&F	Vernacular	First Flight Date		Var. +/- This Year
		Mean 2005-2010	2011	
2098	The Flame	9 June	1 May	-39
1932	Spring Usher	14 Jan	7 Feb	24
1926	Pale Brindled Beauty	25 Jan	23 Jan	-2
1934	Dotted Border	20 Feb	15 Feb	-5
2187	Common Quaker	25 Feb	11 Feb	-14
2190	Hebrew Character	26 Feb	19 Feb	-7
1930	Oak Beauty	4 Mar	12 Mar	8
2182	Small Quaker	5 Mar	23 Feb	-10
1663	March Moth	9 Mar	12 Feb	-25
2243	Early Grey	10 Mar	12 Mar	2
2188	Clouded Drab	13 Mar	11 Mar	-2
1862	Double-striped Pug	18 Mar	11 Mar	-7
2189	Twin-spotted Quaker	19 Mar	12 Mar	-7
2306	Angle Shades	27 Mar	21 Apr	25
1906	Brimstone Moth	6 Apr	6 Apr	0
1852	Brindled Pug	8 Apr	29 Mar	-10
2425	Nut-tree Tussock	10 Apr	18 Apr	8
2389	Pale Mottled Willow	11 Apr	27 Mar	-15
2015	Lunar Marbled Brown	16 Apr	2 Apr	-14
1936	Waved Umber	19 Apr	19 Apr	0
2186	Powdered Quaker	20 Apr	7 Apr	-13
2092	Shuttle-shaped Dart	20 Apr	9 Apr	-11
1728	Garden Carpet	21 Apr	21 Apr	0
2063	Muslin Moth	22 Apr	6 Apr	-16
2289	Knot Grass	1 May	14 Apr	-17

1834	Common Pug	6 May	21 Apr	-15	
2441	Silver Y	7 May	5 Apr	-32	
2087	Turnip Moth	10 May	17 Apr	-23	
2089	Heart and Dart	11 May	25 Apr	-16	
1819	Mottled Pug	12 May	22 Apr	-20	
2160	Bright-line Brown-eye	12 May	25 Apr	-17	
1768	Grey Pine Carpet	12 May	20 Apr	-22	
1979	Lime Hawk-moth	12 May	23 Apr	-19	
2060	White Ermine	13 May	24 Apr	-19	
2102	Flame Shoulder	14 May	24 Apr	-20	
2028	Pale Tussock	14 May	25 Apr	-19	
1888	Scorched Carpet	14 May	9 Apr	-35	
1883	Yellow-barred Brindle	19 May	23 Apr	-26	
2166	Campion	22 May	17 Apr	-35	
2000	Iron Prominent	24 May	20 Apr	-34	
2043	Orange Footman	26 May	24 Apr	-32	
2278	Poplar Grey	13 Jun	24 Apr	-50	
	Average		14 Apr	31 Mar	-14

It is evident that, after a fairly typical start, many species in recent weeks have emerged ridiculously early, presumably because of rather unseasonal temperatures. It is to be hoped that if this results in early egg laying and larval emergence, then the required foodplants have also been prompted to accelerate their annual cycles.

WORDS FROM THE GMS NEWS EDITOR - Malcolm Bridge

May I thanks the contributors to this edition of the GMS News – the spring edition – for making my job so easy and pleasant by sending me such excellent copy. In addition to some of our regulars, Norman, Heather and the two Davids – to whom especial thanks – this edition has two substantial and fascinating pieces by Les Finch.

The recent and enjoyable regional co-ordinators meeting is fully reported by David Gardner and Tom Tams has provided some more of his superb ID pics.. Alan and Nikki have written their first (of several, I hope) pices for GMS News and several of you have supplied lovely pics of your GMS gardens – all far tidier and better cared for than mine.

Final and important last word – Martin Jordan, a Kent-based GMS colleague, has alerted GMS News that a particular MV bulb, UVc, is potentially harmful – see link below for further information. Most of you will probably run UVa bulbs. (I’ve just checked one of my spare bulbs Osram 125W and its code reads “MBF-U” so I’m no wiser) If anyone can shed more light (pun unintended) on this question I’ll print it in the next News.

http://www.darouv.co.uk/UV_General_Information

Special Spring Moths on the Road to the Isles.

By Heather Young

*“Sure by Tummel and Loch Rannoch and Lochaber I will go
By heather tracks wi' heaven in their wiles.
If it's thinkin' in your inner heart the braggart's in my step.
You've never smelled the tangle o' the Isles.”*

And what better time to go than before the midgies wake up! Here is just a taster of what you might find:

Kentish Glory *Endromis versicolora* - Flight Period: April and May, peaking in the middle weeks



Picture credit: Harry Scott

Harry has had plenty of successful outings to find these beautiful moths in Aberdeenshire where they come readily to light, as well as providing occasional day-time encounters. The Rannoch / Tummel population has proved more elusive, with only sporadic sightings in recent years. Targeted surveys organised by Andrew Masterman on behalf of Butterfly Conservation Scotland (BCS) have been unsuccessful so far, but will continue next year, so if you'd like to help, check out the surveys page of the Southwest Scotland branch web-site:

<http://www.southwestscotland-butterflies.org.uk/>

Rannoch Sprawler *Asteroscopus nubeculosa*

Flight period: Mid-March to early May, peaking in early April



Picture credit: Andrew Masterman

Andrew had much more success in the same area with the Rannoch Sprawler, and found them much easier to record by light trapping than the more laborious method of searching crevices in birch trunks by day!

Rannoch Brindled Beauty *Lycia lapponaria*

Flight period: Late March to early May, most in mid-April



Picture credit: Heather Young

You might have to pack your wellies for these little beauties, as they inhabit the wetter areas where the bog myrtle grows. They can be found by day resting on tree trunks, stumps and fence-posts, the flightless female being quite conspicuous with her bold orange stripe.

Belted Beauty *Lycia zonaria*

Flight period: Late March to mid-May, with a distinct peak in early May



Picture credit: Bob Dawson

Bob's work as Conservation Officer for the Bumblebee Conservation Trust takes him out to the Isles on a regular basis, and this is pretty much where you need to go to see this lovely little moth in Scotland. There are populations further south, along the coastline of Lancashire and Cheshire, and scattered locations in Wales and Ireland, but this one was trapped in a garden on Benbecula. If you'd like to learn more about Bob's efforts to secure the future of the Great Yellow Bumblebee, *Bombus distinguendus*, see:

<http://www.bumblebeeconservation.org/great_yellow_project.html>

After all, what's good for bees is usually beneficial to butterflies and moths!

There are other targeted surveys taking place in Scotland that anyone would be welcome to take part in, for instance for the Pine-tree Lappet in Highland BCS branch region:

<<http://www.highland-butterflies.org.uk/index.html>>

but casual records of any species seen while visiting north of the border would be gratefully received by the VC recorders – there are vast under-recorded areas up here!

To make the planning easier if you wish to see a particular moth, have a look at the web-site of the East Scotland branch of BCS, where information gathered for the National Moth Recording Scheme has been used by Mark Cubitt to create a fantastic resource showing distribution maps and histograms of actual flight times of all the Scottish macro moths:

<<http://eastscotland-butterflies.org.uk/mothflighttimes.html>>

It's interesting to see the difference in flight times, even within Scotland for some of our moth species – for instance the Common Marbled Carpet, *Chloroclysta truncata*, is bivoltine in the southern half of the country, and univoltine in the north.

Hopefully I've done my bit for the tourism industry up here – pack your mobile gear, pick up your cromack (fancy name for a stick) and step out yourselves on the Road to the Isles!

Spring Beauties

by David Baker 29 March 2011

OK: It's the start of another mothing year and here come the dull spring species! But no, take a closer look at the late winter/spring regulars.

One of my first moths of the year, as usual was the Pale Brindled Beauty, often in both it's guises as shown below in a twosome; both are males, of course, the female being wingless. Closely following these was a Satellite which can have either the white or orange kidney-mark and satellite dots. I think the white markings tend to make a more striking image.



Next along were the "Orthosias" with Hebrew Characters, Clouded Drabs and Common Quakers, all seemingly fairly dull and even named "Drab" in the one instance. But take a look at this Hebrew Character and the beautiful shading in its varied hues. The Clouded Drab can also be well marked and not simply a monotone dark brown. Here it belies its common name, hence it's specific name of *incerta*, meaning "not fixed or varied."



What about the Quakers: Does anyone know how they got their vernacular name? My dictionary suggests that the "Society of Friends" were referred to as Quaker-coloured or drab by another sect, but surely this doesn't apply to our moths.

The Common Quaker, can be so varied in its shades of brown but, for me, nicest in the chestnut brown with white edged oval marks, kidney marks, and outer cross lines. Its close relation the Twin-spotted Quaker generally has a paler brown to greyish background colour with distinctive

twin-spots on each forewing. This year's single specimen was extremely well-worn and so I have shown my favourite specimen from over the years.



I will finish this short look at the moths often caught before the end of March, with a look at two species which, rightfully, carry the name of Beauty. After an absence of nine years this Oak Beauty turned up in my trap in early March and is, surely, a sight to warm the spirit on a cold and frosty morning. However, things have usually warmed up a little before the latest star of my jottings has shown up in my garden trap and although considered a pest in some locations the Pine Beauty is always welcomed here.



Just to show that things aren't always colourful a lifetime newcomer turned up on Valentine's Day. This Dotted Border was dressed in a sombre attire and not in the usual shades of lightish brown, but then one can't always have everything, as my old Gran used to say.

So, we now await the real colourful moths and butterflies flying throughout the remainder of the year in the warmer months. But let us not forget that even some of the "little brown jobs" can have a close up beauty. Good mothing to everyone in 2011.





Pictures of Grey Dagger, Red Sword-grass and Sword Grass, Tawny Pinion and Pale Pinion contributed by Tom Tams.

2241 Red Sword-grass *Xylena vetusta*



2242 Sword-grass *Xylena exsoleta*

Diagnostic feature of Red Sword-grass is the rich mahogany brown/blackish brown trailing half of upper forewing compared to Sword-grass which lacks this darker colour. (Waring/Townsend)



2235 Tawny Pinion
Lithophane semibrunnea



2236 Pale Pinion
Lithophane hepatica

Tawny Pinion shows solid blackish bar extending from near trailing corner inward and parallel with trailing edge. (Waring/Townsend)

Moth marking experiments at Maidenhead, Hemsdale 2010

By Les J Finch

Management Summary

Purpose of Study

To assess the incidence of re-trapped macro moths, for a selected range of species, at Hemsdale, Maidenhead in the period September to December 2010, in order to establish a framework for an extended study in 2011.

General Observations

455 individual macro moths, in 6 species, were marked and 40 re-traps occurred, this representing 8.8% of the sample.

The re-trap rate experienced should be regarded as a base indicator only, and may well vary dependent upon species and season.

2011 and Onwards

In an attempt to establish a greater degree of confidence in re-trap data, an extended study, encompassing 10 species which, collectively, may fly in all months of the year, is proposed for 2011. Currently, macro moths trapped at the Hemsdale 'constant effort site' generally are released off site. This practice probably will be discontinued, with a suitable 're-trap' reference being included in annual site reports.

Purpose of Study

To assess the incidence of re-trapped macro moths, for a selected range of species, at Hemsdale, Maidenhead in the period September to December 2010, in order to establish a framework for a similar, but extended, study in 2011.

Background

The author has been undertaking moth trapping in the garden of a house in Hemsdale, Maidenhead (SU869823) since the beginning of 2004. Although the available trapping area is only approximately 275 square metres, up to four actinic lamps are operated in any one night. These are supported by the occasional deployment of an MV lamp, but the maximum number of traps utilised is four. Traps generally are operated overnight, with collection and recording undertaken early in the morning.

Lamps have been run, on average, 320 plus calendar days per year, with 350 plus nights having been achieved in the last two years.

Because of the intensive trapping regime, individual moths have been 'potted' as a matter of course and taken off site in order to limit re-traps. Moths have been released subsequently towards Maidenhead Thicket, at least half a kilometre from the base site.

The possibility of individual re-traps at the base site has been minimised, but the likelihood of re-traps had the specimens not been relocated has been unknown.

In the last two years, the author has been participating in the national 'Garden Moth Scheme', and in early September 2010 there was lively debate among the Scheme members regarding the incidence of re-traps at regularly operated sites. The possibility of associated study work in 2011 was suggested.

This paper aims to outline limited survey work undertaken at the Hemsdale site between September and December 2010 involving the marking of macro moths, and to provide a summary of associated re-traps. It is hoped that the experience gained, and information gathered, may help in the formulation of concepts for more detailed study work in future years.

Moth Marking

The experiment was designed to assess the frequency of re-traps. It was recognised that, when the study commenced in early September, the re-trap of previously captured(unmarked) specimens was possible and, for practical purposes, it was decided to concentrate on species that had not so far been recorded in the year. It was also considered appropriate to examine species that normally were encountered reasonably frequently, so that a fair level of confidence could be placed on statistical findings. In particular, the study concentrated on the following species

- Lunar Underwing
- Large Ranunculus
- Blair's Shoulder-knot
- Black Rustic
- Feathered Thorn
- December Moth

Given that any adult moth is unlikely to survive much more than one month in its natural habitat, a system was devised to establish a 35 days marking cycle. This involved the use of a different colour for each day of the week, coupled with five different marking positions(one on thorax, plus wing base and wing apex on each of the upper wings - See Appendix 1). Non toxic, water-based, marking pens were used throughout.

The difficulty of marking live insects was appreciated and, although the experiment was not conducted during the warmest nights of the year, all relevant moths were sedated temporarily before handling. Individuals of the above species were released on site after marking, so that the potential existed for a greater proportion of re-traps in these species in comparison with other species. Individuals of other species captured continued to be released away from the base site. In instances when re-traps of marked moths occurred, individuals were included in record details but were designated as such.

Although trapping occurred at the Hemsdale site on 352 nights during 2010, unfortunately the 13 nights with no recording effort were represented by one continuous interlude within the experimental marking period(Trapping with Dave Grundy did occur on the Isles of Scilly during this time, so that the loss of marking data is all his fault!). This factor may have resulted in some loss of fidelity in the Maidenhead re-trap data.

Marking Data, Re-traps, and General Observations

The majority of subject species demonstrated activity within the ranges experienced in the local tetrad during the previous five years, as the following table shows:-

Species	Individuals Trapped 2005-2009 Annual Range	Individuals Trapped 2005-2009 Annual Mean	Individuals Trapped and Marked 2010 (Hemsdale only)
Lunar Underwing	97 - 422	226	345
Large Ranunculus	3 - 56	23	43
Blair's Shoulder-knot	17 - 51	28	53
Black Rustic	1 - 12	5	5
Feathered Thorn	9 - 22	14	1
December Moth	4 - 21	13	8
Total			455

In retrospect, Black Rustic, Feathered Thorn, and December Moth did not demonstrate activity sufficient to deliver meaningful findings; such (in)activity partly the result of the very cold weather experienced in late November and December. Nevertheless, more detailed information for all six species is provided at Appendix 2.

As a consequence of moth markings, 40 re-trap instances were recorded, these representing 8.8% of the sample size. This re-trap rate may not be representative for a wider range of species, but may serve as a base indicator in further survey work. Lunar Underwing(34 re-traps) was, by some margin, the most commonly re-trapped species, for which the re-trap rate was 9.9%. Individual re-trap data is included at Appendix 3, and a summary is provided at Appendix 4.

During the limited period of experimentation, no individual moth was re-trapped more than five nights after first capture. Most re-trapped moths encountered the experience once only, but one Lunar Underwing, first captured on 14 September, was re-trapped on two occasions.

It appeared that, during successive nights with relatively cool temperatures, moth activity slowed as might have been expected. However, dispersal apparently slowed to a greater extent, this resulting in increased re-trap data. Further experimentation will be required to establish whether the percentage of re-traps becomes less in summer, when generally higher temperatures obtain and a higher dispersal rate may be experienced.

The practice of sedating individuals temporarily before marking worked well and, without moth handling experience, may be regarded as a preferred option in order to limit wing scale damage.

The marking pens utilised (UniPosca, non toxic, water based, 3mm nib) generally were very satisfactory although, compared to other colours used, the 'white' colour did not retain its intensity on moth thorax/wings to a satisfactory standard, and the choice of an alternative colour will be pursued in the future. Additionally, it may be possible to use a slightly broader pen nib(5mm) on larger moth species. The marking cycle of 35 days is likely to be more than adequate for adults of most British macro moth species, and a 28 days cycle is proposed. This will obviate the need for thorax markings which, in practice, proved more difficult to administer than wing markings.

It might be argued that, to avoid disturbing the natural cycle of moth movements, it would be beneficial to cease all trapping; but that would serve to halt useful research into various aspects of moth fauna.

Alternative solutions appear to be

- Restrict moth trapping such that the frequency is no more than 'every other night'. This allows the insects more time to follow their own instincts, but might restrict the availability of suitable trapping nights. This also tends to diminish the statistical confidence of data obtained from a 'constant effort site'.
- Release specimens off-site after capture. This should limit the incidence of re-traps, but might cause certain species to be removed from their preferred habitat. Incidentally, valuable time can be expended by the recorder in 'potting' and removing specimens off-site, especially so in summer when (hopefully) hundreds of individuals may be present.
- Continue trapping, as hitherto, but release specimens on-site after capture. This may result in re-traps, but is not expected to have a significant effect on site data, provided that such data sets are annotated with a suitable commentary, and that the incidence of re-traps can be estimated for all species by reference to specific measurement covering a range of species. In this event, re-trap data may be useful in its own right anyway.

2011 and Onwards

Given the scenarios presented above, the author intends to undertake further research in 2011 on a range of species that should provide opportunities for the marking of insects in all months of the year.

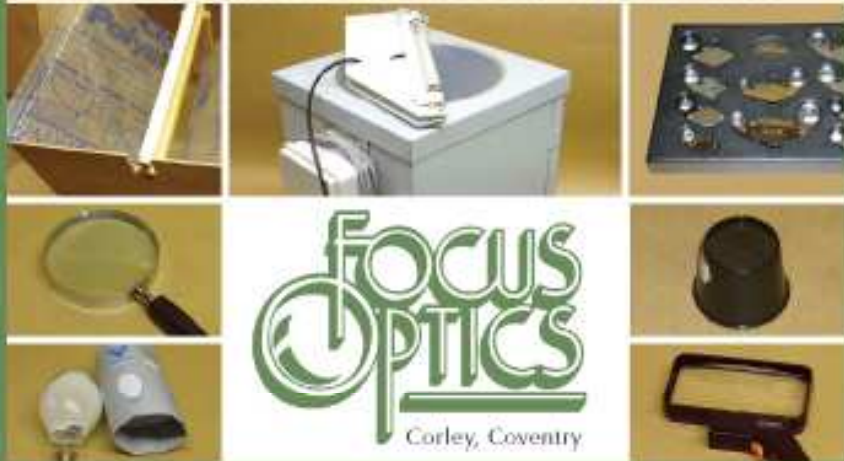
It is thought that certain species might prove difficult to mark, e.g., those carpets which habitually hold their wings in the upright position, and Brimstone Moth which regularly avoids attempts to capture. Species need to be well represented at the site but, equally, the prospect of marking, say, 2,500 Large Yellow Underwings in a season does not appeal. Bearing in mind these and other considerations, the proposed range of species for inclusion in the 2011 review are (in chronological order of probable appearance)

- Chestnut
- Hebrew Character
- Treble Lines
- Common Wainscot
- Silver Y
- Dun-bar
- Broad-bordered Yellow Underwing
- Large Ranunculus
- Feathered Thorn
- Scarce Umber

Even though almost daily trapping may continue at the Hemsdale site, it is likely that all moths will be released on site after being recorded. However, it is intended that a note to that effect will be included in future annual site reports, and that the likely extent of re-trapping will be quantified by reference to data collected in 2011 and subsequent years.

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