GMS Winter News 2010/11

Contents:

I can now confirm that next year's **AGM for 2012 will be on Sunday March 11th from 11am to 4pm.**
Now all we need to do is find a venue - let me know if you have any suggestions or if you want to help in any way with planning it. We need to find a venue which can attract the most recorders possible and also which will allow as many people as possible to come to at least some AGMs in some years.
Best wishes
Dave

Your Moth Records are Important

Dave Grundy

By now you will have sent in your 2010 GMS records to your area coordinator and they will already be in the GMS database being use for important statistical analysis to help conserve common moth species. But, how else can your hard work in taking these notes of your moths be put to a good use? – Yes, of course they can be sent through to your county moth recorder. GMS records are in a separate database from county moth records because they need to be analysed in a different way.

SO, PLEASE, PLEASE, PLEASE SEND IN YOUR MOTH RECORDS TO YOUR COUNTY RECORDER AS WELL AS TO US AT GMS!

When you send them in then please send in all the moth records that you would normally send to GMS, but also send in records for all the rarer and difficult to identify moth species that aren't on your GMS forms as well. And if you run your garden trap on other nights that aren't your weekly GMS night then please send in those records too! And not only that, but if you see a moth in the house, or somewhere else in the garden or during the day or out on a walk or shopping or out trapping in the woods then please send them in too.

Remember that all your moth records are valuable to your county moth recorder – so send them all and for previous years too. We're only on this planet for a limited time – so make sure those dusty moth notebooks don't just get thrown away – they need to be used to conserve wildlife long after we are dead. And not only that, they will now be used as well by the National Moth Recording Scheme of Butterfly Conservation and the National Biodiversity Network gateway website to help look after our wildlife nationally.

So, what are you waiting for, send your records in now! If you don't know who your county recorder is then ask your GMS area coordinator to find out for you, or look them up on various websites – try http://www.mothscount.org/text/57/county_moth_recorders.html (or via a direct link from our GMS website – go to www.gardenmoths.org.uk then click on Links then Recording Groups and Magazines and then on County Moth Recorders).

Start Filling in Your 2011 GMS Forms early to save Yourself work later in the Year

So, GMS 2011 has now started and we don't need to do all that boring bit of filling in the recording forms for another 36 weeks – well think again! If you start filling it in now and then keep doing it every week or two then it isn't a chore. If you leave it till the end then it is a chore. So get stuck in with your form filling now! Also every 9 weeks we ask you for records toward each newsletter – so if you keep on top of this and always send in your 9 week records to your area coordinator then this will keep you on top of recording. The first 9 weeks finishes on 29th April 2011.

What is the Most Valuable Garden to GMS?

That's obvious isn't it – it's obviously that massive rural garden with luxurious flower beds, full-size trees and right next to a stunning nature reserve. But, that's not the answer! A garden like this is fantastic and you will enjoy seeing lots of moths of lots of exciting species. However this isn't essential to GMS for our record keeping. Remember, that what we want to do is to record the average moths seen in an average garden on an average week with average weather. And unfortunately we have ended up with a bias in gardens in the GMS toward these stunning gardens that have bucket-loads of moths. Therefore we need to redress the balance – we need more small gardens and more urban gardens – so do you know anyone that fits that bill? They are the people that we desperately need in GMS. So, if your garden is tiny and in the middle of Manchester or Dublin then that is the garden that we most need. Maybe you only have a concrete backyard or only have a balcony in a block of flats? You are the person we need most!

The other sort of garden that we desperately need is the garden with the most number of years in GMS. If you live in the West Midlands then there are still 10 gardens that have recorded for every year of GMS so far – these are the most valuable gardens that we have to analyse our moth records for. So please try extra hard to make sure you complete this year's recording. If you can't manage the eight years that they

have managed then maybe you can manage seven or six or five? If you are from Wales or SE or E England then maybe you can manage four years in a row – then that is fantastic – or if you are from Ireland or the Channel Isles then maybe you can manage two years in a row and this is your third. So the simple message is that the more years you have recorded in a row for the same garden, the more valuable your records are to us.

And finally statistically the more weeks you can record every year the better your records become. As you know, GMS allows you to miss up to nine of the 36 weeks in the summer GMS, but this won't be ideal as you will miss lots of moth records, so ideally if you can miss less than six weeks is a lot more useful for us in statistical analysis. In fact for many analyses of records, then Jon Sadler has only been checking gardens that miss up to 3 weeks in the year! So the simple message is please try and miss as few weeks as possible. So try and do this by trapping the night before you go on holiday and the night you come back and when you go away then maybe you can ask a friend to run your trap in your garden for you? – It makes an excellent burglar deterrent while you are away.

In short – your garden is incredibly valuable to us – keep up with the regular recording and your records are incredibly valuable to us – even if you have a massive rural garden!!! And don't despair if you do have a massive rural garden and this is your first year of GMS – then we do still want your records as well!

Light Brown Apple Moth (left) was at No.9 in the South but at No.23 in the North, with just a single moth recorded (see Norman Lowe report below) Only two species in the Top 20 were recorded in fewer numbers; Yellow-line Quaker was down from 1.3 to 1.0 and the biggest loser of all, Light Brown Apple Moth, dropped from 1.3 moths per garden to 0.6.

Again, in top spot was December Moth (see front cover) with a whopping average of 6.4 moths for each and every garden, and second was again Winter Moth, (left) with 4.43 per garden. This was up on the previous winter (2.75) and the winter before that (1.84). Again see Norman's report below.

Winter 2010/11 – the results - The overall picture

Norman Lowe

Once more we had a hard winter, but unlike last year the cold weather was at the beginning of winter, not the end. So did that make any difference? – of course it did! But first things first. Again more people than ever have contributed to Winter GMS and results were received from 89 gardens, up from 69 last year and 44 the year before. But the distribution is still very patchy and it would be great to see a more even coverage of our area.

The results indicate that there were more moths about than in previous years. The table below shows the Top 20 moths for the whole GMS, compared with the last two years. Again, in top spot was December Moth with a whopping average of 6.4 moths for each and every garden, and second was again Winter Moth, but after that the ups and downs start. In the main, the gainers were the spring species with the early-flying moths Pale Brindled Beauty (up from 7th position to 5th) and Early Moth (up from 17 to 16) showing modest gains. But the biggest jumps in position were the species that fly a little later in the year: Common Quaker up from 41 to 3, Hebrew Character up from 33 to 7, Dotted Border from 22 to 8 and March Moth from 27 to 14. Two Top 20 species, Small Quaker and Clouded Drab weren't recorded at all the previous year.

Position 2010 (2009)	**Species Name**	**89 Gardens Total**	**89 Gardens Average**	69 Gardens Average 2009/10	44 Gardens Average 2008/9
1 (1)	December Moth	570	6.40	4.43	2.41
2 (2)	Winter Moth	394	4.43	2.75	1.84
3 (41)	Common Quaker	355	4.00	0.03	0.03
4 (3)	Chestnut	322	3.62	1.70	2.48
5 (7)	Pale Brindled Beauty	194	2.18	0.86	1.70
6 (6)	Feathered Thorn	162	1.82	1.07	0.95
7 (33)	Hebrew Character	142	1.60	0.07	0.89
8 (22)	Dotted Border	139	1.56	0.19	0.52
9 (8)	Mottled Umber	128	1.44	0.72	0.73
10 (4)	Yellow-line Quaker	87	0.98	1.28	0.80
11 (-)	Small Quaker	77	0.87	0.00	0.11
12 (26)	Spring Usher	73	0.82	0.14	n/r
13 (-)	Clouded Drab	71	0.80	0.00	n/r
14 (27)	March Moth	66	0.74	0.13	0.34
15 (13)	Satellite	65	0.73	0.46	0.52
16 (17)	Early Moth	58	0.65	0.30	0.57
17 (4)	Light Brown Apple Moth	55	0.62	1.28	0.95
18= (19)	Scarce Umber	44	0.49	0.29	0.48
18= (41)	Tortricodes alternella	44	0.49	0.03	0.86
20 (9)	Red-green Carpet	38	0.43	0.67	0.48

Not surprisingly all of these species were present in greater numbers per garden than last year, and even most of those that were lower in the table than last year had higher scores. For example Chestnut, which dropped from 3rd to 4th place more than doubled its score from 1.7 moths per garden to 3.6. Only two species in the Top 20 were recorded in fewer numbers; Yellow-line Quaker was down from 1.3 to 1.0 and the biggest loser of all, Light Brown Apple Moth, dropped from 1.3 moths per garden to 0.6.

Some moths were not recorded at all. These were *Diurnea fagella*, Rush Veneer, Juniper Carpet, Brindled Pug, Early Thorn and Flame Brocade, and of these *Diurnea fagella*, Juniper Carpet, Brindled Pug and Flame Brocade have never been recorded in Winter GMS. So who next year will be the first to get one of these species in our winter scheme?

So much for the moths that were recorded, but not surprisingly there were lots of nights when no moths appeared in our traps. This year nobody managed to avoid clocking up a zero score at all although there was one lucky recorder who had moths in his trap on every recording night but one. On the other hand some recorders had no moths throughout the whole 16 weeks. Personally, I think these deserve our especial congratulations for persisting with the scheme and in fact their results are just as valuable as those with lots of moths. I for one would like to see a statistical analysis of the zero results to see if we can establish any trends – in particular it seemed to me that there might possibly be some connection between high numbers of zero results and both seaside and urban locations.

Regional results

So what about regional differences? This is where things get even more tricky as some regions contributed a lot more gardens than others. So I thought it might be worth dividing the results up into 4 areas, each with 3 regions: North (Scotland, NE and NW England), South (SE and SE England and Channel Islands) East (East, East Midlands and Yorks and Humberside) and West (Ireland, Wales and West Midlands). The results are in the table below.

You might think that there would be a lot more moths in traps in the southern areas compared with the northern. But overall that doesn't seem to have been the case. However, different species showed different patterns of distribution. Winter Moth, for example, was 2nd or 3rd throughout and December Moth, Chestnut, Common Quaker and Pale Brindled Beauty, were all in the Top 10 of all 4 areas. On the other hand some species were commoner in the North than the South, such as Spring Usher in 6th place in the North but down at 19th in the South. Others were commoner in the South; Light Brown Apple Moth was at No.9 in the South but at No.23 in the North, with just a single moth recorded and November Moth agg. was at No.14 in the South but not recorded at all in the North.There were also East/West splits. March Moth was high up in second place in the East but right down at 20th in the West. On the other hand two species were notably commoner in the West; Feathered Thorn in 6th place compared with only a single moth in the East, and Mottled Umber at 8th in the West and 16th in the East.

	North	**7 gardens**		**South**	**39 gardens**
	Name	**Mean**		**Name**	**Mean**
1	Chestnut	19.14	1	December Moth	6.64
2	Winter Moth	7.29	2	Winter Moth	4.13
3	Mottled Umber	6.71	3	Common Quaker	2.59
4	December Moth	6.43	4	Feathered Thorn	2.03
5	Pale Brindled Beauty	5.71	4	Hebrew Character	2.03
6	Spring Usher	3.14	4	Chestnut	2.03
7	Satellite	2.71	7	Yellow-line Quaker	1.62
8	Common Quaker	2.00	8	Dotted Border	1.26
9	Scarce Umber	1.86	9	Light Brown Apple M.	1.05
10	March Moth	1.57	10	Pale Brindled Beauty	1.03
11	Dotted Border	1.43	11	Large Yellow Underwing	0.92
12	Red-green Carpet	1.00	12	Rusty-dot Pearl	0.82

12	Northern Winter Moth	1.00	13	Early Moth	0.67
12	Feathered Thorn	1.00	14	Red-green Carpet	0.51
15	Clouded Drab	0.86	14	November Moth agg.	0.51
16	Oak Beauty	0.57	16	Mottled Umber	0.46
16	Early Moth	0.57	17	Red-line Quaker	0.41
18	Yellow-line Quaker	0.43	18	Dark Chestnut	0.36
19	Tortricodes alternella	0.29	19	March Moth	0.33
19	Hebrew Character	0.29	19	Spring Usher	0.33

North (Scotland, NE and NW England), South (SE and SE England and Channel Islands) East (East, East Midlands and Yorks and Humberside) and West (Ireland, Wales and West Midlands).

	West	**33 gardens**		**East**	**10 gardens**
	Name	**Mean**		**Name**	**Mean**
1	December Moth	7.55	1	Common Quaker	2.70
2	Common Quaker	6.45	2	March Moth	2.50
3	Winter Moth	4.97	3	Winter Moth	1.80
4	Pale Brindled Beauty	3.18	4	December Moth	1.70
5	Chestnut	3.09	5	Hebrew Character	1.00
6	Feathered Thorn	2.27	6	Pale Brindled Beauty	0.90
7	Dotted Border	2.21	7	Dotted Border	0.70
8	Mottled Umber	1.85	7	Chestnut	0.70
9	Small Quaker	1.82	9	Spring Usher	0.50
10	Clouded Drab	1.73	9	Dark Chestnut	0.50
11	Hebrew Character	1.55	11	Tortricodes alternella	0.40
12	Satellite	1.03	11	Small Quaker	0.40
13	Spring Usher	1.00	11	Blair's Shoulder-knot	0.40
14	Tortricodes alternella	0.88	14	Satellite	0.30
14	Scarce Umber	0.88	14	Yellow-line Quaker	0.30
14	Early Moth	0.85	16	Mottled Umber	0.20
17	Northern Winter Moth	0.67	16	Clouded Drab	0.20
18	Dark Chestnut	0.55	16	Silver Y	0.20
18	Yellow-line Quaker	0.55	19	Light Brown Apple Moth	0.10
20	March Moth	0.52	19	Red-green Carpet	0.10

Of course these results were from 89 gardens in a single, probably exceptional, year. But as we build up the Winter GMS database we'll start to be able to draw firmer conclusions. So if you didn't contribute to Winter GMS this year, why not give it a go in 2011/12?

A Brush With The Law

By Alan Prior

One February night, while taking part in the winter GMS, I inadvertently caused a slight panic in the neighbourhood. Around 2:00 a.m. I just happened to notice a weak flying moth sauntering around the back yard. By the time I'd got myself together to try and catch it, the moth was disappearing. With moths being at a premium at this time of year I decided to search the fence and tree trunks with a torch to see if it had landed somewhere. I had no luck, so disappointed, I returned to the warm indoors. A short while later the metal gate at the side of our house was being rattled noisily and I went to investigate. I found some police officers trying to gain entry. I went and got the key for the lock and handed it over. I then had a conversation to find out what was going on. I was informed that a neighbour had reported seeing torchlight and they'd come to investigate. In the confusion I'd forgotten about my moth chase and said I hadn't been up to the trap at the end of the garden for a few hours. By now there were two cars and a transit van full of police officers blocking our road. I overheard the call for the dog unit and then suddenly remembered my chase around the yard. I quickly informed the officers that it was probably my moth search that had prompted their call out and apologised for the inconvenience. Thankfully they took the news in their stride. We have often had the police showing up at sites we've been recording out in the countryside but this was a first on my own doorstep! It all made me feel somewhat embarrassed at what my seemingly innocent search for a moth had brought as a result. It was a pleasant surprise to learn that somebody else in the area is awake in the early hours as, I thought it was just me! It just reinforces the fact that the GMS and moth recording even in the depths of winter is never ever dull!

Weather, and Whether or Not

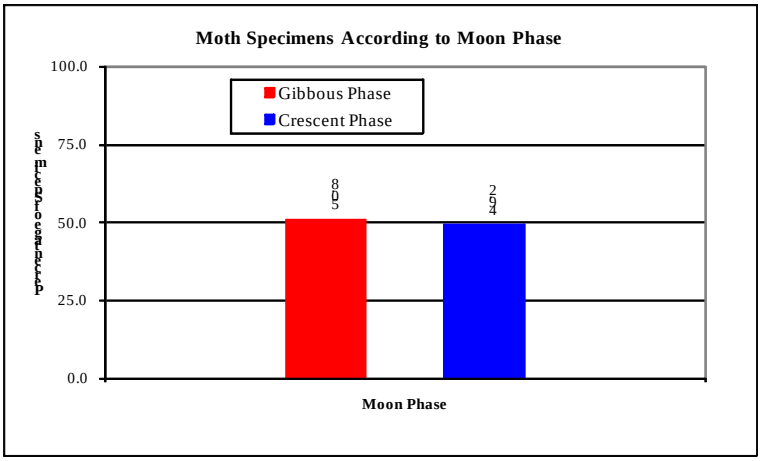
Les Finch

As mothers, I'm sure that many of us examine isobaric charts quite frequently to gauge our catch expectancy. Whether or not to trap should not be an issue; unless there's a logistical reason not to trap, you should consider trapping every night, even if this is limited to the utilisation of an actinic lamp in the garden. Since 2004, I've logged 329 macro species (ex aggs.) in the garden by regular trapping, several of which might not have been revealed by only 'fair-weather' trap deployment.

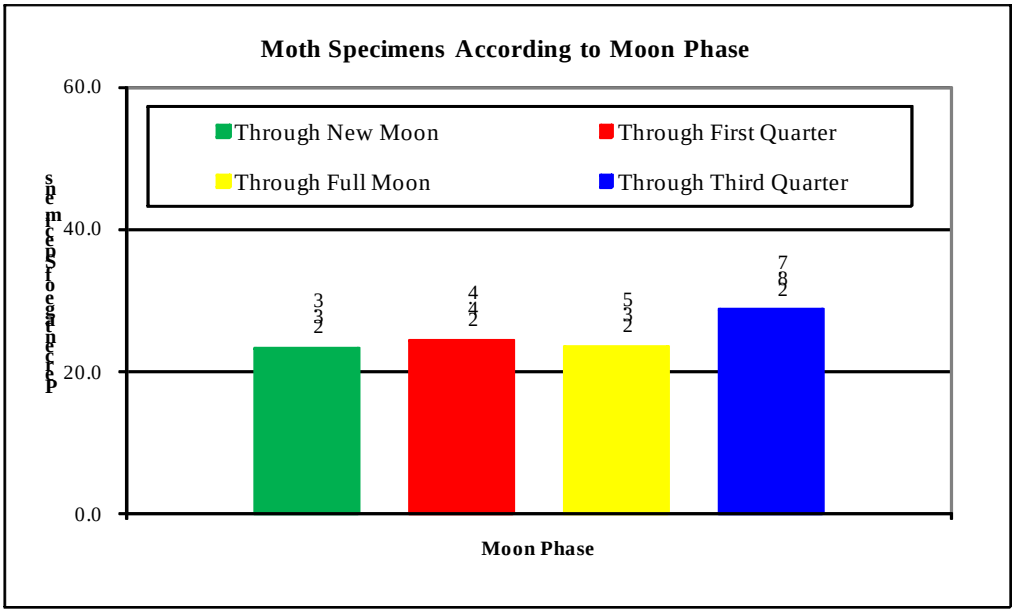
A question often posed is what effects do various aspects of our weather and other natural phenomena have on trap catches. We all believe that strong winds and heavy rain are detrimental to our potential catches, but to what extent? What are the effects of moon phase and light pollution? And, more obscurely, what are the effects of electromagnetic waves (radio, light pollution, etc.) on moths? What are the effects of increased carbon emissions? I'm not a scientist, and I don't know the answers, but the effects of weather on moth catches have fascinated me for some time. This article aims to share a few observations and analysis.

By way of background, I trap in a suburban garden in VC22 (Berkshire). The data used in this analysis relate to some 78,600 macro moths trapped in the six years period, 2005-2010. Because the garden is small (275 sq meters) and surrounded by neighbouring properties, actinic lamps are the order of the night. Nevertheless, trapping has occurred on an average of 345 nights in each of the six years. I receive weather data from a professional meteorologist who maintains a garden weather station and happens to live within a couple of kilometres of my home. The latter factor may not make my analysis statistically accurate, but trends over the extended period are probably meaningful.

It is often postulated that moths are less likely to be attracted to trap lamps when the moon is in a gibbous phase, and especially when there is a full moon. This may be true in a rural environment, but has not been confirmed in my suburban garden that is subject to a typical range of competing light sources. Indeed, the incidences of specimens in the gibbous and crescent moon phases are very similar, viz.:

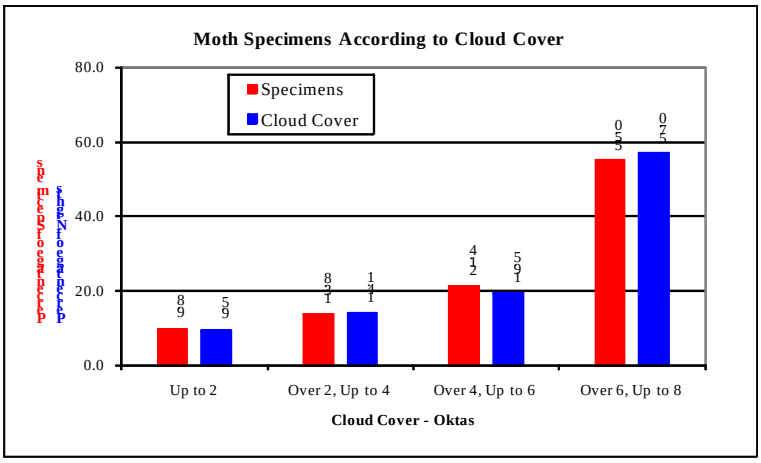


Whilst it is recognised that some moth species fly late in the night, the majority of nocturnal species are believed to start flying within the first two or three hours of darkness. In these circumstances, it might be assumed that the periods likely to be less influenced by the moon would be from the 'third quarter' onwards, when the moon rises at midnight and later, and during the period around the 'new moon' when the moon rises and sets with the sun. As the following chart illustrates, there is a tendency towards greater activity overall in the periods through the 'third quarter' and around the 'new moon', but not to any marked extent.

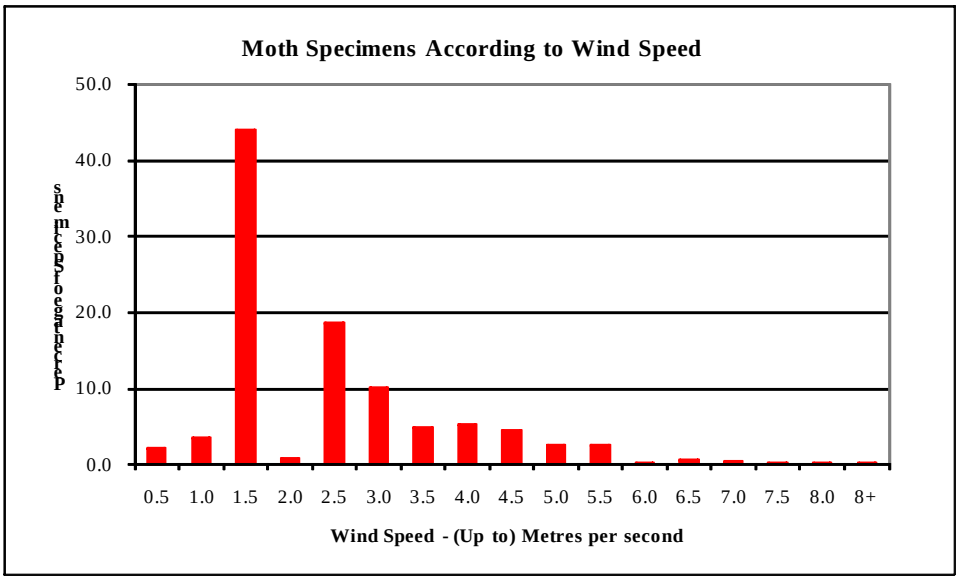


Variations in cloud cover, wind speed, and temperature, on the other hand, appear to have a much greater influence on the size of catches, as may atmospheric pressure, in its own right, to a certain extent.

In relation to cloud cover, analysis of records shows that 55.0% of all captured specimens were taken in nights when more than 6 oktas of cloud cover were experienced during at least part of the period of darkness, although it is acknowledged that 57.0% of all nights were encompassed by this parameter.

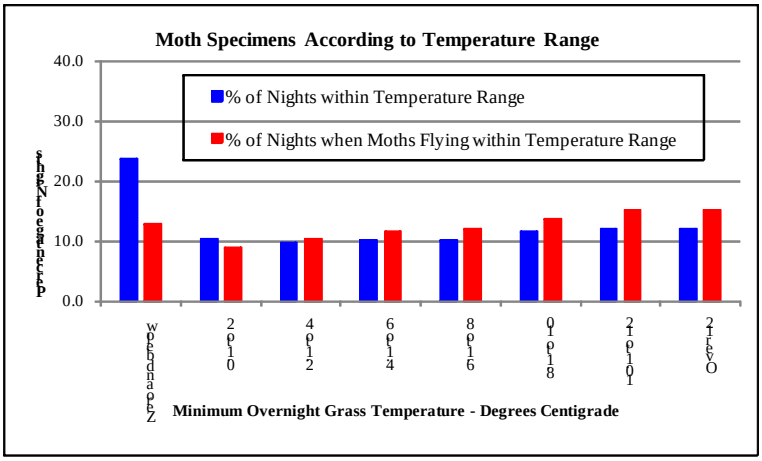


Analysis giving cognisance to wind speed on the night of capture, reveals that 78.9% of individuals were taken when the average wind speed was not more than 3.0 metres per second(5.83 knots), as indicated in the chart below. The apparent abundance of records when wind speeds were over 1.0 metres per second but not more than 1.5 metres per second, and paucity of records when wind speeds were over 1.5 metres per second but not more than 2.0 metres per second, arises because the meteorological data consulted, in accordance with established protocol, reported wind speed within the Beaufort Scale categories; so that intermediate wind speeds between 2 knots(1.03 metres per second - Light Air) and 5 knots(2.57 metres per second - Light Breeze) typically were not recorded.

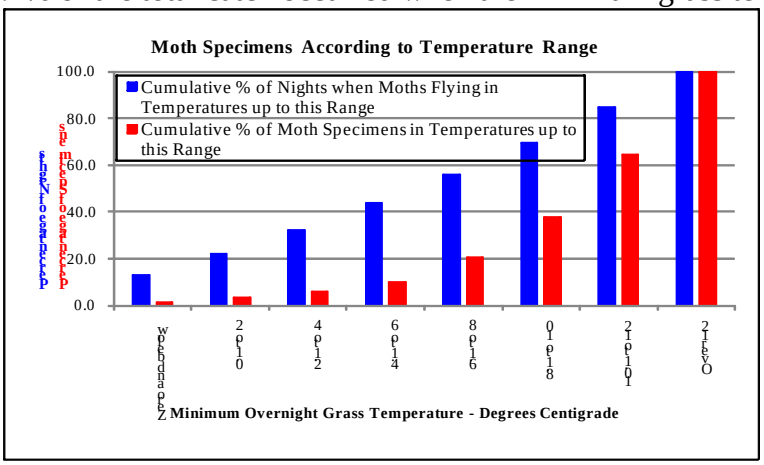


Whilst cloud cover and wind speed evidently influence trap catches, so too do temperature and atmospheric pressure. This review does not seek to identify the correlations among the various impinging forces, but the following two charts demonstrate the general effect of temperature change, by comparing catches with overnight grass temperatures.

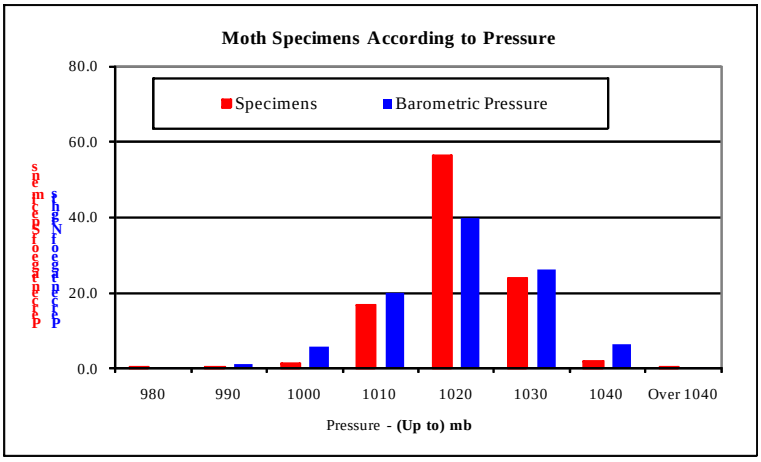
Although zero, and below, centigrade temperatures were recorded in 23.8% of nights, at least minimal flying activity was evidenced in 40.5% of such nights; whilst some form of activity was recorded in a total of 271 nights per annum. At the other extreme, 24.1% of nights experienced a minimum night-time grass temperature in excess of 10^{o}C.



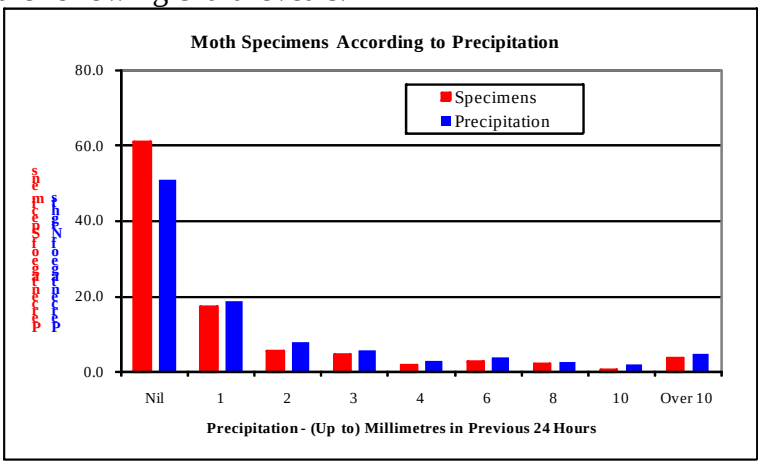
Only 10.1% of the total catch occurred in nights when the minimum grass temperature did not exceed 6°C, whilst 62.2% of the total catch occurred when the minimum grass temperature was over 10°C.



Although trends in atmospheric pressure may be associated with particular types of weather, it is not certain whether moths detect and adapt to pressure variations or to the physical conditions experienced. It is, nevertheless, interesting to compare catches within various pressure ranges. The following chart shows that, whilst recorded atmospheric pressure of over 1010, and up to 1020, millibars was experienced in 39.9% of nights, some 56.3% of all moths were attracted in such nights. Furthermore, only minimal activity was recorded(1.2% of total catch versus 7.2% of nights) when the pressure was 1000 millibars or below.



Precipitation also has a bearing on catch size, although apparently not to the extent which might be envisaged, as the following chart reveals.



Some 60.9% of the total catch occurred during nights when precipitation was not recorded, whilst the number of dry nights experienced was 51.0%. Although a further 17.5% of the catch occurred during nights when precipitation did not exceed 1 millimetre, there is evidence of moth activity, at reduced levels(21.6% of the total catch), even when greater amounts of precipitation are witnessed.

In summary, 'ideal' weather conditions might obtain when there is at least 6 oktas of cloud cover, the wind speed is no more than 3 metres per second, the minimum overnight temperature is over 10^{o}C, atmospheric pressure is over 1010, and up to 1020, millibars, and rainfall does not exceed 1 millimetre. Weather statistics show that such 'ideal' conditions were experienced on an average of 19.0 nights for each of the years of review(5.2% of nights) when 17.3% of the total annual catch was taken. It is pertinent to note, however, that many of the nights categorized transpired in June, July, August, and September when, variously, Riband Wave, Heart and Dart, Large Yellow Underwing, Setaceous Hebrew Character, and Dark Arches comprised a notable proportion of the catches.

Perhaps, in the course of time, meteorologists will be able to forecast exactly which nights of the year the 'fair-weather' mothers will be able to achieve maximum enjoyment from minimum effort!

GMS AGM 6th March 2011

Paul Watts

Around 90 delegates turned up for this year's GMS AGM. They travelled from as far south as Cornwall, from the most west of Wales and at least one came all the way from Scotland – well done Heather!

The pre-meeting period is always a time to catch up with old and new friends and to find out what's happening in their neck of the woods, along with browsing the suppliers stands of course - always of great interest.

The event started with Dave Grundy opening the proceedings with a welcome and introduction and surprised us all by announcing after just 15 minutes that he was already behind schedule! He was sure, however, that the next speaker would catch up, which showed amazing foresight as the next speaker was indeed – Dave Grundy!

So the second Dave Grundy gave us a GMS 2010 round-up with pics and graphics highlighting species losers & winners or movers & shakers with some interesting stats and one or two surprises.

Jon Clifton from ALS delighted us with a presentation showing some of the more unusual and rare moths to be found outside the garden fence. I know many of us trap on other sites and habitats outside of our gardens but there were some species there that I imagine many moth-ers in the audience would gladly give away a Goater to see! Some excellent photo's too from the very knowledgeable Mr Equipment Man.

Representing OPAL, was Jon Sadler, in his capacity as number-cruncher, interrogator and analyser extraordinaire of the GMS database with an impressive insight into the stats that can be gleaned from all the information we submit in the form of our GMS records.. This was a fascinating display and array of graphs, facts and figures and although I personally found it mind-boggling to follow at times Jon demonstrated the workings and the whirrings that have to take place in order to extract and extrapolate the data and present it in such a way that it becomes palatable by the layman – i.e. most of the audience I guess! A somewhat time-consuming but very necessary job that must become more absorbing as the database grows.

Lunch was a fantastic free spread of every type of sandwich possible along with a huge table groaning under the weight of enormous cakes, flans, tarts and pies! Amazing! Thanks indeed must go to all the catering staff on the day. They all did a splendid job!

Zoe Randle then inspired us with her presentation of what the National Moth Recording Scheme has done so far and what it hopes to do in the future. Particularly impressive was the amount of data which has been inputted to date which then links in to the National Biodiversity Network Gateway and the distribution maps at UKmoths.org.uk. This is an incredible achievement in such a short space of time and admirably presented by Zoe. I'm sure we all raise our hats to Zoe and her team as this information is invaluable to moth-ers all over the UK and no doubt beyond.

An equally fascinating talk then followed from local lad (to the venue that is) Graham Finch who is a fellow Leicestershirearian (have I just created a new word?) – although I now live in Shropshire, Graham's patch is where I was born, grew up and in fact lived most of my life. In fact, talking afterwards I discovered he lives just a few fields from the back garden of the bungalow I lived in prior to switching counties. So I know the area he alluded to very well. Particularly interesting was the section with the light-hearted title of 'Bring On The Girls' – I imagined a troupe of Little Emeralds fluttering across the stage dressed in pink tutu's and majestically moving to the strains of Swan Lake. Sorry – letting my imagination run away with me here! No… this was all about the various species of winter wingless females that can be found, but I'm guessing most of us have rarely seen. Graham's message was 'they're out there – you just need to know where and when to look'. It certainly inspired me to grab a high-powered torch and check the nearby tree trunks in the dead of night. I guess you just have to be careful who might see you and wonder what you're up to! Graham has some excellent close-up pics of the girls too and all-in-all a fascinating and insightful presentation. Norman Lowe aided and abetted by the last speaker – oh no… it's Dave again, did a summing up of the day and the information shared, and then opened up the house to debate and discussion, most of which seemed to centre on the problem of incorporating GMS forms into MapMate, a problem that I'm sure many of us have encountered. A number of suggestions were made but I can see this particular debate running for many more discussion periods both online and off. My own suggestion of reverting back to paper records and submitting by post fell largely on very deaf ears. I'm not sure why!

An excellent meeting with lots of information and food for thought. And talking of food; the icing on the cake was the icing on the cake as the caterers implored us to take all the left-overs back home with us. I only wish Tony and I had come in separate cars now! Thanks to everyone concerned for organising such a well-received day.

Mark (Atropos) busy at the AGM

GMS mothers mingling at the AGM

Jon Clifton (ALS) talks moths and traps – probably

The refreshments at the AGM are a real highlight

Lots of chat, meeting old and new colleagues

The irrepressible Dave bending ears.

Views taken at the 2011 AGM by Danny Arnold

My first year mothing in a small garden in Broadstairs, East Kent. CT10 1RX

Sue Smith

It all began with my going to Sandwich Bay Bird Observatory on Easter Sunday, 2009. During this, my first visit to the Observatory, I expressed my interest in Butterflies (for some time I had been noting the various Butterflies I had seen visit my garden) and was told they were just looking at the moths they had trapped the previous night. To which I replied "Oh, I'm not really interested in Moths" as I'm ashamed to say I felt they were rather dull, brown jobbies. I was quickly shown this was **not** the case when they showed me several moths I had never heard of (let alone seen) including my first Poplar Hawk Moth.

At about the same time, I was at my friend's house when her husband (Mike Longdon) was emptying his trap and he showed me a Hebrew Character and a White Ermine. He also lent me several copies of his Butterfly Conservation magazines with which I was most impressed.

Hebrew Character

White Ermine

Within a few weeks I had signed up to attend a Moth Workshop at Sandwich Bay led by Patrick Old and was so inspired I purchased a Skinner Actinic Moth Trap to use in my garden and Waring's "Moths of Great Britain" Field Guide. It was late May when my trap arrived and I was surprised by the sheer variety and colours I could trap in our small garden, but was overwhelmed when it came to identifying the different species. I decided my best bet was to photograph each one. This was an added surprise, as I discovered moths much easier to photograph than butterflies, as many (not all) can be so passive. Mind you, I had difficulty in reliably capturing good shots where the whole moth was in focus and continue to have problems with depth of field! But this is work in progress. At least with digital photographs, I can "bin" the unsatisfactory shots!

Angle Shades

Heath Fritillary

During a conversation it was suggested I to go to East Blean Woods to see the Heath Fritillary (a superb butterfly). On looking through my Butterfly Conservation diary I saw there was a date planned in June at East Blean Woods and contacted David Gardner to confirm details. During our telephone conversation, he told me of his interest in Moths, so I took some of my unidentified moth photos with me and have been very grateful for the support he has given me. He told me about the Garden Moth Scheme and suggested he sent me the spreadsheet and I practice collecting my data during the summer. I then registered for the Winter Garden Moth Scheme, but sadly only trapped one moth during the whole

season! This year was my first full summer season and I was really pleased to trap in excess of 165 species, again thanks to David Gardner and John, Paul, Patrick, Francis Solly and Gadget from www.planetthanet.org and other members at Sandwich Bay www.sbbot.co.uk who have helped me with identification.

I enjoy the anticipation of looking inside the trap the following morning wondering what I have trapped, especially if I trap Hawk Moths.

Privet Hawk Moth

Eyed Hawk Moth

or other less seen species for examples:

Silver Barred

Clancy's Rustic

I was so inspired by Spring Watch and their use of cameras in bird boxes my husband made me a box with a camera and we have both thoroughly enjoyed the privileged view of observing a family of Blue-tits, nest, lay and rear their brood for the past 5 years and I record the activity within the box for Nest Box Challenge via the BTO website. I also contribute to BTO's Garden Bird Watch where I can record all visits to my garden whether they be birds or other wildlife.
This has also been my first year walking a Butterfly Transect in my area for Butterfly Conservation and I look forward to comparing my own data, be it moths, butterflies or birds in subsequent years. I may only be an amateur Citizen Scientist, but hopefully this way I can support the wonderful world of Nature that we all tend to take for granted.

Hummingbird Hawk Moth on Buddleia in my garden.

SOME THOUGHTS ON LIGHTING POWER ON TRAPS

by Richard Bigg Cambs and Essex Branch BC

I have been a member of Butterfly Conservation for many years but I am a relative newcomer to mothing. I made a trap based on the "Skinner" design four years ago and have used it in my garden since then. Since my garden is small, the trap cannot be placed far from the houses. So, as I did not want to annoy the neighbours with a bright light all night, I looked round for a low power UV item. I found a UV tube intended for use in a fish tank filter as an algae killer. I chose one of 9W. This sounds rather puny compared to the 125W bulbs more normally used, but it gives a fair light and attracts moths.

It's the number attracted that I ponder. The average, on a reasonable night in the summer, is around 20 and on a good night maybe 30, which I guess is well down on a larger light source in a larger area. This, however, is what I wonder. My garden is approximately 10 yds by 10 yds. It is bounded by the house on one side, an 8 – 9 ft high thick hedge and a 6 ft fence on two sides and at the bottom, a fence covered with shrubs and ivy again 8-9 ft high with a largish wild plum in the middle. Surrounded as it is, a larger light source would not cover a larger area and the low power source that I use is readily visible in all parts. So is a brighter source more compelling for moths or is it just that a brighter one attracts from a greater distance ??? Would I attract more moths with a higher power or not ??? Any expert opinions ???

My highlights for this past year (writes Sue Smith from Broadstairs, Kent)
March 2010

Trapping my first moth for 2010 - a **Common Quaker** on Friday 19th March for the GMS, but numbers were low for several weeks.

April
I caught several **Early Grey**s.

May
This month I began to trap more than just on a Friday night, but being a bit compulsive obsessive by nature I have to limit it to maximum of 3 nights a week otherwise I find it too time-consuming (still being knew to identifying species). The **Angle Shades'** photo in my Report (a favourite moth of mine) was the first I'd trapped this year and was quite a pristine specimen and I put it in my photo album on the chat-site forum. (Next year, I aim to add more photos to this than I managed this year).

June
On 25th June, I trapped a **Meal Moth** which I gather is quite unusual as except for being close to the cliff edge, where I live is quite residential, other than a local Park and an area of natural scrubland behind our house. Certainly no farms, horses and barns! I also caught my first **Green Silver Lines** which I thought to be unusual in colour.

July
The highlight of this month was trapping my first **Hawk Moths** of the year (**Eyed** and **Privet**).

August
This month I trapped my first and only **Old Lady** on 6th August. I was surprised at its size and was a real treat of a catch!

September
I trapped several pleasing specimens, including the **Black Rustic, Turnip, Orange Swift** and **Rosy Rustic** to name just a few of many. Being new to this, almost every catch turned up something new and exciting!

October
This month I was pleased to trap another new moth for me, the **Red-green Carpet** and was taken with its abdomen that seemed to be more raised than in most moths I'd trapped, but sadly numbers and species were now noticeably beginning to dwindle.

November
The last moth I have trapped this year (and my only moth trapped so far during this Winter Garden Moth survey) was the **Scarce Umber** on **19th November, 2010 – temperature 7C,** since then I haven't caught anything else and with this particularly cold winter so far, I wonder if I will see any more until next Spring? (The only moth trapped during the scheme last year was 1 Light Brown Apple Moth 20th November, 2009 – temperature 13C, but it would be nice to break this record of 1 for the winter season!)

If I was to be asked of any Downsides to trapping, I would have to mention wet egg boxes, but at least they dry quickly in the airing cupboard! My disappointment of not trapping more Hawk Moths, as although I didn't purchase a trap until May of last year, during last summer I did trap more species of Hawk Moth than this year, but hopefully numbers will increase next year. (I would really like to trap a Dead Head Hawk Moth, but as yet I have not trapped or seen a live specimen, only photos in books). The frustration and overwhelming feeling at times trying to ID moths I am less familiar with, although as I said in my report I have been helped by some many kind and generous people.

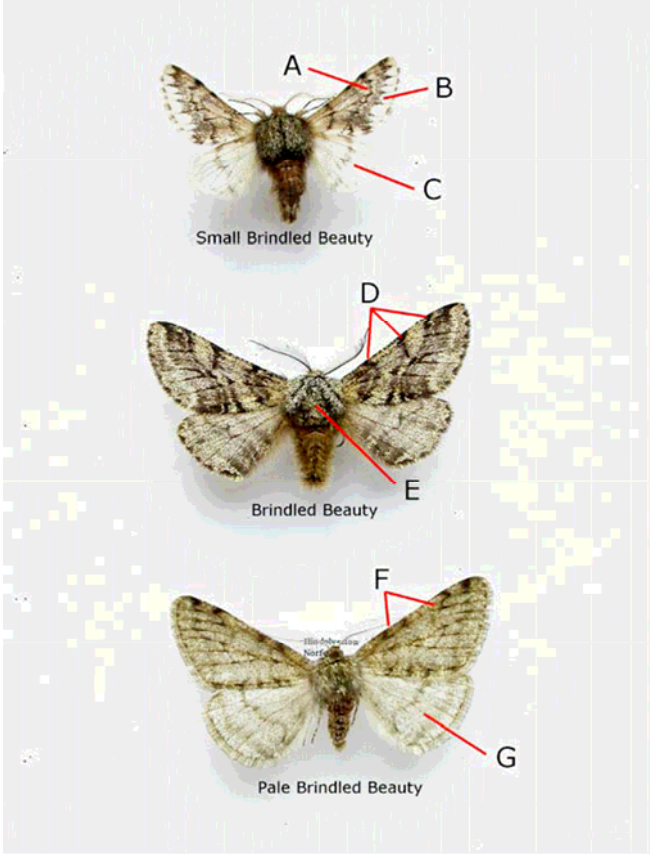
The above are just a few of my star species and I have many other favourites (too many to list here) and from once thinking moths are "Just little brown jobbies" I certainly couldn't have been more wrong!!

Sue Smith

THE SEPARATION OF MALE BRINDLED BEAUTY (*Lycia hirtaria*), PALE BRINDLED BEAUTY (*Phigalia pilosaria*) & SMALL BRINDLED BEAUTY (*Apocheima hispidaria*)

Pale Brindled Beauty is the first of the three to fly being on the wing from January through until early March whereas Brindled Beauty is on the wing from early April until May. Thus confusion of these two should be almost separable on flight period alone but there are some that will fly earlier or later than literature states. Small Brindled Beauty flies from mid-February through to the end of March. Small Brindled Beauty should cause little confusion being much smaller in size than the other two species.

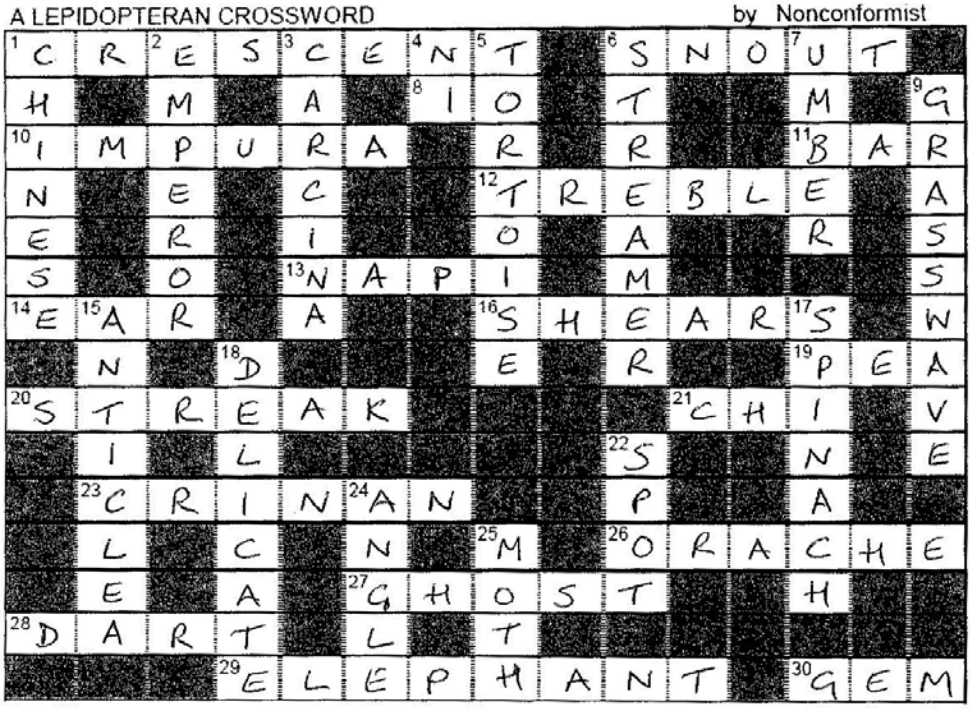
It also shows a more jagged, irregular median fascia (**A**) and a pale area to the outer edge of the forewing (**B**). The hindwing is also much paler, almost white (**C**). Due to its small size, the basal area of the forewing also appears much thinner. Confusion could arise with the other two species but Brindled Beauty shows stronger fascia (cross-line) (**D**) and is a more boldy marked insect. The thorax also tends to be heavier and thicker (**E**). Pale Brindled Beauty is much paler overall, almost ochreous in ground colour with a weaker sub-basal and median fascia (**F**) and a paler hindwing (**G**).



Note: A rare dark, almost unicolorous form of Oak Beauty exists (see lower picture) and could be mistaken for Brindled Beauty but both the subbasal and median fascia are more angular in appearance. In some of these forms the wings can appear to be shorter than normal in this species leading to further potential confusion. Many thanks for Julian Small (Yorkshire) for providing the image of Oak Beauty.

Jon Clifton Norfolk

A LEPIDOPTERAN CROSSWORD by Nonconformist



Congratulations to Leon Truscott (Cornwall) and Heather Young (Stirling), both of whom sent in correct solutions to the Xmas cross-word (Heather's entry is featured above) – many thanks to Nonconformist for a great composition.

Across

1.	Does this fly on a waning moon?	(8)
6.	An " on your face" moth found in porridge.	(5)
8	Was Juno's companion so specific?	(2)
10.	Panelling that almost needs an airpump?	(6)
12 & 11.	Score sixty and head for a pint.	(6&3)
13.	The pain of having coloured blood-vessels.	(4)
16.	A moth of kitchen and garden.	(6)
19.	Olive Oyl's sweet cream edged baby.	(3)
20.	The runner Ethel shouldn't look at.	(6)
21.	Is this a grey one I see before me?	(3)
23 & 14	Species found when it begins to rain nacre.	(6&3)
26.	A moth certainly good for aches and pains.	(6)
27.	Should we call this moth Banquo?	(5)
28.	Still found in much of our clothing?	(4)
29.	Don't give the bird to this mammoth moth.	(8)
30.	A jewel in anyones moth trap.	(3)

Down.

1.	A far-eastern member of an acting group.....	(7)
2.	... ruled over by a moorland species.	(7)
3.	Querky green twister? But not specific.	(7)
4.	An immigrant in reverse?	(2)
5.	A butterfly minus a carapace, very slow now.	(8)
6.	Found flying at Xmas parties?	(7)
7.	Barred brown earthy mineral.	(5)
9.	Was Graves the author of this little beauty?	(5&4)
15.	A clean it up generic for 6d.	(7)
17.	Strength-giver for Bluto's enemy.	(7)
18.	This moth is much too fine to handle.	(8)
22.	Metallic mark, but not precious.	(4)
24.	To fish for a moth without dark glasses.	(5)
25.	Yes! It's definitely mother, no hesitation.	(4)