

Species	Records		Squares		Records (%)	Adults/All-species adults <sup>1</sup> (%)				
	Adults		10km	1km		2012	2013	2014	2015	2016
Speckled Wood	727	1860	19	151	5.67	3.29	2.38	3.63	2.57	4.03
Wall Brown	0	0	0	0	0.00	0.01	0.00	0.00	0.00	0.00
Marbled White	462	4183	18	103	3.60	8.19	5.14	8.18	7.57	9.07
Gatekeeper	564	2069	18	139	4.40	4.30	3.89	5.44	5.75	4.49
Meadow Brown	1203	6601	21	203	9.38	23.18	17.81	16.56	14.69	14.31
Ringlet	676	5304	21	164	5.27	13.85	7.82	12.45	9.01	11.50
Small Heath	425	1343	15	57	3.31	2.19	3.03	3.44	2.55	2.91
Overall	12832	46116	21	435						

<sup>1</sup> These values show the number of adults reported for each species relative to the number of adults reported for all species, allowing crude year-on-year comparisons to be made using data partially acquired by casual recording.

# Macro-moths 2016

*Melissa & Andy Banthorpe*

## Introduction

It was a bit of a mixed year weather-wise, which affected both moth numbers and diversity at certain times. The early-winter period was relatively mild, which meant some species came out early but spring and early summer were quite cool. June was rather wet at times too. September was warmer than usual and December was quite mild too.

There was just one addition to the county list in 2016 – Cypress Carpet. For details see the review below. It was also not a great year for migrants but the following species were recorded: Convolvulus Hawk-moth, Humming-bird Hawk-moth, Vestal, Dewick's Plusia, Scarce Bordered Straw, Small Mottled Willow, Black-spotted Chestnut and Dark Swordgrass. However, Dewick's Plusia and Black-spotted Chestnut may be resident rather than migrant, only time will tell.

During the year the Recorders ran lights in the field at the following places: Cooper's Hill, Harrold-Odell Country Park (HOCP), Leighton Buzzard (All Saints churchyard), Stockgrove Country Park and Totternhoe Old Quarry.

We were assisted in recording by a network of people regularly running light traps/recording in their gardens in 2016. These were at Bedford, Beeston, Biggleswade (three sites), Blunham, Bromham (two sites), Carlton, Clifton (two sites), Clophill, Dunstable, Heath & Reach, Houghton Regis, Kempston (two sites), Leighton Buzzard, Lidlington, Lower Stondon, Luton (two sites), Markyate, Marston Moretaine, Potton (three sites), Sandy, Sharnbrook (two sites), Shefford, Stotfold, Studham, Toddington, Turvey, Upper Caldecote, Upper Stondon and Wilden. Traps were also run regularly at the following locations: John O'Gaunt Golf Course (Sutton), Lousy Bush NR (formerly Wrestlingworth Gravel Pit NR), Marston Vale Country Park (MVCP), The Lodge (RSPB Sandy), Studham Common and Whipsnade (National Trust Office).

In addition we have access to the records from the Rothamsted Insect Survey (RIS) traps in the county. These are situated at Cockayne Hatley and Eaton Bray. Ian Woiwod continues to operate and identify the macro-moths from the Cockayne Hatley RIS trap, and Melissa identifies the macros from the Eaton Bray RIS trap, which is operated by Graham Buss.

The recording boundary for moths in Bedfordshire is that of the Watsonian Vice-county 30. For more details of this see the article in the 2009 Journal (Banthorpe 2010).

## Review

The following list includes species of interest recorded in VC30 during 2016. It also includes a few records from 2015, which were not processed before that report was published. We are keen to receive records for all species, even those regarded as very common, as without these records the dataset is incomplete and we will not be able to track future changes in abundance and distribution.

Most of the species analysis is based on the 26,994 records for 2016 that had been uploaded to the county database by mid-April 2017. However, a couple of datasets are not in yet, and some records have been gleaned from emails and other sources, as a few of our regular trappers had not sent in their records by the time the report was written. We have sight of the Cockayne Hatley RIS trap data for 2016 courtesy of Ian Woiwod but the majority has not been entered into the county database yet.

The list is based on that of Agassiz, Beavan & Heckford (2013), which was a revised taxonomic list and numbering system of British Lepidoptera. This list has subsequently been updated and corrected; the new version can be downloaded via the Natural History Museum's website. The number in square brackets refers to a species' Bradley-Fletcher number (Bradley 2000), which were used in previous reports.

A checklist of the macro-moths of VC30 with their current status and acceptable flight-date ranges is on the Beds Moth Group (BMG) website [www.vc30moths.org.uk](http://www.vc30moths.org.uk) or available from the Recorders on request. This is usually updated annually. Our records are also scrutinised at a national level, so please note that your records may well be rejected if you have not provided sufficient evidence. This also applies for commoner species outside their acceptable flight-date range.

## Cossidae

### 50.002 Leopard Moth *Zeuzera pyrina* (L.) [161]

Amongst the 11 records received for the year was a single larval record. During the summer, most likely June, a small Ash tree was cut down in HOCP to make a handle for a scythe (WMM). On removing the bark the observer noticed something had been eating the wood – “like a giant wood worm had been at work”. The section was bagged up and taken home, and frass was seen coming out over the coming days. Several weeks later an adult, female Leopard Moth emerged (had an ovipositor). This is the first time larval signs of the moth have been found in the county.

## Sesiidae

### 52.001 Raspberry Clearwing *Pennisetia hylaeiformis* (Lasp.) [369a]

There were three records in 2016: a single larva was found in a Raspberry cane in April (RCR) and adults came to pheromone lures at Biggleswade (9) on 21st July (SCB) and Studham (1) on 23rd July (CRBB).

**52.002 Hornet Moth** *Sesia apiformis* (Cl.) [Nb] [370]

Exuviae were found at the same site at Sandy on 12th June (2) and 3rd (2) and 10th July (3) plus a freshly emerged adult was also seen there on 3rd July (RAC). The only other record in 2016 was an adult male to pheromone lure at Potton on 10th July (WG).

**52.003 Lunar Hornet Moth** *Sesia bembeciformis* (Hb.) [380]

A moribund individual was found at Heath & Reach on 20th July in the evening (MHo).

**52.011 Red-belted Clearwing** *Synanthedon myopaeformis* (Borkh.) [Nb] [379]

Singletons were found resting on apple leaves on consecutive days – 25th June (MB) and 26th June (LRB) – in the same garden in Biggleswade, plus another was found in a garden in Keysoe Row on 6th July (RB).

**52.014 Six-belted Clearwing** *Bembecia ichneumoniformis* ([D. & S.]) [Nb] [382]

There was just one record of this species in 2016: a singleton to pheromone lure in Jubilee Copse on Studham Common on 18th July (CRBB).

**Lasiocampidae**

**66.002 Pale Eggar** *Trichiura crataegi* (L.) [1632]

A singleton trapped at Riseley on 24th August (JoP) was the first record of the species in the county since 2013.

**66.005 Small Eggar** *Eriogaster lanestris* (L.) [Nb] [1633]

The presence of this moth was recorded twice at a site near Ravensden/Wilden. Two webs with large larvae were seen on 30th June (RAB), and a further, vacated web and single larva, near none of the webs, on 14th July (RAB & RCR).

**Sphingidae**

**69.004 Convolvulus Hawk-moth** *Agrius convolvuli* (L.) [Migrant] [1972]

There was quite an influx of this species to the UK during September 2016, and singletons were trapped at Potton on the 6th (WG), Markyate on the 13th (DG) and Lower Stondon on the 21st (AMB & MGB).

**69.010 Humming-bird Hawk-moth** *Macroglossum stellatarum* (L.) [Migrant] [1984]

It was a poor year for records of the species with only 13 seen in 2016. The first was seen at Stotfold on 24th June (GC) and the last was trapped at Luton on 9th October (AG). All sightings were of singletons.

**Geometridae**

**70.036 Maiden's Blush** *Cyclophora punctaria* (L.) [1680]

A single larva spotted on an Oak leaf at The Lodge (RSPB Sandy) on 9th October (AMB det. MGB) was the first larval record for the county.

**70.038 Vestal** *Rhodometra sacraria* (L.) [Migrant] [1716]

There were five records of this migrant moth in 2016 as follows: Luton on 23rd August (2) and 13th September (TI); Upper Stondon on 29th August (JE); Clophill on 31st August (RC); and Luton (second site) on 10th September (AG).

There was an additional Vestal record for 2015: a singleton in the Cockayne Hatley RIS trap on 26th August (IPW).

**70.043 Chalk Carpet** *Scotopteryx bipunctaria* ssp. *cretata* (Prout) [Nb] [1731]

The only records of this species were both on the same day, 15th July. One was seen at Houghton Regis ChP during the day (TM) and ten were trapped at Totternhoe Old Quarry (AMB & MGB).

**70.083 Cypress Carpet** *Thera cupressata* (Geyer) [1771a]

A singleton trapped at Upper Caldecote on 28th October (MB, KBu & LARB conf. AMB & MGB) was a new addition to the county list.

**70.109 Autumnal Moth** *Epirrita autumnata* (Borkh.) [1797]

A singleton attracted to building lights at The Lodge (RSPB Sandy) on 21st November (DLB inc. gendet) was the first record for the county since 2009.

**70.174 Pinion-spotted Pug** *Eupithecia insigniata* (Hb.) [Nb] [1820]

One was trapped at Upper Caldecote on 11th May (MB, KBu & LARB). This was the first since 2012.

**70.203 Orange Underwing** *Archiearis parthenias* (L.) [1661]

A singleton seen at The Lodge (RSPB Sandy) on 30th March (CCa) was the only record received for this species in 2016.

**70.287 Annulet** *Charissa obscurata* ([D. & S.]) [1964]

This species should have been included in the 2015 report. Two to light at Totternhoe Old Quarry on 28th August 2015 (AMB & MGB) were the first recorded in the county since 2003. This brings the total number of records in the database to ten.



Cypress Carpet  
Photo: Matt Burgess



One of the two Annulets trapped at Totternhoe Old Quarry in 2015.  
Photo: Melissa Banthorpe

**Notodontidae**

**71.027 Chocolate-tip** *Clostera curtula* (L.) [2019]

A single larva beaten from Aspen at Long Riding, Sandy Heath, on 26th August (DLB) was only the second larval record for the county.

**Erebidae**

**72.047 Hoary Footman** *Eilema caniola* (Hb.) [Nb] [2045]

A male was trapped at Upper Caldecote on 2nd August (MB, KBu & LARB gendet AMB). This was the second confirmed record of the species for the county.

**72.052 Dotted Fan-foot** *Macrochilo cribrumalis* (Hb.) [Nb] [2493]

Singletons were trapped at Upper Caldecote on 25th June and 24th July (MB, KBU & LARB).

**72.066 Waved Black** *Parascotia fuliginaria* (L.) [Nb] [2475]

There were three records in 2016 – one larval and two adults. A larva was found again at Woburn Safari Park during a bioblitz on 10th June, in the same area as the previous year (HP); and single adults were trapped at Lower Stondon on 24th July (AMB & MGB) and Upper Stondon on 5th August (JE).

**Noctuidae**

**73.010 Dewick's Plusia** *Macdunnoughia confusa* (Steph.) [Migrant] [2436]

Singletons were trapped at Biggleswade (LRB) and Upper Caldecote (MB, KBU & LARB) on the 15th September and at Upper Stondon (JE) on 22nd September.

**73.015 Silver Y** *Autographa gamma* (L.) [Migrant] [2441]

There were 30 records received in 2016. The first were singletons trapped at Bedford (AY & TY) and Biggleswade (LRB) on the 9th May, and the last was one trapped at Blunham on 5th November (PH). The maximum number recorded was ten, which were amongst wing fragments collected from below a Brown Long-eared Bat roost in Maulden on 8th October (SR).

**73.074 Bordered Straw** *Heliothis peltigera* ([D. & S.]) [Migrant] [2403]

There was an additional record from 2015: a singleton trapped at Biggleswade on 20th June (PM).

**73.076 Scarce Bordered Straw** *Helicoverpa armigera* (Hb.) [Migrant] [2400]

A larva was found eating a Flat Peach *Prunus persica* var. *platycarpa*, which had come from a nearby supermarket, at Houghton Regis on 7th June (JDW), and an adult was trapped at Biggleswade on 27th September (LRB).



The Dewick's Plusia trapped at Biggleswade.  
Photo: Melissa Banthorpe



Scarce Bordered Straw larva found at Houghton Regis.  
Photo: Janine Dixon-Wilkinson

**73.087 Small Mottled Willow** *Spodoptera exigua* (Hb.) [Migrant] [2385]

There was just one record in 2016 – a singleton trapped at Upper Caldecote on 11th September (MB, KBU & LARB) – after the high of 13 records the previous year.

Two records were additional to the 11 published in the 2015 report: singletons were trapped at Turvey Abbey on 16th and 30th August (BrJM).

**73.184 Pale-lemon Sallow** *Cirrhia ocellaris* (Borkh.) [Na] [2276]

One trapped at Clifton on 30th September (ARO conf. MGB) was the first since 2013. The species remains a rarity in the county with only 11 records in the database. There was a peak of three records in 2010.

**73.196 Black-spotted Chestnut** *Conistra rubiginosa* (Scop.) [Migrant/recent colonist] [2259a]

Surprisingly, there were yet again two records of this species in the county in 2016. One turned up again in a trap at Upper Caldecote on 13th November (MB, KBu & LARB), and one was found in the Cockayne Hatley RIS trap on 25th December (IPW). It will be interesting to see if there are any further records in 2017.

**73.214 White-spotted Pinion** *Cosmia diffinis* (L.) [pRDB] [2317]

There were three records in 2016, all of singletons in August. The species was again recorded at Upper Caldecote, on the 5th and 23rd (MB, KBu & LARB), but also recorded at a new site – Lower Dean – on the 11th (SH).

**73.257 Beautiful Yellow Underwing** *Anarta myrtilli* (L.) [2142]

All six records came from The Lodge (RSPB Sandy) as follows: a singleton trapped on 21st July (CCA); an adult found daytime on 5th August (SCB); and larvae on 5th (1) (WG) and 9th (2) September (DLB), and 4th (1) and 14th (2) October (WG). Some of these records came from the new, regenerating heathland, which is good news.

**73.327 Dark Sword-grass** *Agrotis ipsilon* (Hufn.) [Migrant] [2091]

There were 11 records. The first (1) was recorded at Biggleswade on 27th June (LRB) and the last (2) at Upper Caldecote on 1st November (MB, KBu & LARB). The maximum number recorded was two.

**73.336 Red Chestnut** *Cerastis rubricosa* ([D. & S.]) [2139]

A larva found on a grass stem in Poorshills Wood & Meadow Plantation, near Woburn, on 10th June (AMB det. MGB) was the first larval record for the county.

**73.356 Heath Rustic** *Xestia agathina agathina* (Dup.) [2135]

A larva was swept off heather at Cooper's Hill on 2nd April (AMB conf. by R.Leverton & R.Fry). This was the first confirmed larval record for the county but also the first confirmed record of the species since 1949.

In March 2012 a few larvae were swept off heather at Cooper's Hill (CC & GH) and photos sent to the Recorders. The majority were True Lover's Knot but a couple looked superficially like a green form of this species. They were tentatively identified as this at the time but it was also suggested that they could be Heath Rustic, with the caveat that they would have to be bred through to at least a later instar before the record was accepted. Subsequently the Recorder's have found that there is no green form of larva for True Lover's Knot. These larvae were likely to have been Heath Rustic but they were not kept and the photos did not show sufficient detail to confirm the identity.

Migrant records are forwarded to the appropriate editor for inclusion in the Immigration of Lepidoptera to the British Isles Report for the *Entomologists Record and Journal of Variation*.

All records are held by the Bedfordshire and Luton Biodiversity Recording and Monitoring Centre and updated regularly. In addition the dataset is forwarded to the National Moth Recording Scheme annually.



## References

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*Melissa and Andy Banthorpe are now the Society's joint Recorders for all Moths, a position they hold in an honorary capacity, having taken on the micros as well in spring 2016.*