Lancashire Moth Group Newsletter
February 2016

Introduction by Pete Marsh

Welcome to the Newsletter covering the latter part of 2015. This is the final year of the National Macro Moth Atlas and hopefully everyone with a bit of time will be pulling out the stops to record as extensively as possible. Soon after this Newsletter is published, Kevin McCabe will have updated the Matrix covering our recording area and it will be available to have a look at on the Lancashire Moths website

The main plea as regards this year is maybe sacrifice the long-standing garden list and its one or two extra species a year and check the OS map for the region within reasonable range of your house and try and target some under-recorded habitat within your square or the 'resident moth-er-less' square next to yours. I find that once the routine is established of e.g. collecting your couple of actinics from 'wood x', putting the batteries on charge for the next night, checking the weather, contacting the relevant landowner/keeper/deer stalker, it becomes no great effort and is highly enjoyable and full of anticipation. You just need to be careful your light is not visible from a "dodgy" public right of way, but there is always the risk of theft when you set a moth trap – even in a Yealand Conyers garden (ask Brian!). Occasionally things don't work out and a common error is to chain up a generator at a remote private site and then forget to turn the fuel cap switch to 'on' – it usually lasts just long enough for you to think everything is running perfectly and you are out of light and earshot!

If anyone in VC60 has an area of private woodland they can access and/or use of an outside socket at a promising location in an under-recorded area, but you don't have the 'gear' to take advantage of the opportunity, please do get in touch with me. I will not, however, be interested in any sites which have a known reputation for attracting "night life" - it's all very amusing sheet and lighting whilst surrounded by hordes of 20-somethings tottering around in high heels being 'attacked' by Drinker moths, as happened one night at Jubilee Tower car park, but the same 'habitat' can also produce a much nastier version of the human race. I'm sure Richard will echo this offer with respect to VC59.

There is an on-going offer to facilitate with the ranger service at the under-recorded Beacon Fell which I was not able to take up last year - I do live miles away. If this service is still being funded, anyone interested this year?

Many thanks to the contributors to this Newsletter. I do feel a bit guilty that the new and expanding hobby of checking for leaf-mines and other larval/pupal signs has not been given a lot of prominence here, but Ben Smart's Micro-tips Facebook site and indeed Ben and others regular postings on the Lancashire Leps and (national) Recording Moths Facebook sites provide a shed-load of information for anyone interested. Apologies to anyone who objects to scientific names not being used to accompany the vernacular in the text. I would do if it was an Annual Report, a more 'formal' statement of the year's mothing events. Conversely, I only use the "traditional" vernacular with micros, such as Rush Veneer and Mother of Pearl, not the new-fangled knot-horn-type stuff

Hope 2016 is a productive year. Metcheck had it raining every day in July a week ago, now they are going for a heat-wave! We'll see.

Chocolate Tip, St Helens

An early addition to the county list

Steve Palmer/Tim Hutchison/John Langmaid

The micro that Tim Hutchinson found on the station at Carnforth on the 25th January 2016 has now been confirmed as *Bankesia conspurcatella*. He passed the specimen on to me, which I've set, and John Langmaid very kindly took photographs of his specimen of this male moth and the possible confusion species (*Dahlica inconspicuella*). Tim's moth is a perfect match for John's conspurctaella while the antennal and forewing cilia features mentioned in MBGBI are also definitive.

A *Mompha langiella* from Torrisholme was thought to be also new for VC60 until it was realised that a specimen from exactly the same site was photographed in 2015 (see 'new for' section).

Lancashire Moth Social Monday 21st March 2016

The room is booked at the usual venue, **Lancashire Wildlife Trust headquarters at Cuerden**, Shady Lane, Bamber Bridge, arrive from 1900ish for a formal start about 20 minutes later

Programme not fully sorted at this stage but does include input from Steve Palmer and Richard Walker and we hope to have Gary Hedges, data manager for Cumbrian records, with us.

If you do wish to give a short presentation on your own recording efforts, please let me know as soon as possible.

This is open to everyone interested in moths, not just people who send records in. Please, as usual, let me know if you are coming so can get a handle on likely numbers. Thanks. PMrsh123@aol.com or text 07532433043

Garden Moth Scheme

The Garden Moth Scheme (GMS) is due to start again imminently – will you be joining in recording for this excellent citizen science study? Over 350 gardens across Britain and Ireland will be taking part and that is just ordinary gardens with ordinary moths. No garden is too rural or too urban! For me it is my 14th year of taking part in this excellent scientific project, but new comers are especially welcome – anyone at all can take part – even beginners at studying moths.

But what happens with all the records from all of these gardens? They all go off to a database once per year and this database is an excellent resource of figures on population fluctuations over the years. And because recording is so consistent and comparable between gardens and years then all sorts of other scientific comparisons can be made between catches for different types of moth traps or different types of gardens (rural or urban etc)

To take part all you need to do is to trap the moths in your garden once a week from 4th March to 4th November (and you're allowed to miss the odd week on holiday etc) and of course count how many you see of each species. You then send your records in to your area coordinator and in return you will receive a quarterly newsletter every 9 weeks. In this there will be lots of information from the statistics of what is being caught in all these gardens. For instance how are moth catches comparing between Ireland and SE England and what are the top 10 commonest moths of the spring. It's a great read. Plus of course you will hear reports back from people's gardens in the excellent Garden Moth Scheme facebook group. Also there are regular reports back to the GMS annual conference of findings from the study. This year the conference will be on March 13th in Staffordshire.

Belted Beauty survey 2016

Sunday 17th April 2016 starting 10.30am

BELTED BEAUTY COUNT, POTTS CORNER

The annual survey of the Belted Beauty colony will take place on Sunday 17th April, meeting in the Potts Corner Car Park (SD413571) at 1030am. Be prepared for cold, wet and windy conditions and waterproof walking boots or wellies are advisable. On occasions a charge is levied for parking but is unlikely to exceed £1. Organiser Steve Palmer – s.palmer12@btopenworld.com

It is hoped that 2016 will prove a better year for the Belted Beauty following on from its very poor showing in 2014 and 2015.

As many of you will know, DONG Energy have received planning permission to drill two tunnels under the marsh for cabling linked to a new offshore windfarm. DONG have made their case to and received approval from the Planning Inspectorate and Secretary of State on the basis that the development will not affect the Belted Beauty or saltmarsh habitat. Monitoring of the moth will be continuing during and after the planned construction process and operational phases to ensure this is the case.

Work on the cabling tunnels is due to commence during 2016 so there may be delays or restrictions relating to accessing parts of the site. This is not anticipated to be a problem for the April count as the drilling is not expected before June 2016. However it will be advisable to allow extra time to travel down the narrow approach road just in case there are any vehicular access delays due to preparatory site work.

National moth nights 2016

The national theme this year 'Hawk Moths' and hopefully the spring/early summer will not be as late as 2015, otherwise it is going to be more like the back end of Hebrew Characters than Hawk-moths in this area! More seriously it is a very good time of year for a variety of scarce and local species in our area and I will certainly be out in all kinds of habitats targeting the likes of Glaucous Shears and (proper!) Red Twin-spot Carpet on the moors, Clouded Magpie under my local elm trees, Alder Moth and Alder Kitten in the river valleys and hopefully a more 'relevant' Small Elephant Hawk-moth in the upland cloughs

Anyone who wants to come out, either sheet/lighting or checking traps in the morning, please contact Richard Walker or Pete Marsh, but the where and when, certainly in Pete's case, is very weather-dependent with decisions made the day before

The National Moth Days and Nights in 2016 are organised as follows:

1) Setting a moth trap(s) on the night of Thursday 9th June and recording the catch the following morning

2) Daytime searching on 10th June - heather moorland, raised bogs such as Cockerham Moss and limestone hillsides could be productive for localised species where you might be the only recorder and receive a halo in the write-up!

3) Set a moth trap on the night of Friday 10th June and recording the catch

4) As 2) on 11th June but how about a different habitat?

5) Set a moth trap on the night of Saturday 11th June and record the catch in the morning

If you are mad keen, you could set several traps in different habitats each night as well as 'sheet and lighting' for a couple of hours or so. Last year the only suitable moorland trap night was the final night and the Sunday morning was a race between Cross of Greet area and Leck Fell to check and gather in four lots of traps before the sun dispersed everything!

Events associated with National Moth Night

If you prefer organised diary entries well in advance, Leighton Moss offer two possibilities. The first of these is a formal RSPB event which will include moths, but also a walk looking for more general invertebrates. For this event, you could perhaps bring along some of the "collateral", such as smelly dung beetles which often grace moth traps

Leighton Moss events

Saturday 11th June

Public event at Leighton Moss in the classroom at the rear of the main centre. 1000am onwards or earlier if you are bringing specimens to show. Includes moths, but also other invertebrates with a guided walk by expert Steve Garland

Sunday 12th June

This is the gathering for all the moth-ers who have taken part in National Moth Days and Nights. Please bring everything you have accumulated over the three nights and days (and kept in the fridge in the meantime). There will be experts on hand to attempt to identify any e.g. small micro-lepidoptera. All welcome - you will not need to bring specimens to be let in!

Classroom doors open from 0900hrs. Other events may be organised nearer the time - keep an eye on the Facebook site or email Richard or Pete the week beforehand.

Brian Hancock Pug update

I have almost finished an update to my Pugs of Lancs and Cumbria with several new photos and records. I am waiting a month to see if any more records come in for Lancs and Cumbria and I hope to have it on the Lancs Moth website by Mid March.

Moth Highlights July - December 2015 by Pete Marsh

The second half of 2015 saw some decent records, especially micros. A whole host of postings on leaf mines and associated evidence of larval and pupal stages have been posted on both the Micro Tips site and the main Lancashire Moths Facebook group, especially by Ben Smart. These have predictably provided some of the first for the region in 2015. Some under-recorded tetrads – our "white holes" - received attention, notably from resident newcomers running moth traps therein (special thanks, for example, to Kate Hughes and Jack Morris for choosing such an important place to live!). Please note that a traditional comment in many newsletters, as opposed to annual reports/final datasets. applies here - a few of these records are still not fully confirmed, but the vast majority are fully authenticated, including all the 'new for' section.

We could do just a little bit more in the squares which are furnished by some excellent garden traps, but where specific habitats have not been targeted. Whilst your garden trap may be limited, as regards new stuff, to the occasional additional wanderer from the third year of operation or so onwards (see comments accompanying the new for 10km square selection), what would happen if, for the last year of the macro moth atlas, you obtained permission to record in that private woodland just up the road with its nice stand of beech and scattering of ancient oak trees? Have you got one of the excellent range of actinic traps which can battery operated at a secluded private site. Indeed are there any outside sockets enabling a 125 MV to be safely used? Is there anyone with a generator who might like to form a small team to be alerted and go out and e.g. add some under-recorded moorland on a calm muggy night? If you would like to do this sort of thing, but haven't the confidence to go out on your own, why not ask and see if someone nearby is available by getting in touch with one of us (see contacts page)?

As mentioned previously, with examples such as Lead-coloured Drab and aspen, subtle changes in habitat can produce quite a different range of moths. Warton Crag is a very good example of this where the north-eastern side has a different array of species to the more open and sunlit western side. Targeting an area of beech on the NE side in 2015 produced the first 'dot' in our whole recording area for ***Strophedra weirana***

New for either VC60 or VC59 or not previously recorded in either vice-county

New for VC60 in 2015 were a mixture of the small and possibly/probably previously overlooked, a product of targeting the correct food-plant/habitat and two 'big and obvious' species. In the first category were ***Bucculatrix cristatella*** found by Jeremy Steeden (JS) at Fairhaven Golf Course on 28/7 along with the first confirmed ***Dichorampha vancouverana***, ***Mompha langiella*** found by Alan Draper at at Torrisholme on 24/3 (retrospective i.d. after one found there in early 2016!) and ***Mompha bradleyi*** found at Carleton by Jonny Scragg (JSc) on 3/6. Finally ***Scythris grandipennis,*** new for the whole of our region. This gorse feeder was located on Heysham Moss on June 24th (Justine Patton (JP)). It is clearly highly localised and very rare in the north of England but it is worth looking for larval spinnings.

In the second category, the aforementioned ***Strophedra weirana*** found by JP at Leek Hill Wood, Warton Crag on 1/7 and ***Pammene splendidulana***, located by swishing a net at one of the few things which moved at Thrushgill clearfell, with oak woodland nearby, on 4/6 (JP). In the third category, nowhere near a nursery, a **Varied Coronet** found by Ida and Derrick Smith (I & DS) at Calder Road, Blackpool on 19/6 and the first confirmed VC60 **Dwarf Cream Wave** found by JP at coastal Middleton, nr Heysham, on 12/7.


Varied Coronet

A similar mixture of tiny things recorded by specialists through to the big and obvious comprised the 'new for VC59 in 2015. ***Ectoedemia louisella*** was located by Ben Smart (BS) in field maple keys on 17/7 and confirmed when an adult emerged on 7/8. Nearby BS located some tenanted mines on oak at Lower Hardy Farm, Chorlton between 3/11 and at least 11/11 and these were identified from photographs by John Langmaid as being ***Ectoedemia heringi.*** ***Triaxomera parasitella*** was located at two sites, by Graham Dixon (GD) at a Hoghton garden on two June dates and a singleton in the same month at Formby National Trust (Richard Walker (RW), Ron Moyes (RM) et al). Arguably the most significant "macro" moth record was a **Yellow-legged Clearwing** (see Richard's note), a female found at Croft on 17/7 by Phil Brighton, following some detective work after a photo on the internet. ***Mompha jurassicella*** made its awaited VC59 appearance (several records from Morecambe gardens/Heysham in VC60) with three found by Kevin McCabe (KMcC) at Flixton between September and November.

The first **Triple-spotted Pug** for at least two centuries was located in the garden trap at Hoghton by GD on 23/8, amazingly the same night/same trap as the first **White-point** for anywhere in this region! The notorious **Brown Tail** made its first VC59 appearance in ominously suitable habitat (the previous VC60 record was on a wall near the docks and almost certainly imported) found by John Girdley (JG) at Woodvale on 17/7. **Fen Square Spot** is being claimed

with more confidence these days as the midsummer species in between the two Small Square Spot broods. New for VC59 were records from Freshfield Dune Heath on 4/7 (G Jones (GJ)) and SD83 on 21/7 (Geoff Turner (GT)) (see last Newsletter).

Other, mainly macro-moth, records of interest

VC59

Currant Clearwing

Goat Moth was well-recorded at Freshfield between 28/6 and 4/7 (GJ, RW, RM, E Fish (EF)) – see separate article. Nearby, there was further evidence that **Currant Clearwing** is more widespread than previously thought with 11 at Formby 2-4/7 (RW, A & S Parsons (A & SP). Nearby 66 **Red-tipped Clearwing** were recorded at Ainsdale between 15/7 and 17/7 (RW, RM and L Leather). Other Formby area specialists included **Portland Moth** on 30/7 (RW, S & AP), White Colon on 9/7 (GJ) and **Grass Eggar** on 7/8 (S Tobin). Two species absent from VC60 in 2015 appeared in the deep south, a **Plain Wave** at Rindle Wood (I Walker (IW) and two records of **Spinach** at Fazackerley in early July (L Ward & S Flynn).

All 6 **Small Ranunculus** were from St Helens on 6/7-7/7 (D Owens (DO)). A very welcome VC59 record was **Clouded Magpie** from Gorse Hill Nature Reserve (Aughton) on the late date of 18/8 (L Brotherstone) - where are the elms? Two species which were thin on the ground over the whole region were **Minor Shoulder Knot**, with one recorded at Banks on 22/7 (D Unwin (DU)) and **Grey Shoulder Knot** which was recorded at Hale on 6/11 (Carol Cockbain (CC))

Welcome sightings in new areas included a late **Clouded Brindle** at Hoghton on 2/8 (GD) and **Alder Kitten** at the previously under-recorded Clitheroe square on 25/7 (Jack Morris (JM)). **Sandhill Rustic** was located at its usual site at Southport shell beach on 1/10 (RW) and a **Butterbur** was recorded the 'easy way' (see VC60), a light trap at Flixton on 6/10 (KMcC).

Scarce Silver Lines remained south of the Ribble in 2015, including one at Billinge on 7/9 (Chris Derbyshire (CD)). Conversely **Beautiful Snout** has a significant presence in VC60, but a singleton at Haydock on 12/7 (K Haydock and J Mills) was an excellent record from a new area. Another 'southern species', **Chocolate Tip**, appeared at Parr, St Helens on 11/8 (Ray Banks (RB)) and finally a **Dwarf Cream Wave** on 9/7 at Formby caused a little less excitement than the VC60 record as this area has 'previous' (Trevor Davenport (TD))

VC60

The second county record of ***Elachista gleichenella*** was located on Warton Crag RSPB on 23/5 (JP). Two **Lyme Grass** were recorded from the nearest regular trap site to Lytham dunes on 25/6 (Ashley Baines (AB)) and three **Silver Hook** were located nearby during the day on 15/7 (AB, Jonny Scragg (JS)). Other species which only occurred at Lytham included 5 **Small Blood Vein** from 12/7, **Grass Rivulet** on 7/8 and four **Bordered Pug** during August (AB).

The 1/7 saw all sorts of excitement on Leck Fell (PM, SP), not the least a thunderstorm-related moon-bow as well as a shedload of moths, although nothing really show-stopping to rival the weather! Highlights were a day-time **Beautiful Yellow Underwing** and eight **Grey Mountain Carpet** and elsewhere three **Reddish Light Arches** from two traps at the traditional north-eastern end of Warton Crag (Peter Stevens (PS), JP). Lord's Lot was searched for **Bilberry Pug** at dusk on 3/7 and five were quickly located at the 2014 site and a **Haworth's Pug** was located on Warton Crag RSPB on 24/7 (both JP). **Lilac Beauty** was a nice record from Silverdale Moss on 5/7. **Welsh Wave** was a very odd new SD67 record high on Leck Fell on 9/7, accompanying a more predictable **Light Knot Grass** and three of **The Confused**. The same night produced ***Eana penziana***, the first record for some time in VC60 but coinciding with seveal in the upland limestone just over the border in VC64 (PM). A **Blood Vein** was new for Sunderland on 10/7 and two of its similarly spreading relative, **Clay Triple-Lines** were at Yealand Conyers on 17/7 (Brian Hancock (BH)). A species also on the move northwards, albeit slowly, is **Marbled White Spot** and one appeared at Docker Moor on 13/7 (PM). An out of range **Double Dart** was located at Longsands, Preston on 15/7 (Zac Hinchcliffe (ZH))

Minor Shoulder-Knot has become rather hard to find in recent years with just a singleton at Leighton Moss centre on 18/7 and this site produced two presumably different **Four-dotted Footman** on 22 & 25/7. There was a series of **Fen Square Spot** records in the latter half of July and early August from Leck Fell, Docker Moor and Botton Head Middle gill (PM). **Golden Plusia** was an excellent record away from its Warton stronghold at the Crook of Lune on 18/7 (Steve Graham (SG)). The only **Crescent-striped** of the year was from a traditional site at Sunderland on 22/7 but this reflects how the saltmarsh habitats are under-recorded, especially in wet windy summers! The following night saw a complete surprise with a **Triple-spotted Clay** being carefully documented at Heysham NR and around this time it was confirmed

just how common **Barred Carpet** is in the shaded areas of the north-eastern side of Warton Crag with a remarkable 58 in two traps in Strickland Wood on 18/7 (JP). The highly localised **V-Moth** was scarce this year but appeared in a Warton garden on 25/7 (PS). The 29/7 saw 7 **Red Carpet** in two traps at the top of Leck Fell (Jean Roberts (JR)), along with 6 **The Confused**, the only **Galium Carpet** of the year and the **Ling Pug** form of Wormwood Pug (PM). Only a handful of **Netted Carpet** could be found this year in the Hyning Wood area (BH et al)

Double Square Spot and Triple-spotted Clay

The first half of August involved a tedious trawl through the database with its screeds of common noctuids - indeed if a was forced to miss a half-month in the whole year as regards moth trapping, this would be it, especially in a good=bad wasp year. Many of the interesting species at the beginning were already well-recorded in July. A **Waved Black** was located at its only known site at Carnforth Station underpass on 1/8 (Tim Hutchison (TH)). Other snippets of interest were an **Annulet** on Warton Crag on 10/8, a **Tissue** not hiding in a cave at Gaitbarrows, along with four **Beech-green Carpet**, on 12/8 (both JP) a **Striped Wainscot** on Barrow Scout on 14/8 (PS) and a **Pretty Chalk Carpet** at Yealand Conyers on 14/8 (BH).

The second half of the month saw a few new moths of interest including a new site for **Small Rufous** with two at Heysham Moss on 17/8, a short flurry of half a dozen **Suspected** at Docker Moor from 18-20/8 and more prolonged series of **Neglected Rustic** and **Hedge Rustic** there from 20/8, along with a couple of **Anomalous**. A **Blood-vein** was a good record from Silverdale Moss on 21/8 and worryingly the only **Tawny-specked Pug** of the year away from the Fylde coast was at Heysham NR, also on 21/8. The declining **Heath Rustic** was a very welcome record from the bothy site at Docker Moor on 26/8, next to the mature heather and another heather species seemingly on the wane, **Pale Eggar,** was equally welcome with a couple at Leck fell on 29/8, along with a single **Small Autumnal Moth** and a nice flurry of second brood **Striped Twin-spot Carpet.**

Heath Rustic

September started with a real struggle on the 1/9 for three of us trying locate **Butterbur** at the successful 2014 site along the Wenning at Hornby - one was eventually located (JP)! The National Moth Nights (10^{th}-12^{th}) were a real struggle for garden trappers with limited choice of (lack of) shelter, but careful assessment of the wind at more flexible woodland sites saw some decent stuff including **Olive** and **Orange Sallow** at Herring Head on 10/9, **Heath Rustic** again at Docker Moor bothy on 11/9 and some limestone wall-sheltered trapping at Leck Fell producing a **Pale Eggar** amongst the more numerous **Haworth's Minor** on 12/9. Other stuff included **Brown-spot Pinion** at Barrow Scout Fields on 12/9 (PS) and this was one of a minor resurgance of this species ion VC60 with records from Catterall, Over Kellet, Bolton-le-Sands, Carnforth and Warton (Kate Hughes (KH), Linda Renshaw (LR), Steve Garland (SG), Liz Lyon (LL) and PS). A targeted NMN sheet and light at Baines Crag on 12/9 just about came up with the goods in the form of **Oak Lutestring** and **Flounced Chestnut** (PM, JP). **Beaded Chestnut** were very welcome VC60 records at Warton on 19/9 (PS) and near Eagland Hill, Pilling, on 3/10 (Patrick Woods (PW))

The night of the 6/10 was productive (see also migrant report) with some open hillside trapping in upper Hindburndale paying off with the catch including the very elusive **Northern Deep-brown Dart** at Greenbank Farm (JR). This was followed by an even greater prize in the form of a **Streak** at Heysham Road on 18/10 (JH) – *is* there a resident population in our area? The usual localised late autumn species appeared in the usual places with one or two minor range extensions, notably **Sprawler** at Botton Head middle gill on 19/10 (PM), **Autumn Green Carpet** at Catterall on 18/10 (KH), **Tawny Pinion** at Fulwood on 5/10 (Alan Powell (AP) and **Northern Winter Moth** at Catterall on 8/11 (KH). Dry ground and shelter were at a bit of a premium later on in the mild winter, but did include a lead-in to 2016 with two **Pale Brindled Beauty** at Aughton Woods on 17/12 (JP)

Pale Eggar, Leck Fell

Preliminary matrix results and some interpretation by Kevin McCabe

Below is a selection of preliminary "new for 10km square in 2015" records, which will be available to peruse, along with all the rest of our 10km squares, on the Lancashire Moth Group website in the near future. It is just to give people some idea of levels of recording in different 10km squares. Therefore it really does show the difference between species-rich, well-recorded squares with multiple resident moth-ers, such as SDs 45-47 and others where a single recorder operating a garden trap for three-four years makes so much difference. Anyone you could do a house-swop with in an under-recorded square in 2016? After the third year or so of garden trapping, the number of new species drastically reduces and the gaps in any such 10km square will be mainly in under-recorded specialist habitat.

SD45 is a very well-recorded square and the only 'new stuff' in 2015 was either from specialist searching (often daytime) or the aforementioned coastal Dwarf Cream Wave

131	Incurvaria oehlmanniella	Heysham Moss	Justine Patton
227	Monopis laevigella	Pontins old site south shore	Justine Patton
251	Ochsenheimeria taurella	Middleton Nature Reserve LWT	Justine Patton
493	Coleophora serratella	Heysham Nature Reserve LWT	Justine Patton
630	Biselachista albidella	Heysham Nature Reserve LWT	Justine Patton
1153	Epinotia sordidana	Heysham Nature Reserve LWT	Pete Marsh
1246	Grapholita tenebrosana	Middleton Nature Reserve LWT	Justine Patton
1272	Pammene aurana	Heysham Nature Reserve LWT	Pete Marsh
1285	Dichrorampha plumbana	Middleton Nature Reserve LWT	Justine Patton
1705	Dwarf Cream Wave	Middleton old pontins site	Justine Patton

SD46 has a long history of recording (e.g. Charles Goodall and a schoolboy Pete Marsh in the '60s!) and in recent years this has continued in the south of the square, including a couple of 'micro specialists'. John Holding garden has a track record for the 'sensational' (e.g. Crescent Dart and Waved Carpet) and Streak comes into that category in this area.

388	Prochoreutis myllerana	Heysham Moss LWT	Justine Patton
422	Argyresthia albistria	Lundsfield Quarry	Young, M R & Palmer, S M
782	Bryotropha senectella	Heysham	Holding D J
847	Syncopacma taeniolella	Lundsfield Quarry	Young, M R & Palmer, S M
853	Anacampsis populella	Heysham Moss LWT	Justine Patton
854	Anacampsis blattariella	Heysham Moss LWT	Justine Patton
855	Anacampsis cinerella	Heysham Moss LWT	Justine Patton
911	Scythris grandipennis	Heysham Moss LWT	Justine Patton
1113	Eudemis profundana	Heysham	Holding D J
1147	Epinotia cruciana	Heysham Moss LWT	Justine Patton
1186	Epiblema sticticana	Lundsfield Quarry	Young, M R & Palmer, S M
1233	Pammene aurita	Heysham	Holding D J
1245	Grapholita janthinana	Lundsfield Quarry	Young, M R & Palmer, S M
1520	Hellinsia osteodactylus	Morecambe arkholme court	Justine Patton
1864	Streak	Heysham	Holding D J

SD47 is a richly recorded square, holding the largest species list in the region, which would be even better if half of it was not in Cumbria (e.g. Marbled Brown)! It is still producing the occasional new record for the micro specialists and the gradually spreading Striped Wainscot was new in 2015

714	Agonopterix yeatiana	Leighton Moss: compt 34: Orchard	Leighton Moss Team
738	Monochroa tetragonella	Silverdale Moss RSPB	Justine Patton
1146	Epinotia rubiginosana	Gait Barrows	Stephen M.Palmer
1221	Strophedra weirana	Leek Hill Wood	Justine Patton
1247	Grapholita funebrana	Warton Crag LWT	Peter Stevens
2196	Striped Wainscot	Barrow Scout Fields RSPB	Peter Stevens

SD54 is a funny old square. Without the best efforts of long-term resident, Graham Hulme, it would have stood out as the least well-recorded bird atlas square and this situation was very similar for moths until Graham managed a few sessions in his upland-biased site in 2014. Then Kate appeared and the lowland garden absentees were partially addressed with some of the new 2015 species, such as Burnished Brass, showing just how under-recorded this area has been with no previously resident moth-ers.

3	Micropterix aureatella	Beacon Fell	Steve and Carolyn Palmer
200	Psychoides filicivora	Wyresdale Park	Steve and Carolyn Palmer
391	Glyphipterix simpliciella	Beacon Fell	Steve and Carolyn Palmer
834	Caryocolum tricolorella	Wyresdale Park	Steve and Carolyn Palmer
882	Mompha locupletella	Nicky Nook, Scorton	Steeden, J
1015	Eulia ministrana	Brock Bottoms	Anne E Smith
1042	Acleris rhombana	Catterall Garden	Kate Hughes
1288	Alucita hexadactyla	Catterall Garden	Kate Hughes
1395	Udea ferrugalis	Catterall Garden	Kate Hughes
1413	Hypsopygia costalis	Catterall Garden	Kate Hughes
1631	December Moth	Catterall Garden	Kate Hughes
1659	Yellow Horned	Wyresdale Park	Steve and Carolyn Palmer
1761	Autumn Green Carpet	Catterall Garden	Kate Hughes
1767	Pine Carpet	Catterall Garden	Kate Hughes
1867	Treble-bar	Catterall Garden	Kate Hughes
1884	Magpie Moth	Oakenclough HUlme	Graham Hulme
1914	Dusky Thorn	Catterall Garden	Kate Hughes
1923	Feathered Thorn	Catterall Garden	Kate Hughes
1935	Mottled Umber	Catterall Garden	Kate Hughes
2057	Garden Tiger	Oakenclough HUlme	Graham Hulme
2091	Dark Sword-grass	Catterall Garden	Kate Hughes
2092	Shuttle-shaped Dart	Catterall Garden	Kate Hughes
2126	Setaceous Hebrew Character	Catterall Garden	Kate Hughes
2232	Black Rustic	Catterall Garden	Kate Hughes
2240	Blair's Shoulder-knot	Catterall Garden	Kate Hughes
2241	Red Sword-grass	Catterall Garden	Kate Hughes
2245	Green-brindled Crescent	Catterall Garden	Kate Hughes
2247	Merveille du Jour	Catterall Garden	Kate Hughes
2248	Brindled Green	Catterall Garden	Kate Hughes
2259	Dark Chestnut	Catterall Garden	Kate Hughes
2266	Brown-spot Pinion	Catterall Garden	Kate Hughes
2269	Centre-barred Sallow	Catterall Garden	Kate Hughes
2271	Orange Sallow	Catterall Garden	Kate Hughes
2299	Mouse Moth	Catterall Garden	Kate Hughes
2389	Pale Mottled Willow	Catterall Garden	Kate Hughes
2434	Burnished Brass	Oakenclough HUlme	Graham Hulme
2449	Dark Spectacle	Oakenclough HUlme	Graham Hulme

SD72 provided Dave Bickerton with a whale of a time when he started mothing a few years ago – new species coming out of the woodwork in a previously under-recorded square. As can be seen from the 'new for' 2015 list, Dave is still the sole provider of records but, apart from the 'silly absentee', Mottled Rustic, he now has to scrape the obscure micro barrel! Have you time to target specialist habitat in 2016, Dave?

294	Aspilapteryx tringipennella	Petre Crescent, Rishton	David Bickerton
516	Coleophora trifolii	Petre Crescent, Rishton	David Bickerton
519	Coleophora deauratella	Petre Crescent, Rishton	David Bickerton
547	Coleophora discordella	Petre Crescent, Rishton	David Bickerton
559	Coleophora peribenanderi	Petre Crescent, Rishton	David Bickerton
582	Coleophora glaucicolella	Petre Crescent, Rishton	David Bickerton
584	Coleophora alticolella	Petre Crescent, Rishton	David Bickerton
587	Coleophora caespititiella	Petre Crescent, Rishton	David Bickerton
630	Biselachista albidella	Petre Crescent, Rishton	David Bickerton
724	Metzneria lappella	Petre Crescent, Rishton	David Bickerton
765	Teleiodes vulgella	Petre Crescent, Rishton	David Bickerton
770	Carpatolechia proximella	Petre Crescent, Rishton	David Bickerton
782	Bryotropha senectella	Petre Crescent, Rishton	David Bickerton
819	Scrobipalpa costella	Petre Crescent, Rishton	David Bickerton
878	Batrachedra praeangusta	Petre Crescent, Rishton	David Bickerton
1020	Cnephasia stephensiana	Petre Crescent, Rishton	David Bickerton
1115	Ancylis achatana	Petre Crescent, Rishton	David Bickerton

1151	Epinotia trigonella	Petre Crescent, Rishton	David Bickerton
1205	Spilonota ocellana	Petre Crescent, Rishton	David Bickerton
1245	Grapholita janthinana	Petre Crescent, Rishton	David Bickerton
1259	Cydia fagiglandana	Petre Crescent, Rishton	David Bickerton
1302	Crambus perlella	Petre Crescent, Rishton	David Bickerton
1314	Catoptria margaritella	Petre Crescent, Rishton	David Bickerton
1316	Catoptria falsella	Petre Crescent, Rishton	David Bickerton
1524	Emmelina monodactyla	Petre Crescent, Rishton	David Bickerton
1648	Pebble Hook-tip	Petre Crescent, Rishton	David Bickerton
1654	Figure of Eighty	Petre Crescent, Rishton	David Bickerton
1682	Blood-vein	Petre Crescent, Rishton	David Bickerton
1811	Slender Pug	Petre Crescent, Rishton	David Bickerton
1893	Tawny-barred Angle	Petre Crescent, Rishton	David Bickerton
1934	Dotted Border	Petre Crescent, Rishton	David Bickerton
2039	Red-necked Footman	Petre Crescent, Rishton	David Bickerton
2092	Shuttle-shaped Dart	Petre Crescent, Rishton	David Bickerton
2139	Red Chestnut	Petre Crescent, Rishton	David Bickerton
2247	Merveille du Jour	Petre Crescent, Rishton	David Bickerton
2387	Mottled Rustic	Petre Crescent, Rishton	David Bickerton

Unfortunately SD73 has ground to a halt as I understand Meurig, who supplied an excellent series of records has moved away. As you can see, some common species were new in 2015 so, if anyone is able to target and specialist habitat in this square this year, I'm sure further new species will be added

1653	Buff Arches	Read Garden	M Garbutt
1654	Figure of Eighty	Read Garden	M Garbutt
1827	Freyer's Pug	Read Garden	M Garbutt
1837	Grey Pug	Read Garden	M Garbutt
1860	Green Pug	Read Garden	M Garbutt
1922	Swallow-tailed Moth	Read Garden	M Garbutt
1996	Alder Kitten	Read Garden	M Garbutt
2087	Turnip Moth	Read Garden	M Garbutt
2138	Green Arches	Read Garden	M Garbutt
2155	Dot Moth	Read Garden	M Garbutt
2186	Powdered Quaker	Read Garden	M Garbutt
2243	Early Grey	Read Garden	M Garbutt
2280	Miller	Read Garden	M Garbutt
2385	Small Mottled Willow	Read Garden	M Garbutt
2410	Marbled White Spot	Read Garden	M Garbutt
2469	Herald	Read Garden	M Garbutt

SD74. This has been a great effort from Jack, with additionally loads of extra stuff in 2014. I'm sure there will be more to come in 2016

0409a	Argyresthia trifasciata	Hawthorne Place, Clitheroe	Jack Morris
411	Argyresthia goedartella	Hawthorne Place, Clitheroe	Jack Morris
420	Argyresthia pruniella	Hawthorne Place, Clitheroe	Jack Morris
455	Ypsolopha scabrella	Hawthorne Place, Clitheroe	Jack Morris
648	Endrosis sarcitrella	Hawthorne Place, Clitheroe	Jack Morris
658	Carcina quercana	Hawthorne Place, Clitheroe	Jack Morris
970	Pandemis cerasana	Hawthorne Place, Clitheroe	Jack Morris
972	Pandemis heparana	Hawthorne Place, Clitheroe	Jack Morris
998	Epiphyas postvittana	Hawthorne Place, Clitheroe	Jack Morris
1002	Lozotaenia forsterana	Hawthorne Place, Clitheroe	Jack Morris
1043	Acleris aspersana	Hawthorne Place, Clitheroe	Jack Morris
1048	Acleris variegana	Hawthorne Place, Clitheroe	Jack Morris
1133	Epinotia bilunana	Hawthorne Place, Clitheroe	Jack Morris
1288	Alucita hexadactyla	Hawthorne Place, Clitheroe	Jack Morris
1338	Dipleurina lacustrata	Hawthorne Place, Clitheroe	Jack Morris
1342	Eudonia angustea	Hawthorne Place, Clitheroe	Jack Morris
1344	Eudonia mercurella	Hawthorne Place, Clitheroe	Jack Morris

1345	Elophila nymphaeata	Hawthorne Place, Clitheroe	Jack Morris
1356	Evergestis forficalis	Hawthorne Place, Clitheroe	Jack Morris
1392	Udea olivalis	Hawthorne Place, Clitheroe	Jack Morris
1398	Nomophila noctuella	Hawthorne Place, Clitheroe	Jack Morris
1413	Hypsopygia costalis	Hawthorne Place, Clitheroe	Jack Morris
1428	Aphomia sociella	Hawthorne Place, Clitheroe	Jack Morris
1497	Amblyptilia acanthadactyla	Hawthorne Place, Clitheroe	Jack Morris
1768	Grey Pine Carpet	Hawthorne Place, Clitheroe	Jack Morris
1771	Juniper Carpet	Hawthorne Place, Clitheroe	Jack Morris
1902	Brown Silver-line	Hawthorne Place, Clitheroe	Jack Morris
1996	Alder Kitten	Hawthorne Place, Clitheroe	Jack Morris
2166	Campion	Hawthorne Place, Clitheroe	Jack Morris
2236	Pale Pinion	Hawthorne Place, Clitheroe	Jack Morris
2256	Satellite	Hawthorne Place, Clitheroe	Jack Morris
2273	Pink-barred Sallow	Hawthorne Place, Clitheroe	Jack Morris

SD83. Geoff's (and previously Graham Garvaghan's) efforts in this former 'white hole' have reached the stage where the macros look pretty comprehensively recorded unless there are some little pockets of untouched specialist habitat

SD83

5	Micropterix calthella	Brierfield	Geoff Turner
12	Eriocrania sangii	Brierfield	Geoff Turner
438	Swammerdamia pyrella	Brierfield	Geoff Turner
483	Epermenia chaerophyllella	Brierfield	Geoff Turner
516	Coleophora trifolii	Brierfield	Geoff Turner
644	Borkhausenia fuscescens	Brierfield	Geoff Turner
689	Agonopterix ciliella	Brierfield	Geoff Turner
892	Mompha subbistrigella	Brierfield	Geoff Turner
898	Limnaecia phragmitella	Towneley Park	Geoff Turner
954	Eupoecilia angustana	Brierfield	Geoff Turner
1233	Pammene aurita	Brierfield	Geoff Turner
1245	Grapholita janthinana	Brierfield	Geoff Turner
1252	Grapholita lunulana	Brierfield	Geoff Turner
1259	Cydia fagiglandana	Brierfield	Geoff Turner
1415	Orthopygia glaucinalis	Brierfield	Geoff Turner
1497	Amblyptilia acanthadactyla	Brierfield	Geoff Turner
1508	Stenoptilia bipunctidactyla	Brierfield	Geoff Turner
2124	Fen Square-spot	Brierfield	Geoff Turner

Use of pheremones in 2015 by Richard Walker

The contacts at Christ Church College, Canterbury University sent me one experimental lure for Forester and Cistus Forester and also two for Goat moth. Already in stock from last year and used in 2016 were lures for Currant and Red-tipped Clearwing.

Justine Patton was sent the former as she had access to Cistus Forester but despite repeatedly waving it under their noses it had no effect. I'm grateful for her time and diligence. When returned the same lure had a direct effect on the Forester population in the Formby area. At Ainsdale male moths assembled on the grass stalks around the lure within a few minutes. At two other separated sites where Forester have been recorded in very small numbers (twos and threes over their flight season), Forester came again within minutes.

Goat Moth

The Goat moth lure consisted of ten separate pheromone phials which had to be strung five meters apart and about two meters off the ground. I was joined by Graham J, Shelagh & Alex P on Freshfield Dune Heath where we rigged up two lines. To make sure the lure attracted the moth no MV or other bright light were allowed, this required a constant torch light vigil up and down the lines. Three Goat moths, (each potted) came out of the darkness around 2230hrs flew through the pheromone vapour cones, circle the area and came back a second time. Having taken home the three moths I tried each individual with the ten pheromones in turn. The moths could have been dead for their reaction didn't amount to a raised eye brow never mind antenna.

The results, when reported back to Canterbury University, were strikingly positive. Each moth on both its circuits had passed through numbers one to four of the trail pheromones which showed that a combination of these had stimulated the moths. Subsequent work has refined the pheromones and later this year five new sets, including moth traps will come my way. Watch this space, or get in touch.

Emperor moth pheromones are a cert, if the moth is present the males appear within minutes. On one slightly overcast afternoon a walk along four miles of the Sefton Coast Dune system and at 18 separate sites I had multiples of males flying in. Whilst heath and moorland are their usual haunts they are more elusive at lowland sites. Looking down from the top of the dunes one could see the Emperor males coming out of the larger bramble patches from over twenty meters away and zigzagging up the pheromone cone to the lure.

July 3rd 4th and 5th saw a number of Currant Clearwing come to pheromone in two separated Formby gardens. In one the Blackcurrant bush was very small. I'm of the opinion this is a much commoner moth than we think.

After last year's considerable success in using pheromones for Red-tipped Clearwing at Ainsdale a separate area was selected and Ron Moyes, Colin Daley, Jan Leather, a trainee attached to Natural England and myself searched with pheromones over a number of days. A further eighteen sites were located within the dune system all amongst Creeping Willow and 39 moths came to be counted. A pattern which was beginning to emerge is that most successful areas were comprised of mature Creeping Willow and in a sunny position.

Work on this area will continue this year, those interested can contact me.

Emperor Moth

Migrant Lepidoptera in Lancashire 2015 by John Girdley

2015 was a good year for migrant moths, possibly the best since the exceptional numbers seen in 2006. Migrants are associated with "Spanish Plume" like conditions, when rafts of warm air from the continent are driven north over the UK. Migrants therefore arrive in waves. The 12th July was particularly good and there were several waves of migrants during a run of unseasonal warm weather in October. If numbers are large, breeding may occur resulting in a second generation later in the year. Often, some common species can be mixed up with these, for example significant pulses of Angle Shade and Straw Dots in autumn, but these are difficult to sort out from the locals. Coastal sites always do best, Sunderland Point is possibly the best migrant moth site in Lancashire, but Morecambe, Heysham, Lytham and Formby all pull in the moths. Predictably however, the numbers turning up in Lancashire are a pale shadow of what is caught on the South Coast.

The following records are of note (based on records received by the end of Dec 2015)

464 Diamond-backed Moth *Plutella xylostella*

There were 126 records of 179 moths. The first was seen on 16th April in Morecambe (Justine Patton (JP)) and the last at Southlands, Longton on 12th November. (John Girdley (JG)) (this site produced a remarkable 45 records of 79 moths, approximately 40% of the Lancashire total and suggests that breeding probably took place.) The highest one night count was at nearby Walmer Bridge on 10th July when Graham Jones (GJ) recorded 12.

1395 Rusty-dot Pearl, *Udea ferrugalis*

There were 23 records of 24 moths

The first was at Sunderland Point on 19th June (Jean Roberts (JR)) and the last at Heysham on 31st Oct (John Holding (JH)). The only multi-moth night was two from Southlands on 9th October (JG)

1398 Rush Veneer *Nomophila noctuella*

There were 58 records of 72 moths.

The first was from Fulwood on 12th June (Alan Powell (AP)) and the last from Caterall (Kate Hughes (KH)) and Sunderland Point (Pete Marsh (PJM)) both on 28th October. The most in one night, three, was from an overnight trap left at Ainsdale NNR on 9th October (Ron Moyes (RM) and Colin Daly (CD))

1408 *Palpita vitrealis*

There were 4 records of 4 moths. This was the best year yet for this species with only 7 previous records.

The first was on 8th August from Heysham (JH) and the last on 25th August at Catterall (KH) (Who remarkably had had another on 14th August.)

1716 Vestal *Rhodometra sacraria*

With just 3 records this was a poor year.

The first two were remarkably on the same day, 12th July, with one at Freshfield Dune Heath (Richard Walker (RW)) and the other at Lytham St. Annes, (Ashley Baines (AB)). The third was soon after further north at Gaitbarrows on 15th July (Rob Petley-Jones (RP-J))

1720 Gem *Orthonama obstipata*

There were five records of six moths

First was at Hale on 12th July (Carol Cockbain (CC)) and the last at Carnforth on the 11th November (Liz Lyon (LL)), The only multi-moth record was at the MOD Ranges at Altcar with two together on 9th October (RW).

1972 Convolvulous Hawk Moth *Agrius convolvuli*

There were two records this year, the first from Leighton Hall on the 14th August (Sue Hilling (SH)) and the other, a scruffy individual, from Ashley's Farm, High Tatham on the 25th August (JR) pictured right.

1984 Hummingbird Hawk Moth *Macroglossum stellatarum*

There were at least twenty two records, all singletons, with later records trickling in via e.g. photo websites.

The first was from Clitheroe on the 17th June (Jack Morris (JM)) and the last from Cockersands on the 2nd October (KH). The most productive site was Turner House, Crook O'Lune with four records (Steve Graham (SG))

2091 Dark-sword Grass *Agrotis ipsilon*

Always one of the commoner migrants, there were sixty five records of sixty nine moths

Twelve of these records were from Sunderland Point. Both first and last records were from Southlands on the 5th May and 13th October (Claire Ward (CW) and (JG)). Another also appeared in Morecambe on the 5th May (JP)

2119 Pearly Underwing - *Peridroma saucia*

With just 3 records this was a very ordinary year. The first was at Southlands (JG) on the 18th July and the last at Sunderland on 19th October. (PJM) The other was at Lower Greenbank Farm, near Thrushgill, on 6th October, in the same trap as a Scarce Bordered Straw. (JR)

2194 White-point *Mythimna albipuncta*

The first record for Lancashire (VC59) was in Hoghton on the 23rd of August, (Graham Dixon (GD))

2385 Small-mottled Willow - *Spodoptera exigua*

There were twenty three records of thirty four moths. The first was at Read (Nr Padiham) on 12th June (Mike Garbutt (MG)) and the last from Sunderland on the 21st September (PJM). There were eleven records from Sunderland Point including five together on both 12th and 13th July (the second night's moths were different as the originals were released away from the site.). With a second generation in September, speculation was rife of possible breeding as this species has a very fast life cycle. This was an above average year and certainly the best since 2006.

2400 Scarce Bordered Straw - *Helicoverpa armigera*

Three records of four moths was very average.

The first was at Southlands on 23rd July (JG), two were together at Sunderland on the 9th August (PJM) and the last was at Lower Greenbank Farm, near Thrushgill on the 6th October (JR)

2403 Bordered Straw - *Heliothis peltigera*

Twenty two records of twenty three moths was the best year since 2006, but a perhaps disappointing virtual lack of autumnal home-bred individuals.

The first was at Yealand Conyers on 5th May (Brian Hancock (BH)) and the last at Heysham on 11th September (JH). This same site had four records during the year. The only multi moth night was the 12 June when two appeared in Warton. (Martin Elsworth (ME))

2408 Small Marbled *Eublemma parva*

There were two records, both the same day and these were the first Lancashire records for four years. Both occurred on the 12 July (c/f Vestal records above) and at similar coastal sites, Freshfield Dune Heath (RW) and Lytham St. Annes (AB). Clearly a great night for migrants.

2432 Ni Moth *Trichoplusia ni*

There was just one record at Hale on the 8th September, (CC), the first since 2011 and the 7th for Lancashire.

2441 Silver Y *Autographa gamma*

There were 1115 records of 2502 moths
The general Heysham area produced over 200 records but several sites across Lancashire managed 50+ records.
Diurnal records in the very warm conditions in late September, greatly out-numbered those in traps.
The first was on 12th May at Heysham (JH) and the last at Lightfoot Green on 15th December, (Steve and Caroline Palmer (SMP & CP))
Twenty six in the same Heysham trap on 11th September was the highest one night count. (JH)

Bryotropha boreella **Nineteen years later** by Stephen Palmer

During the summer of 1996, a daytime visit was made to an area of conifer-planted moorland to the east of Longridge, near Preston. This site had become one of my favourite daytime 'moth-ing' areas with its wide open rides and occasional large but sheltered heathery clearings. As long as I kept my eyes and ears open for approaching lunatic off-road cyclists, it always seemed to turn up something special.

It was early August and the site was abuzz with insects. After about an hour or so, at the highest point of my walk, I netted a rather drab, dark-grey micro-moth resembling a *Bryotropha*, but unlike any I had previously encountered. Subsequent microscopic examination and help from Dr. John Langmaid led to it being identified as *Bryotropha boreella*, an upland species found, at that time, almost exclusively in Scotland.

Despite many more visits to this and other similar areas over the following years, only a handful of further sightings of the moth were made. These included an early evening flight of the species at Leck Fell in 2005 and two individual sightings from well separated moorland sites by Jeremy Steeden and Nigel Rogers in 2009 and 2011 respectively. It was obvious from these finds that the moth was resident in the county but virtually nothing was known about its ecology and significantly, the larva had never been described. It therefore became a bit of an on-off quest to try to find out more about this obscure and elusive moth.

With the 1996 discovery firmly in the back of my mind, a daytime visit to Jeffrey Hill, a few miles north-west of the original Longridge site, was undertaken on 24th July 2012. The calm sunny conditions were perfect for fieldwork (as well as the midges) and in no time two *B. boreella* were found flying in an extensive, flat, damp mossy area on top of the hill. It was always a pleasant spot to visit with Manchester Treble-bar and Wood Tiger often present and over the next two years *B. boreella* was found to be a regular here suggesting it might be a breeding locality. But the really tricky part was finding the larva – work by Mr. R. J. Heckford on other closely related species pointed to a moss being the most likely larval foodplant but there were many different moss species present from very wet Sphagnum to dry, open fern-like types.

Typical Bryotropha boreella habitat

It was time to call in the cavalry, as despite some half-hearted searches in dreadful April weather (the most likely time to find mature larvae) I was struggling to find much or even identify the mosses. Contact was made with Mike Gosling and Jeremy Steeden who very kindly visited the site with me and provided an excellent list of the mosses present. They even tried hard to teach me how to identify the mosses – I was not the best of students. I then got in touch with the one person who stood the best chance of finding the larva, Bob Heckford, who has a distinguished track record of unearthing the life histories of Britain's most obscure micro-moths, including many of the *Bryotrophas*. Bob, together with friend and fellow lepidopterist Stella Beavan, were keen to visit and in April 2015 they made the long track up from Devon. The stage was set for what we all thought would be the proverbial search for a needle in a series of haystacks.

Bryotropha boreella larva

8th April dawned fine, dry, mild, sunny and calm - it felt more like southern France than upland Lancashire. We could not believe our luck and, even better, after a few hours or so on our hands and knees Bob and Stella had located over a dozen likely larvae (to my one, although I must add that I found plenty of empty spinnings, as per usual). The question though remained, were they our target species? It was considered possible, at the time, that they might

be the larva of *Phiaris palustrana*, a common moorland moth of this area which also feeds on mosses. Time would tell and we left the area knowing that it would take a month or two before any moths emerged.

It was a tense period and the more I thought about it the more I feared I'd be back on my hands and knees again in April 2016 in a more typical early Lancashire Spring. I was away down south when the phone call came from Bob. Carolyn passed on the message that I should phone Bob as soon as possible and this produced confirmation that the moths had started to emerge and, even better, they were all B. boreella. Subsequent publication of the discovery took place in the Entomologist's Gazette (Heckford, Beavan and Palmer, 2015) and the near twenty year wait was over.

Bryotropha boreella adult

I would like to thank Bob, Stella, Mike and Jeremy for their enthusiasm and expertise in tracking down this illusive larva and its foodplants. Also thanks to Bob for giving permission to use his photographs in this article.

If you want to find out more about this moth, its close relatives and how to separate the larvae of *B. boreella* from *Phiaris palustrana*, visit the Gelechiid Recording Scheme website page http://www.gelechiid.co.uk/species/bryotropha-boreella

Heckford, R. J., Beavan, S. D. & Palmer, S. M., 2015. *Bryotropha boreella* (Douglas, 1851) (Lepidoptera: Gelechiidae): discovery of the larva.

Epiblema turbidana by Ben Smart

This moth was sat on a Butterbur leaf at Chorlton Ees on 21/6/15. Photographed and retained

It is the first VC59 record of *Epiblema turbidana* since 1953 and the first Lancs record since 1979

Here are the responses from circulating the photograph:

Comment from Steve Palmer: "It's not a moth I've encountered before but does look a very good match for that species. Bradley, Tremewan and Smith mention the antennae being ciliate and the presence of a weak ocellus. I can find no other species that resembles your moth".

Comment from Steve Hind (VC58 micro recorder): "My only experience of this species is of them flying over banks of Butterbur in sunshine on warm still evenings at a couple of sites in 1997. I suspect that it is far more common than our records suggest, as I specifically targeted the species that year, so the fact that it has not been seen since 1953 is simply because nobody will have looked for it. There had not been any VC58 records since 1955 and only one since. I can't remember much about the moth now, only that it was large and pale brown. Your photos look a good match, especially given the size and site. If we ever get any warm evening sunshine again, re-visit the site and you should see several more, providing the butterbur is in sun and not in the shade".

Subsequently confirmed via gen det by Nigel Rogers

So check your Butterbur out, look for this moth in June and then go back in mid-August with a torch and net (preferably more than one of you for safety) just after dusk and look for Butterbur moth itself 'hovering' slowly around and under the leaves of the foodplant

Two widespread but elusive day-flying moths by Brian Hancock

Small Yellow Underwing and Marsh Pug share the same habitat, food plant, flight season and are day flyers. Both feed on Mouse ear (*cerastrum* sp.) Common mouse ear is frequent on unimproved grassland and waste places. Marsh pug has been recorded from 11 sites in Lancashire since 2000 ranging from Chorlton meadows in the south Gait barrows meadow in the north, Fleetwood country park in the west and Rowley, Burnley in the east. In seven out of the eleven sites Small Yellow Underwing has been recorded as well, but appears a more widespread species having been recorded at an additional 19 widespread locations since 2000.

Their flight periods overlap. Most records for Small Yellow Underwing are for the second week of May just into June whilst the Marsh pug flies from mid May to mid June. There have recently been five records of Marsh Pug in August suggesting a second brood.

Both are very small and rapid flyers low over the vegetation. I find them extremely difficult to follow and therefore very easy to lose. Most records on Mapmate are for single specimens and I suspect both occur in very low densities. For both species I have success in netting one by sweeping though the Mouse ear when I never saw any in flight after a considerable search.

The most consistent sites from Marsh Pug are Fleetwood Nature Park, (SD 336466) Heysham Nature Reserve, (SD 4059) and Ash Hill, Flixton,(SD 7393) but I can't give any particular hot spots for the Small Yellow Underwing except perhaps in my area the meadow at the bottom of Gait Barrows.(SD4876)

Many of us are out in the late spring looking for Butterflies; half the battle is being aware that these two species are probably much more widespread than we think and knowing what to look for. Be aware that the day flying micros of the *Pyraustra* species (esp. *aurata* and *purpuralis*) can be confused with the Small Yellow Underwing and both are out in spring and early autumn. You need a good view at rest or preferably a netted specimen.

As an example I visited the Watchtree nature reserve, a disused airfield west of Carlisle with Liz Still the Cumbria Moth recorder. I thought the site looked good for Marsh pug though there were no records for North Cumbria VC70 for 100 years. Within a season she had a May and an August record and one even in her garden resting on a polytunnel.

Seek out any patches of wasteland, re-capped rubbish tips or flower rich meadows near you home and give them a thorough search. Be patient, these two can turn up at sites you think you know well. Try sweeping and on dull days there is always a chance of spotting one at rest, look at the beautiful photo from Barry Dyson. You may be pleasantly surprised.

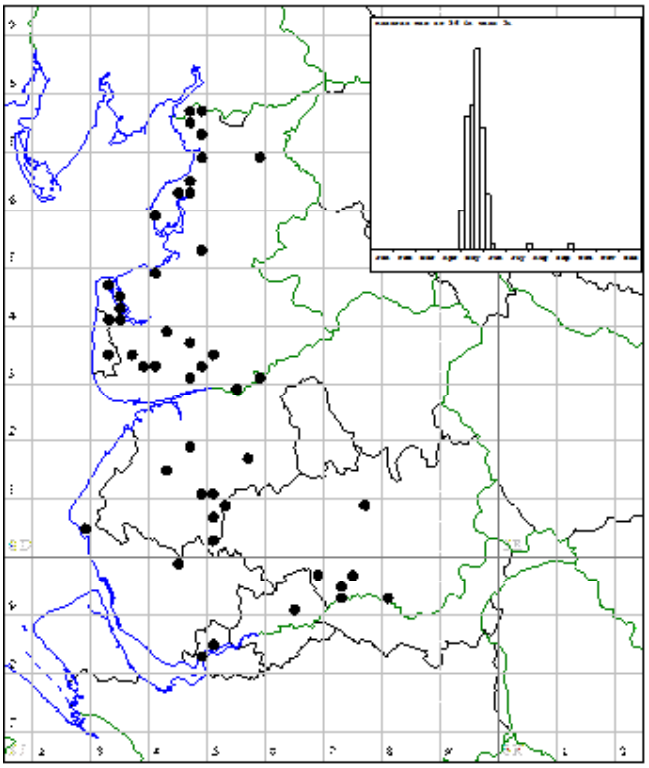
Small Yellow Underwing at rest on Bedstraw

Small Yellow Underwing in active mode.

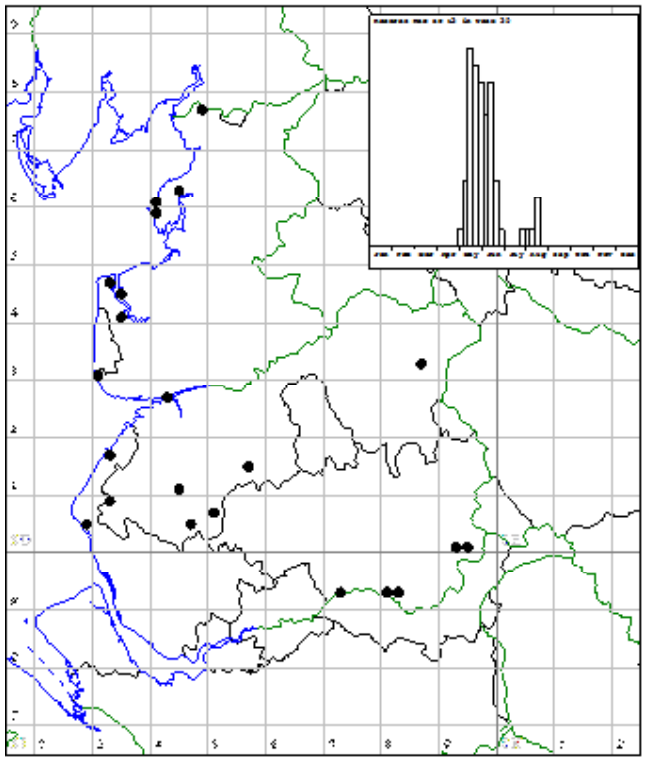
Marsh Pug from Flixton

Marsh pug at rest. Fleetwood. Barry Dyson.

2397 Small Yellow Underwing (Panemeria tenebrata)



1822 March Pug (Eupithecia pygmaeata)



All change for the Moths of north Preston and beyond? by Stephen Palmer

During the early 1990s a work move brought Carolyn and me up from south Wiltshire to Lancashire and of course the moth trap came with us. On our first February night in Preston we set the trap and an Early Moth was found resting on the wall nearby the following morning. And so it began!

Looking back over more than twenty years of subsequent light trapping and daytime fieldwork in our garden and immediate surrounds little seems to have changed. Some moths that appeared in the early days have not been seen since, while others have moved in or briefly moved through on their surge north. Reasons for the early losses are likely to be mixed but overall the main factors that you would expect to cause problems, such as habitat loss/change and differing land management practises have been minimal. Not many areas could claim that these days but all that is about to change, and not for the better as far as habitat and wildlife is concerned.

The relative habitat stability over 20 years suggests that the moths that have disappeared are declining because of more widespread factors (or that my recording techniques have changed). The latter may be the case with fieldwork as I rarely record daytime fliers or leaf-miners in my immediate vicinity these days. However the light trapping has remained constant with an average of twice weekly traps run from the end of February to the end of November and rarely on other occasions when suitable weather conditions occur. What the detrimental factors are in the Preston area causing moth species to decline or disappear may relate to overall climate change, chemical usage, changes in hedgerow management, maturing of trees and shrubs etc – all rather speculative. But what I do know is that those species attracted to light which have disappeared from our garden include, amongst others, Northern Deep Brown Dart, Autumnal Rustic, Spinach, Double Dart, Tawny-speckled Pug and Brown-spot Pinion. Significantly, when looking at all of these species in a wider geographical context , most have declined regionally and to some extent nationally while some are now considered rarities in Lancashire.

In comparison a good number of new species have appeared over the two decades as they extended their range northwards in the UK or inland and further upland within Lancashire. These include Shuttle-shaped Dart, Golden-rod Pug, Black Rustic, Straw Dot, Green Arches, Dingy Footman and Buff Footman to name but a few. Red Underwing and Blair's Shoulder Knot had already settled into the area by the time we started recording. Around the garden Psychoides filicivora, Phyllonorycter leucographella (pyracantha leaf-miner), Argyresthia trifasciella, Acrolepia autumnitella and, of course, Epiphyas postvittana (light brown apple moth) have all established themselves in the last 20 years with their obvious larval feeding signs, as well as the moths themselves, becoming a regular feature in the shrubbery.

One of the main pleasures of recording moths by light trap in your garden is you never quite know what might turn up next. There can be one-off rare migrants; some species might get blown down from the hills or drift inland from coastal populations; some may just be present in the area at extremely low population levels or may appear as an adventive brought in with stored food products or bird food etc. Wherever they come from, they bring with them that sense of surprise and excitement as your mind puzzles through the reasons for it gracing your garden trap. Over 30 of the species we have recorded in the garden come into one of the above categories and are likely to be single, never to be repeated sightings. Species for example which feed on Broom, Gorse, Heather and Bilberry have appeared on single occasions including most frequently The Streak in 2014 - all of these are plants absent from the immediate vicinity. Scrobipalpa instabilella, Archers Dart and White-line Dart are all strictly coastal species that have appeared as singletons. And then we come to the migrants.

I must say I do not consider my garden a migrant hotspot as during periods of strong coastal migration in Lancashire it is unusual for us to get anything of interest – maybe just a small increase in the number of Silver Y. However over the years, Euchromius ocellea, Platytes alpinella, Bedstraw Hawk, Convolvulus Hawk, Ni Moth and Small Marbled have all been found in or near our garden trap. More difficult to understand are the presumed wanderers that appear once and really leave you scratching your head to explain their presence. Silky Wainscot, Southern Wainscot, Golden-rod Brindle and Striped Wainscot all fall into that category.

So often it is the rarities that make the headlines when considering the highlights of a long period of study at a single site. But really it is the day-to-day, bread and butter species that actually should be getting the plaudits – without them we'd not be bothering to run a trap at all. Single night hauls of 138 Common Quaker on 28th March 2003 or 546 Large Yellow Underwing on 7th August 2004 were certainly memorable occasions, if not greatly desirable for the latter species. The reappearance of several Garden Tiger in 2015 after a few years absence was a real joy as were the dozen very freshly emerged Mottled Pug on the wall around the trap in May 2014. To find that Yellow-barred Brindle was not only increasing in frequency but had also become regularly double brooded in Lancashire, when the books still gave it as single brooded in northern England, was exciting. In some years common moths would appear very early or very late in comparison to longer term flight periods. All of these things add to the enjoyment of moth recording and lead to a much wider appreciation of the ecosystem around us.

After 20 years though, all is about to change. Northern Preston, like many other parts of Lancashire and elsewhere across Britain, has just entered a major house building phase with the first of over 4000 houses being built as I write. Hedges, their associated trees, grazing fields and scrubby banks will disappear under tarmac, concrete and desirable five bedroom houses (oh and a few 'affordable' properties probably placed right up against the motorway embankment) will take their place. None of this area is an SSSI, an area of outstanding beauty, or a protected habitat of any kind – it is plain, ordinary low-quality grassland surrounded by interesting but poorly managed hedgerows – and maybe there might be a few bats present or the odd Great Crested Newt. Nothing to worry about then as we drive forward to provide these desperately needed five bedroom properties.

But the loss of 'ordinary' habitat such as this is gaining pace all over Britain and it won't be the rarities that suffer – they have already been lost or are hunkering down on nature reserves (where lack of finances mean they probably don't have much chance of long term survival). It will be the widespread and common species that are affected and before long they won't actually be widespread and common anymore. Houses do need building, but the right sort at reduced densities whilst at the same time keeping existing habitat (such as meadows, hedgerows and trees). These two things are not mutually exclusive – with a bit of thought and care existing habitats can be incorporated into developments. Any additional plantings should always be of locally sourced, locally occurring trees and shrubs and then maybe, just maybe, we won't be setting our moth traps in ten or fifteen years thinking – do you remember when we used to get 500 plus Large Yellow Underwing in a trap, as the species is added to the red data list of threatened species.

Whilst trying to explain to Preston City Council why they should take a more proactive role in ensuring existing habitat features are kept, I read an Environmental Impact report on the planned housing development across the road from us. The survey, carried out about a year ago, mentioned various features of note and as an aside detailed the 600 or so species of moth recorded in the area. That was it. There was no mention that this diversity of species must mean something or that it warranted further investigation to see why so many different moths were found in the area. The report concluded with suggestions about removing ivy from trees and keeping a little bit of hedgerow and some trees because bats might use them. Well, when the moths and other invertebrates disappear, so will the bats and nobody will remember the hedges, trees or fields or the diversity of moths they harboured.

Moth Species by 10km Square in VC 59 & VC 60

SD	2	3	4	5	6	7	8	9	SD
					23				
8					41				8
					64				
			573	351	96				
7			473	424	244				7
			1046	775	340				
		73	377	284	264				
6		95	412	373	375				6
		168	789	657	639				
		17	373	323	60				
5		22	378	345	122				5
		39	751	668	182				
		236	219	182	155	104	78	36	
4		301	273	225	231	249	190	6	4
		537	492	407	386	353	268	42	
		320	213	440	226	141	290	108	
3		365	286	345	343	247	348	156	3
		685	499	785	569	388	638	264	
		274	335	394	166	250	71	63	
2		339	346	343	318	263	42	202	2
		613	681	737	484	513	113	265	
	159	316	363	288	286	215	190	249	
1	299	373	374	363	354	293	266	288	1
	458	689	737	651	640	508	456	537	
	471	260	358	477	220	336	191	152	
0	431	342	305	378	323	367	283	293	0
	902	602	663	855	543	703	474	445	
SD	2	3	4	5	6	7	8	9	SD
		287	320	430	467	561	454	96	
9		320	339	357	388	416	360	110	9
		607	659	787	855	977	814	206	
		106	327	268	183		83		
8		45	369	263	207		8		8
		151	696	531	390		91		
SJ	2	3	4	5	6	7	8	9	SJ

Line 1	Micro Moth Counts		**VC60**	**VC60/59**	**VC59**
Line 2	Macro Moth Counts				
Line 3	Combined Moth Counts				
	Total 10k. Squares = 61				

Recorders

PMrsh123@aol.com Peter Marsh – VC60 Macro

john@birdtours.co.uk John Girdley – VC60 Micro

rbkvwalker@talktalk.net Richard Walker - VC59 Macro & Micro

troubleatmill@btinternet.com Graham Dixon – MapMate hub

Several people help with the determination of micros from VC59 and VC60, but also we recommend that you post the trickier ones which can be identified by photos (both aspects please, lateral ones can be very important in the identification process) on the Lancashire Moths Facebook site where several people, including Ben Smart, can offer advice.

In some cases this may mean that the specimen requires dissection and whether you wish to pursue this option is entirely up to you. However acceptance of the record without dissection is unfortunately not an option with several species. If it is obviously likely to be a rare and localised species, where perhaps a new population in VC59 or 60 is a possibility, can we please urge you to retain the specimen for dissection and therefore confirmation or otherwise. Thanks

If you do not wish to own MapMate, please could you send your records in, if possible, using Alex Parson's spreadsheet, the details of which are on the Lancashire Moth Group website.

Of course, we will still accept paper copy or any other means of sending records in - it is not a problem entering these. However we will not be entering casual postings on the Facebook site where the location has not been published. We have had problems requesting details from people whose mothing motivation is not the 'recording scene'.

Thanks once again for all your efforts and good mothing!

Useful contacts and links

Lancashire Moth Group Website	http://www.lancashiremoths.co.uk
Lancashire Moths Yahoo Group	https://groups.yahoo.com/neo/groups/lancashiremoths/info
Lancashire Lepidoptera Facebook Group	https://www.facebook.com/groups/119829941488294/
Lancashire Micro Moth Tips FB Group	https://www.facebook.com/groups/580000418802001/
UK Moths Website	http://www.ukmoths.org.uk
Leaf Mines UK	http://www.leafmines.co.uk
Gelechiid Recording Scheme	http://www.gelechiid.co.uk/
Butterfly Conservation	http://www.butterfly-conservation.org
Butterfly Conservation Lancs	http://www.butterfly-conservation.org/306/lancashire-branch.html
Norfolk Moths	http://www.norfolkmoths.co.uk
Hampshire Moths	http://www.hantsmoths.org.uk
European Butterflies & Moths	http://www.lepidoptera.eu
The National Bio-diversification Network	https://data.nbn.org.uk
Mersey Bio Bank	http://www.merseysidebiobank.org.uk
Lancashire & Cheshire Fauna Society	http://www.lacfs.org.uk