

Macro-moths 2014

Melissa & Andy Banthorpe

Introduction

It was actually quite an interesting year for macro-moths despite issues with the weather at times. January and February were rather wet and stormy but March was a good month, with many people reporting reasonable catches. Spring was generally good overall, though it got a bit cold in May at times. A number of species came out early, and the Recorders were able to trap at the more-exposed sites of Bison Hill in early April, and Barton Hills and Totternhoe Quarry in mid to late May without getting too cold. June and July were fairly warm but there were a few rainy days, including heavy showers at the BNHS/Wildlife Trust invertebrate day at Flitwick Moor on 28th June. Lionel Burgess, Matt Burgess and Ben Sale had a really good night's trapping at Home Wood, Northill, on 2nd July, in terms of numbers of moths and species recorded. August was cooler than usual but autumn was relatively mild. A number of species had an extended season, and some single and double-brooded species had partial second and third broods.

During the year the Recorders ran lights in the field at the following places – Barton Hills, Bison Hill, Cranfield University, Chicksands Wood, Flitton Moor, Flitwick Moor, Stotfold Mill Meadows, Totternhoe Old Quarry, Woburn Safari Park and Whipsnade Zoo.

We are assisted in recording by a network of people regularly running light traps in their gardens. These are at Bedford, Biggleswade (three sites), Blunham, Bromham (two sites), Carlton, Clifton (two sites), Clophill, Dunstable, Eaton Ford, Heath & Reach, Houghton Regis, Kempston, Leighton Buzzard, Lidlington, Lower Stondon, Luton (three sites), Markyate, Pottton (three sites), Renhold, Sharnbrook (two sites), Shefford, Stotfold, Studham, Toddington, Turvey, Upper Caldecote, Upper Stondon and Wilden. Traps were also run regularly at the following locations: Beeston, Marston Vale Country Park (MVCP), Stopsley High School, Studham Common, The Lodge (RSPB Sandy) and Wrestlingworth Gravel Pit NR.

In addition, with the kind assistance of Chris Shortall 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.

There were seven new county records this year – Balsam Carpet, Pauper Pug, Lunar Yellow Underwing, Satin Lutestring, Kent Black Arches, Hoary Footman and Sharp Angled Peacock (for details see the review of species below).

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 all species recorded as larvae during the year in VC30, plus others of interest. However, we are keen to receive records for all species including 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. Larval records are particularly welcome.

During 2014 we made a concerted effort to improve the number of larval records in the county database. This got off to a slow start but a fair number of species had been recorded by the end of May. Early June was not too bad but over the course of the rest of the year, the effort put in became greater than the rewards. In the end we managed to record 86 species.

As of 1st April 2015, with the other larval records from various observers, the total number of species recorded as larvae in 2014 was 103; the total number of larval records for 2014 was 275.

Most of the species analysis is based on the 31,450 records for 2014 that had been uploaded to the county database by the beginning of April 2015. However, some records have been gleaned from emails as a few of our regular trappers had not sent in their 2014 records by the time the report was written. In addition only some of the Cockayne Hatley RIS data and a proportion of casual records had been uploaded by this time.

The list follows that of Agassiz, Beavan & Heckford (2013), which is a revised taxonomic list and numbering system of British Lepidoptera. The number in square brackets refers to a species' Bradley-Fletcher number (Bradley 2000), which were used in previous reports.

A list of the macro-moths of VC30 with their current status, and a table of expected first and last dates for species in the county are on the Beds Moth Group (BMG) website www.vc30moths.org.uk or available from the Recorders on request.

Sesiidae

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

A singleton came to a pheromone lure in Pegnut Wood on 12th July (JHM), and emergence holes were found at Sandy on 29th March, Husborne Crawley on 4th April and Clapham Park on 11th October (AMB & MGB).

52.003 Lunar Hornet Moth *Sesia bembeciformis* (Hb) [371]

In January, whilst cutting down sallow AS found two unknown larvae, which had been feeding on the wood. He brought them indoors to breed through thinking they might be Coleoptera. He was rather surprised when a Lunar Hornet Moth emerged on 27th March (seen by AMB & MGB). There is only one other larval record from 1983 when Keith Webb found a larva at East Hyde and bred it through. Most of the 33 records in the database are of larval workings or emergence holes but there are two records of adults – a record from Bedford in the Victoria County History (1904) and one from Kempston in 1911 collected by R.P.K. Rylands.

52.008 Red-tipped Clearwing *Synanthedon formicaeformis* (Esp.) [Nb] [380]

A singleton was swept off vegetation at Felmersham NR on 18th June (JCo), and the species was attracted to a pheromone lure at Biggleswade Common on 23rd July (1) and 24th July (3) (JHM).

52.010 Orange-tailed Clearwing *Synanthedon andrenaeformis* (Lasp.) [Nb] [378]

A singleton came to a pheromone lure at Cockayne Hatley on 24th June (IPW).

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

There were two adults found in a garden in Blunham on 30th May (AH), and one was seen briefly on Hawthorn at Pegsdon Hills on 21st June (MGB).

52.012 Yellow-legged Clearwing *Synanthedon vespiformis* (L.) [Nb] [374]

One came to a pheromone lure at The Lodge (RSPB Sandy) on 14th July (JHM).

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

At Totternhoe Old Quarry on 4th July four adults were swept from Bird's-foot Trefoil and one came to a pheromone lure (AMB & MGB). In addition, a singleton was found resting on vegetation at Warden Hill on 22nd July (HJG).

Zygaenidae

54.008 Six-spot Burnet *Zygaena filipendulae* ssp. *stephensi* (Dupont) [169]

There were 20 records of this species in 2014 including five of larvae. The larvae were all found during June at the following locations: Cranfield University grounds, Knocking Hoe, Luton, Sandhouse Lane NR and The Lodge (RSPB Sandy). Of note, HJG counted 53 in his garden in Stoneleigh Close, Luton, on 1st June; some of these had started spinning cocoons by the 17th June.

54.009 Narrow-bordered Five-spot Burnet *Zygaena lonicerae* ssp. *latomarginata* (Tutt) [171]

There were 15 records this year, which included one of a single larva at Sharnbrook Summit on 5th May (KB), and one of a cocoon found at Cranfield University on 5th June (emerged on 19th June) (AMB & MGB).

Drepanidae

65.012 Satin Lutestring *Tetheella fluctuosa* (Hb.) [1656]

A single to MV light at Flitwick Moor on 6th June (AMB & MGB) was the first confirmed record for the county. According to Arnold *et al.* the species was noted from Aspley Heath on 7th–8th May in Colonel Kershaw's notebook. The date was considered to be rather early and no specimen had been seen, so this record remains unverified.

65.015 Frosted Green *Polyploca ridens* (Fabr.) [1660]

A singleton attracted to MV light at Turvey Abbey on 29th April (BrJM) was the only record this year.

65.016 Yellow Horned *Achlya flavicornis* ssp. *galbanus* (Tutt) [1659]

There were seven records for 2014 including one of a larva, which was found in Silver Birch spinnings at Rowney Warren on 4th May (AMB & MGB). Arnold *et al.* (1997) has the foodplant, birches, starred indicating it had been found as a larva in the county, however, there are no previous larval records in the VC30 database.

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

There were four records in 2014: an adult to MV light at Turvey Abbey on 30th March (BrJM); a web at Harrold on 3rd June (HAS); a web and eggs at Harrold on 6th June (HAS & RCR); and a web with at least ten larvae at Thurleigh Airfield on 6th June (GBe).

66.007 Oak Eggar *Lasiocampa quercus quercus* (L.) [1637]

There were 12 records received during year. These included a record of nine larvae found at Sandy Smith NR on 8th April (JP) when guards were removed from Hawthorn hedging.

66.010 Drinker *Euthrix potatoria* (L.) [1640]

There were 56 records, including nine of larvae, in 2014. Larvae were recorded from the following sites: Arlesey, Cranfield University, Dropshort Marsh, Flitton Moor, Sandy Smith NR, Stotfold Mill Meadows, The Lodge (RSPB Sandy) and Woburn Safari Park. The finding of a parasitised, moribund larva at The Lodge on 6th June (NDW), and the subsequent emergence of examples of the tachinid *Exorista larvarum* from it, has been written up as a separate article in this Journal.

Sphingidae**69.002 Eyed Hawk-moth** *Smerinthus ocellata* (L.) [1980]

Of the 27 records from 2014, one was of a single larva seen at Priory Country Park on 30th July (KB & JU).

69.006 Privet Hawk-moth *Sphinx ligustri* (L.) [1976]

There were 200 records of this species in 2014. Of these, just three were of larvae – all singletons in August – at Bedford, Stotfold and Westoning.

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

All the 26 records were of single adults. The first was at Luton on the early date of 29th March (HJG, photo seen by AMB & MGB) and last was seen at Bromham on 24th September (MaH & MiH). Larvae have been found in the county in previous years but none were seen in 2014.

69.016 Elephant Hawk-moth *Deilephila elpenor* (L.) [1991]

There were six records of larvae amongst the 207 received this year. A single larva was reported at Tempsford in late July; the other five records came from August, including one in Bedford. Larvae were recorded from 1st August (3) to 28th August (1) (max of 4 on 3rd August) in a Bromham garden eating Fuchsias (PA); and one larva was found amongst cut Gladioli (sourced locally) in Pulloxhill on 21st August (PM).

69.017 Small Elephant Hawk-moth *Deilephila porcellus* (L.) [1992]

It would appear this species had a very good year – 87 records of 114 moths/larvae were received, the best year so far. The first record of the species was in 1891 and there are only a handful of years when it was recorded until the mid-1970s. After this records are more regularly spaced in terms of years recorded but never more than up to three records per year until 2005, when 19 records were received. It has been recorded annually from 2003 to 2014 but the number of records fluctuated between two in 2003 to 19 in 2005 in the years 2003 to 2008. From 2009 they have been increasing but there was a massive jump from 31 in 2012 to 72 in 2013. Part of this may be down to increased recording coverage, as the number of people running a trap in their

garden has been steadily increasing year on year since the current Recorders took up their position in late 2006.

There was just one larval record in 2014; one was found in Shillington Little Field on 27th July on Lady's Bedstraw (GBe). For interest there are 301 records in the county database and only four are of larvae.

Geometridae

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

After 15 records in 2013, there was just a singleton this year at Upper Caldecote on 14th September (MB, KBu & LARB).

70.039 Oblique Striped *Phibalapteryx virgata* (Hufn) [Nb] [1718]

A singleton trapped at Biggleswade on 27th August (LRB) was the third county record. The first was trapped at Potton on 6th August 1997 by Joan Childs, and the second was found in the Cockayne Hatley RIS trap on 7th August 1998 (IPW).

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

This species was recorded at two sites in 2014. In Totternhoe Old Quarry a singleton was seen on 4th July (AMB & MGB), and 20+ were recorded during a Wildlife Trust training day for the species on 17th July (AMB, MGB & GH *et al.*). In addition singletons were seen at Houghton Regis ChP on 12th and 15th July (TM).

70.050 Balsam Carpet *Xanthorhoe biriviata* (Borkh.) [1721]

A photograph of an odd-looking carpet-type moth, which was trapped at Bromham on 3rd April, was forwarded to the Recorders for comment. This turned out to be a Balsam Carpet (MaH & MiH, det. AMB & MGB conf. CWP), which was new to the county.

70.066 Shoulder Stripe *Earophila badiata* ([D. & S.]) [1746]

There were eight records of this spring species received in 2014. Amongst them was a record of a larva from Sandy Smith NR on 14th May (MGB). It was beaten off Blackthorn but there was probably a *Rosa* sp. (normal foodplant) nearby as it took this, and not Blackthorn, in captivity.

70.074 July Highflyer *Hydriomena furcata* (Thunb.) [1777]

Of the 25 records in 2014, one was of a bilaterally aberrant adult trapped at Sandy on 2nd July (AS, via DB). At Chicksands Wood on 5th May two larvae were found by beating willow and Dogwood (AMB & MGB), and at Marston Thrift on 17th May a larva was found on a *Rosa* sp. (AMB & MGB).

70.090 Chevron *Eulithis testata* (L.) [1755]

A singleton was trapped at Flitwick Moor on 5th July (AMB & MGB). It was last recorded in the county in 2009.

70.105 Northern Winter Moth *Operophtera fagata* (Scharf.) [1800]

There was just one record for this species in 2014 – a larva was found on oak in Lowe's Wood on 15th May (AMB & MGB).

70.106 Winter Moth *Operophtera brumata* (L.) [1799]

Of the 36 records in 2014, 11 were of larvae. These were found between mid-April and mid-late May at Barton Hills NR, Chicksands Wood, Flitwick Moor, Lowe's Wood, Marston Thrift, Sandy

Smith NR, Studham Common and Rowney Warren. Larvae were either beaten from or found eating Blackthorn, Field Maple, Hawthorn, Hazel, Horse Chestnut, Hornbeam, lime, oak, *Rosa* sp., Silver Birch and Sycamore.

70.107 November Moth *Epirrita dilutata* ([D. & S.]) [1795]

There were five confirmed records of adults from two locations – Carlton and Eaton Ford – and two larval records from two 1km squares in Chicksands Wood on 12th April (AMB & MGB). A total of six larvae were found after beating Blackthorn, elm fruits, Hawthorn and Hornbeam.

In contrast 53 records were received of the aggregated November Moth species group – includes Pale November Moth and Autumnal Moth, though only males can be separated by dissection.

70.111 Small White Wave *Asthena albulata* (Hufn.) [1875]

A singleton came to actinic light at Luton on 20th May (AG).

70.118 Brown Scallop *Philereme vetulata* ([D. & S.]) [1791]

There was just one record in 2014: three came to light at Home Wood on 2nd July (MB, LRB & BS).

70.121 Scallop Shell *Hydria undulata* (L.) [1789]

At Flitwick Moor during a BMG meeting on 6th June, one was netted at dusk (MiH) and one came to MV light (AMB & MGB). On a BMG trip to the same site on 5th July two more were trapped using MV light (AMB & MGB). It was good to see this species was still present at this SSSI, as it was last recorded there in 2009.

70.128 Pretty Chalk Carpet *Melanthia procellata* ([D. & S.]) [1784]

There were two trapped at Home Wood on 2nd July (MB, LRB & BS).

70.137 Grass Rivulet *Perizoma albulata albulata* ([D. & S.]) [1807]

Of the 20 records this year, two were of larvae. Grass Rivulet is known to feed in the seed pods of Yellow Rattle, and at Sharpenhoe Clappers (1) and Totternhoe Knolls (2) on 4th July larvae were found doing just that (AMB & MGB). These were the first larval records for the county.

70.142 V-Pug *Chloroclystis v-ata* (Haw.) [1858]

There were 60 records of this species in 2014, including a larva found on Angelica seeds at Sandy Smith NR on 9th September (AMB & MGB). There is only one other larval record in the county database from August 1995, when the species was found at Houghton Regis on Elder by Adrian Riley.

70.151 Foxglove Pug *Eupithecia pulchellata* Steph. [1817]

There were 45 records of this species in 2014. Larvae were found in sewn-up Foxglove flowers at Lower Alders NR (1) on 20th June (AMB) and King's Wood Heath & Reach (2) on 30th June (AMB & MGB). There is one other larval record in the county database from 2001 – Mark Gurney found three in Foxglove flowers at The Lodge (RSPB Sandy) on 19th June – but the foodplant is starred in Arnold *et al.*, which was published before then.

70.154 Marsh Pug *Eupithecia pygmaeata* (Hb.) [1822]

A small pug swept at Totternhoe Old Quarry on 17th July was identified as a female Marsh Pug on dissection (AMB). There are now ten records in the county database; seven come from the

Clophill area (1984–1985), there is a record from Flitwick Moor (1984), and another record from Totternhoe Old Quarry (2009).

70.156 Brindled Pug *Eupithecia abbreviata* Steph. [1852]

Of the 54 records from 2014, three were larval. Single larvae were beaten from Hawthorn at MVCP on 31st May and 8th June (MGB), and from oak at Duck End NR (DENR) on 8th June (AMB & MGB). These were the first larval records for the county.

70.160 White-spotted Pug *Eupithecia tripunctaria* H.-S. [1835]

There were 17 records of this species in 2014. Larvae were found by AMB & MGB feeding on Angelica seeds at the following locations: Chicksands Wood, Flitwick Moor, Sandy Smith NR and Stotfold Mill Meadows. These are the only larval records in the county database, however in Arnold *et al.* Elder is starred.

70.164 Pauper Pug *Eupithecia egenaria* H.-S. [RDB] [1824]

This was a new addition to the county list. A male was trapped at The Lodge (RSPB) on 29th May (CCa, gendet DB conf. by AMB), and another male was trapped at the same site on the following day (DG, inc. gendet). The species is also known as Fletcher's Pug.

70.168 Narrow-winged Pug *Eupithecia nanata* (Hb.) [1846]

There was one larval record amongst six in 2014, which all came from heathland sites. A total of three larvae were swept from Heather at Cooper's Hill on 7th September (AMB). This was the first larval record for the county.

70.171 Ochreous Pug *Eupithecia indigata* (Hb) [1844]

There were five records of this species in 2014. A small larva, believed to be this species was beaten from Scots Pine in Ampthill Park on 1st July (MGB). It was reared to pupation and emerged in May 2015, when the identity was confirmed. It was the first larval record for the county.

70.173 Lime-speck Pug *Eupithecia centaureata* ([D. & S.]) [1825]

There were 70 records of this pug, including one of a single larva found feeding on Angelica seeds at Stotfold Mill Meadows on 6th September (AMB & MGB).

70.182 Currant Pug *Eupithecia assimilata* Doubl. [1832]

Amongst the 28 records this year, was one of a larva beaten from Golden Hop in Lower Stondon on 15th August (AMB & MGB). It was the first larval record for the county.

70.199 Small Seraphim *Pterapherapteryx sexalata* (Retz.) [1882]

Singletons were trapped at Flitwick Moor on 6th June (AMB & MGB) and Upper Caldecote on 20th June (MB, KBu & LARB).

70.202 Early Tooth-striped *Trichopteryx carpinata* (Borkh.) [1881]

One was trapped at Clifton on 9th April (RM, conf. AMB & MGB), which was a new site for the species. This is well away from where all the previous six records have come from, which is around Heath & Reach in the south-west of the county.

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

A singleton was seen at The Lodge (RSPB Sandy) on 1st April (NDW).

70.204x Orange Underwing/Light Orange Underwing agg. [1662x]

If the critical identification features cannot be seen to separate the two species, records will be assigned to the aggregate group. Note that Light Orange Underwing has changed genus; it is now *Boudinoyiana notha* (Hb) and has the number 70.204 in the new checklist.

There were three records of undetermined orange underwings in 2014, all singletons, at Flitwick Moor on 8th March (AMB & MGB), The Lodge (RSPB Sandy) on 9th March (JOS) and Potton Wood on 17th March (IPW).

70.208 Scorched Carpet *Ligdia adustata* ([D. & S.]) [1888]

Of the 40 records from 2014, two were larval with one from each brood. An almost fully-grown larva was beaten from Spindle in Chicksands Wood on 19th June (MGB), and a smaller instar was also found on Spindle at Sandy Smith NR on 9th September (AMB & MGB). These were the first larval records for the county.

70.212 Sharp-angled Peacock *Macaria alternata* ([D. & S.]) [1890]

A singleton was trapped at Biggleswade on 21st July; it was photographed on the trap but unfortunately flew off before it could be potted (LRB, conf. by AMB, MGB & CWP). This was the first confirmed record for the county. In Arnold *et al.* there is a record of one seen on willow by the Embankment in Bedford in 1959; there was not a specimen and confusion with Peacock Moth *Macaria notata* (L.) cannot be ruled out, so the record remains unverified and is not in the county database.

70.237 Early Thorn *Selenia dentaria* (Fabr.) [1917]

There were 147 records of Early Thorn in 2014, and just one was larval. At MVCP on 14th September a single larva was beaten from Hawthorn (MGB). There is just one other larval record in the county database, which is from 2012, when one was found at Flitwick Moor on 4th October (RCR).

70.241 Scalloped Oak *Crocallis elinguaris* (L.) [1921]

A single larva beaten from Blackthorn in Chicksands Wood on 12th April (AMB & MGB) was the only larval record out of 153 records for the year.

70.244 Feathered Thorn *Colotois pennaria* (L.) [1923]

There were 35 records of adults and three of larvae in 2014. Single larvae were beaten from Field Maple at Chicksands on 12th April, and from Hawthorn at Rowney Warren on 4th May and Sandy Smith NR on 14th May (AMB & MGB).

70.247 Pale Brindled Beauty *Phigalia pilosaria* ([D. & S.]) [1926]

There were 18 records in 2014. A total of three larvae were found in Chicksands Wood on 5th May having been beaten from elm, oak and willow (AMB & MGB).

70.248 Brindled Beauty *Lycia hirtaria* (Cl.) [1927]

Of the 21 records for 2014, one was of a small instar larva beaten from Small-leaved Lime in Chicksands Wood on 19th June (MGB). It took this in captivity and is a new foodplant for the county, having been recorded on Hazel and willow previously.

70.251 Oak Beauty *Biston strataria* (Hufn.) [1930]

There were 26 records in 2014 of Oak Beauty, including a single larva beaten from oak in Flitwick Moor on 21st May (MGB). There is another larval record in the county database from 1951,

which is in S.H.Kershaw's notebook for King's Wood Heath & Reach on 28th June. He may not have collected it/them (record only indicates presence not quantity), as no specimen was found with these label details in his collection.

70.252 Peppered Moth *Biston betularia* (L.) [1931]

Of the 185 records of this species in 2014 only two were of larvae. Singletons were found at Flitwick Moor on 12th September (AMB & MGB) and Woburn Safari Park on 19th September (DB).

70.254 Scarce Umber *Agriopis aurantiaria* (Hb.) [1933]

There were more records of larvae (7) than of adults in 2014. Larvae were recorded from Aspen, birch, Blackthorn, Hawthorn, Hazel and oak during May, and at the following locations – Chicksands Wood, Flitwick Moor, Jordans Mill, Lowe's Wood, Marston Thrift, MVCP and Sandy Smith NR. Adults were trapped at The Lodge (RSPB Sandy) on 7th November (CCa) and Upper Caldecote on 18th and 19th November (MB, KBU & LARB).

70.255 Dotted Border *Agriopis marginaria* (Fabr.) [1934]

There were 27 records for 2014, including three larval records. Larvae were found at Rowney Warren (3 on birch) on 4th May (MGB), Chicksands Wood (1 on wild clematis) on 5th May (AMB & MGB) and Flitwick Moor (1f on oak – was bred through and emerged 1st March 2015) on 21st May (MGB).

70.256 Mottled Umber *Erannis defoliaria* (Cl.) [1935]

At the right time of year (throughout May) larvae of Mottled Umber are reasonably easy to find by beating various trees and shrubs – it is a polyphage. In 2014 there were ten records of larvae amongst a total of 26 for the year. Larvae were recorded at the following locations: Chicksands Wood, Flitwick Moor, Lowe's Wood, Marston Thrift, MVCP, Rowney Warren, Sandy Smith NR and Sharnbrook; and on the following foodplants: birch, Blackthorn, elm, Hawthorn, Hazel, Hornbeam, oak and Sycamore.

70.264 Satin Beauty *Deileptenia ribeata* (Cl.) [1940]

A singleton was trapped at Home Wood on 2nd July (MB, LRB & BS, conf. AMB & MGB). This is the first since one was trapped at Maulden Wood in 2011.

70.265 Mottled Beauty *Alcis repandata repandata* (L.) [1941]

There were 87 records in 2014, including a single larva found on part of the John Bunyan Trail (near Brogborough) on 1st November (AMB det. MGB). There is one other larval record in the county database from 2006, when one was found in the woodland near Swiss Garden on 3rd May (AMB & MGB); Arnold *et al.* also has Heather starred.

70.270 Engrailed *Ectropis crepuscularia* ([D. & S.]) [1947]

In the new checklist Engrailed has taken the scientific name of what was formerly Small Engrailed, which has now become *Ectropis* sp. without a proper scientific name.

There were 45 records of Engrailed in 2014 including five larval records. Larvae were recorded between early May and mid-July at Chicksands Wood (on Hazel and oak), Flitton Moor (on Mugwort), Flitwick Moor (on oak) and Marston Thrift (on birch).

70.273 Brindled White-spot *Parectropis similaria* (Hufn.) [1950]

There were five records of this species in 2014. Adults were trapped at Flitwick Moor and The Lodge (RSPB Sandy). A larva beaten from Hawthorn at Chicksands Wood on 31st August (AMB & MGB) was the first larval record for the county.

70.274 Grey Birch *Aethalura punctulata* ([D. & S.]) [1951]

One was trapped at Biggleswade on 16th May (LRB).

70.277 Common White Wave *Cabera pusaria* (L.) [1955]

Of the 63 records in 2014, one was of a larva beaten from birch at MVCP on 14th September (MGB). This was the first larval record for the county.

70.278 Common Wave *Cabera exanthemata* (Scop.) [1956]

The first larval record for the county came from Chicksands Wood on 31st August, when a parasitised larva was found on an Ash leaf (AMB & MGB). The record was amongst 20 for the species in 2014.

70.279 White-pinion Spotted *Lomographa bimaculata* (Fabr.) [1957]

A singleton was trapped at Sharnbrook on 2nd June (DVM). This species should be more common, considering how much Hawthorn (its main foodplant) is about in the county, but it has been seldom recorded in the last five years.

70.282 Early Moth *Theria primaria* (Haw.) [1960]

There was one record of an adult moth in 2014, which was trapped at Turvey Abbey on 6th January (BrJM). All the rest (4) were of larvae, which were beaten from mainly Blackthorn or Hawthorn at Chicksands Wood (4, covering 2 1km squares) on 12th April, MVCP (2) on 10th May and Lowe's Wood on 15th May (AMB & MGB).

70.300 Blotched Emerald *Comibaena bajularia* ([D. & S]) [1667]

There were four records of adults in June from The Lodge (RSPB) and Turvey Abbey, plus a really late record of one to MV light at Clophill on 19th September (RC, conf. from photo AMB & MGB). This is the latest record for the county; the previous latest was of one on 26th July 2012.

70.305 Common Emerald *Hemithea aestivaria* (Hb.) [1669]

There were three larval records amongst the 43 records this year. Larvae were beaten from either Blackthorn or Hazel at Chicksands Wood (1) on 12th April, Sandy Smith NR on 14th May and MVCP on 14th September (MGB).

Notodontidae**71.003 Puss Moth** *Cerura vinula* (L.) [1995]

There were eight records of adults and one of a larva in 2014. A single larva was beaten from birch near a poplar (it took poplar in captivity) at MVCP on 31st May (MGB). This was bred through and emerged on 19th May 2015. The last time larvae were found in the county was in 2000, when one was found in Chicksands Wood on 23rd July (HAS).

71.013 Pebble Prominent *Notodonta ziczac* (L.) [2003]

There were 46 records of Pebble Prominent in 2014. One beaten from willow in Chicksands Wood on 31st August (AMB & MGB) was the only larval record for the year. Arnold *et al.* has

willow starred as a foodplant but the only other larval record in the county database was one found on Aspen at Coppice Wood, Melchbourne on 23rd August 1989 (DVM).

71.016 Great Prominent *Peridea anceps* (Goeze) [2005]

The only record of this species in 2014 was one to light at Heath & Reach on 13th May (MH).

71.023 Scarce Prominent *Odontosia Carmelita* (Esp.) [2010]

A singleton was attracted to light at Heath & Reach on 24th April (MH). This is the first record of the species since one was trapped at Cooper's Hill in 2010.

71.025 Buff-tip *Phalera bucephala* (L.) [1994]

There were 145 records in 2014 but only two were of larvae. In Lower Stondon eight almost fully-grown larvae were found feeding on a small willow bush near the Recorders' house on 18th August (AMB & MGB), and at Wrest Park one was beaten off oak on 18th September (IKD).

Erebidae

72.001 Herald *Scoliopteryx libatrix* (L.) [2469]

Of interest, a Herald was seen fluttering about inside Maulden village hall during a BNHS talk on 18th February (KB, also seen by AMB & MGB).

72.003 Snout *Hypena proboscidalis* (L.) [2477]

Of the 208 records of Snout in 2014 two were larval. A single larva was found on comfrey at Arlesey on 6th April but did not take this or nettles in captivity and died shortly after. There was also a larva swept from nettles at Chicksands Woods on 12th April (AMB & MGB).

72.004 Buttoned Snout *Hypena rostralis* (L.) [Nb] [2480]

There were 13 records of this species in 2014 and only one was of a larva, which was beaten off Golden Hop in Lower Stondon on 2nd July (MGB).

72.009 White Satin Moth *Leucoma salicis* (L.) [2031]

Of the 61 records for the year, two were larval and one was pupal. At MVCP on 31st May five, very-early instar larvae were found on silken pads attached to Grey Poplar leaves (AMB & MGB), and a later instar larva was found on Black Poplar in Lower Stondon on 19th June (MGB). An empty pupal case was found at the Woburn Forest Center Parcs site on 4th September (AMB).

72.010 Black Arches *Lymantria monacha* (L.) [2033]

There were 40 records in 2014, including one of a small larva which was beaten off Silver Birch at Marston Thrift on 17th May (MGB). It took birch in captivity, which is not one of its usual foodplants (has a preference for oak). Arnold *et al.* has oak starred but the 2014 record is the only larval one in the county database.

72.012 Brown-tail *Euproctis chrysorrhoea* (L.) [2029]

Surprisingly, there was only one larval record in 2014 amongst the 43 for the year. A single larva was found at Cranfield University on 5th June on Hawthorn (AMB & MGB).

72.013 Yellow-tail *Euproctis similis* (Fuessl.) [2030]

There were only two larval records this year from 77. Single larvae were found at Chicksands Wood on Hazel on 5th May and MVCP on oak on 8th June (AMB & MGB).

72.015 Pale Tussock *Calliteara pudibunda* (L.) [2028]

There were 104 records of adults and three of larvae in 2014. Single larvae were found at King's Wood Heath & Reach (beaten from oak) on 30th June (AMB & MGB), Dunstable on 12th September (LC) and Barton le Clay on 28th September (DS).

72.017 Vapourer *Orgyia antiqua* (L.) [2026]

There were 14 records of adults, 11 records of larvae and one record of a pupa in 2014. Larvae were recorded between 1st June and 22nd September at the following locations: Broom, Dropshort Marsh, Chicksands Wood, DENR, Flitwick Moor, King's Wood Heath & Reach, Luton, MVCP, The Lodge (RSPB Sandy) and Upper Caldecote. Larvae were found on a variety of trees, shrubs and other plants, including Crab Apple, plum and Purple Loosestrife. A vacated pupal-case covered with eggs (most had hatched) was found at Woburn Safari Park on 15th September (AMB & MGB).

72.019 Buff Ermine *Spilosoma luteum* (Hufn.) [2061]

There were 294 records of adults in 2014. Adults have now been recorded from the 3rd April to the 18th October. A singleton trapped in Lower Stondon on 3rd April (AMB & MGB) was the earliest record for the county by just over a month – the previous earliest date was the 4th May (from 1978). The previous latest date was the 24th September (from 2011) but this was passed when one was trapped on 7th October at Upper Caldecote (MB, KBU & LRB), followed by singletons trapped at Biggleswade on the 14th and 18th of October (LRB).

There was also a larval record in 2014; 13 were beaten off Golden Hop in Lower Stondon on 15th August (AMB & MGB).

72.024 Ruby Tiger *Phragmatobia fuliginosa fuliginosa* (L.) [2064]

Of the 131 records in 2014 was one of a larva, which was found amongst strawberry plants in a Bromham garden on 3rd April (MaH & MiH).

72.026 Garden Tiger *Arctia caja* (L.) [2057]

This species is still being seen in the county in most years but in very low numbers. A photograph was emailed to the Recorders of one trapped in Blunham on 15th July (PH).

72.029 Scarlet Tiger *Callimorpha dominula* (L.) [2068]

Adults (8 recs) were seen at Bedford (3 recs at one site), Flitwick Moor/river Flit area (2 recs), Heath & Reach (1 rec of 3), The Lodge (RSPB Sandy) (1 rec) and Woburn (1 rec).

Larvae (9 recs) were recorded at Aspley Heath churchyard – 51 were counted on Green Alkanet on 5th April (AMB & MGB); Heath & Reach (3 recs, at different site to above, noted on Garden Anchusa and Garden Forget-me-not); Flitton Moor (1 rec, on comfrey); Flitwick Moor (2 recs), including 40 on comfrey on 2nd April (JCom); Potsgrove (1 rec, on Garden Anchusa); and Woburn (1 rec, different site to above; on Green Alkanet).

These are the first confirmed larval records for the county. There is a larval record in S.H.Kershaw's notebook for King's Wood Heath & Reach for 3rd June 1954. There are, however, no specimens relating to this record and no other notes against it; the record remains unverified.

72.030 Jersey Tiger *Euplagia quadripunctaria* (Poda) [2067] [NB]

There were 20 records of this species in 2014, and they were seen between 16th July and 9th August. The majority of records (14) were split between two sites in Bromham: the species was trapped nine times at Grange Lane with a total of 13 recorded (8 red form, 4 yellow form, 1 form

not noted) (MaH & MiH), and five times at Northampton Road with a total of 11 recorded (8 red form, 3 yellow form) (PA). In Kempston a total of four were recorded (two dates) (MJP), and singletons were recorded in Bedford (2 sites) (GCo, SL), Cardington (LK) and Houghton Conquest (CWo).

72.031 Cinnabar *Tyria jacobaeae* (L.) [2069]

There were 162 records of Cinnabar in 2014, of which eight were larval. There were two high counts of larvae at Totternhoe Knolls/Old Quarry 200+ were seen on 4th July (AMB & MGB) and 100 were seen on 17th July (HJG). Larvae were also recorded at Bromham Lake NR, Salem Thrift and Sharpenhoe Clappers.

72.035 Rosy Footman *Miltochrista miniata* (Forst.) [2037]

A singleton was recorded at The Lodge (RSPB Sandy) (attracted to building lights) on 30th September (SCB), which was around six weeks later than the previous late date for the county of 14th August (1973). However, this was surpassed by one which was trapped on 16th October (RE) at the same site. Photographs of both were seen by the Recorders.

72.038 Four-dotted Footman *Cybosia mesomella* (L.) [2040]

Singletons were recorded during the day at Yelnow New Wood on 23rd and 24th June (HAS), and one was trapped at Flitwick Moor on 5th July (AMB & MGB). These bring the total number of records in the county database to ten.

72.042 Red-necked Footman *Atolmis rubricollis* (L.) [2039]

There are 17 records of Red-necked Footman in the county database and 11 of these were from 2014. Adults were recorded at Bromham; Biggleswade; King's Wood Heath & Reach; Old Warden; The Lodge (RSPB Sandy); Totternhoe Old Quarry, where six were found during the day on 16th June on Lady's Bedstraw (RK); Sharnbrook and Upper Caldecote.

It was also pleasing to receive two records of larvae – one was found on a wall on buildings at The Lodge (RSPB Sandy) on 12th September (IKD, conf. AMB & MGB), and two were found by a moth trap in the morning at Heath Wood, Whipsnade on 19th September (CRBB, conf. AMB & MGB). It had rained heavily during the night and it is thought they were dislodged from the trees above the trap. These were the first larval records for the county and prove the species is now breeding in the county.

72.043 Buff Footman *Eilema depressa* (Esp.) [2049]

Amongst the 21 records of Buff Footman in 2014, one was of a larva, which was beaten from oak at Lowe's Wood on 15th May (AMB & MGB). There were also two late records of adults. The previous latest date an adult had been recorded in the county was 17th August (2012) but singletons were trapped nearly two months after that in 2014; Luton on 14th October (AG, conf. AMB & MGB) and The Lodge on 16th October (RE, conf. AMB & MGB).

72.044 Diny Footman *Eilema griseola* (Hb.) [2044]

There was one larval record in 2014 plus 123 of adults. A larva was found on a lime trunk in the grounds of Cranfield University on 5th June (AMB & MGB).

72.045 Common Footman *Eilema lurideola* (Zinck.) [2050]

There were 399 records of adults and seven of larvae. Records of larvae came from four locations – Biggleswade, Bromham, Lower Stondon and Markyate – and they were recorded between mid-February and late May.

72.046 Scarce Footman *Eilema complana* (L.) [2047]

A larva found on an Ash trunk at Wilden on 24th April (AJG) was the only larval record of the species in 2014. In contrast there were 181 records of adults.

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

A singleton (male) trapped at Luton on 16th July (AG, gendet AMB) was new for the county. A second individual, looking very much like the one from the 16th, was trapped at the same location on 17th July; it was not examined in further detail, so remains unconfirmed.

72.049 Orange Footman *Eilema sororcula* (Hufn.) [2043]

This species is still increasing in numbers, since it was added to the county list in 2003. In 2014 there were 45 records of adults. The first larval record for the county came from King's Wood Heath & Reach on 30th June 2014, when one was beaten from oak (AMB & MGB).

72.067 Small Purple-barred *Phytometra viridaria* (Cl.) [2470]

There was just one reported this year, from Totternhoe Old Quarry on 5th June (RM).

Noctuidae**73.001 Spectacle** *Abrostola tripartita* (Hufn.) [2450]

There were 199 records of Spectacle this year but only one was larval. A single larva was swept from nettles at Ampthill Park on 1st July (AMB & MGB).

73.012 Burnished Brass *Diachrysia chrysitis* (L.) [2434]

There were 111 records in 2014, including one of a larva found on comfrey at Sandy Smith NR on 6th April (AMB & MGB). This was the first larval record for the county.

73.014 Golden Plusia *Polychrysia moneta* (Fabr.) [2437]

Singletons were trapped at Biggleswade on 16th June (LRB) and Bromham on 5th July (MaH & MiH).

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

There were 145 records of Silver Y in 2015. The first was one trapped at Markyate on 29th March (DGi), the last was one trapped at Lidlington on 21st November (AD). The maximum seen was six, which were nectaring on Buddleia at Upper Stondon on 21st July (JE).

73.021 Scarce Silver Y *Syngrapha interrogationis* (L.) [2447]

One was recorded in the Cockayne Hatley RIS trap on 27th July (IPW, conf. AMB, MGB & CWP). There are two previous records of this species for the county: singletons were trapped at Sharnbrook on 8th August 1995 (DVM) and Turvey Abbey on 10th August 1997 (BrJM).

73.032 Nut-tree Tussock *Colocasia coryli* (L.) [2425]

There were two records of larvae in 2014 and 112 records of adults. A very early instar larva was beaten from Field Maple at MVCP on 8th June (MGB), and a large-ish larva was beaten from lime at Ampthill Park on 1st July (AMB & MGB).

73.037 Dark Dagger *Acronicta tridens* ([D. & S.]) [2283] and**73.038 Grey Dagger** *Acronicta psi* (L.) [2284]

There were just two confirmed (adult) records of Dark Dagger (both males by gen. check, which came from Lower Stondon where it has been recorded before) compared to nine confirmed (adult) Grey Daggers (all gen. checked or gendet) and 147 of the *tridens/psi* aggregate. The

species can be separated easily as larvae but there are only seven larval records of Dark Dagger in the county database versus 38 records of Grey Dagger.

Grey Dagger larvae were found twice in 2014 – Flitwick Moor (1 beaten from birch) on 28th June and Lower Stondon (1 found on sallow) on 20th August (AMB & MGB).

73.045 Knot Grass *Acrionicta rumicis* (L.) [2289]

A larva found on bramble at Clophill on 22nd September (RC) was the only larval record for the species in 2014. In contrast there were 41 records of adults.

73.047 Coronet *Craniophora ligustri* ([D. & S.]) [2291]

There was only a singleton this year, which was trapped at Lidlington on 5th July (AD).

73.048 Small Yellow Underwing *Panemeria tenebrata* (Scop.) [2397]

Just two adults were reported in 2014; one at Bison Hill on 15th May (TM) and one at Studham Common on 17th May (CRBB).

73.058 Mullein *Cucullia verbasci* (L.) [2221]

There were five records of adults in 2014 from Bromham, Eaton Ford, Upper Caldecote and Upper Stondon. The rest (12) were all larval (between mid-May and late June) and were recorded at Bedford, Bromham (two sites), Cranfield University, Eversholt, Stotfold, The Lodge (RSPB Sandy), Turvey Abbey, Upper Stondon and Wootton. Larvae were noted eating mainly *Verbascum* but one was noted on figwort at The Lodge (CCa), and six were recorded eating *Buddleia* in Stotfold (GC).

73.059 Toadflax Brocade *Calophasia lunula* (Hufn.) [RDB3] [2223]

There were 28 records of at least 35 adults from five sites in 2014, plus larvae were recorded at another three sites. Most of the adult records (23) came from the known site in Biggleswade (LRB); a singleton was trapped at a new site in Biggleswade (PMc); one was trapped at a new location – Houghton Regis (TM); two were trapped at one of the known Luton sites (AG); and one was trapped at Upper Caldecote (MB, KBU & LARB). Larvae were again found at Stoneleigh Close in Luton – maximum of ten on 15th and 18th September (HJG); but were also found at new locations in the county – Upper Stondon (JE) and Wrestlingworth (ML).

73.062 Copper Underwing *Amphipyra pyramidea* (L.) [2297]

There were 118 records of adults, plus larvae were found at Sandy Smith NR (1) on 14th May, Lowe's Wood (2) on 15th May and MVCP (1) on 8th June (AMB & MGB).

73.065 Sprawler *Asteroscopus sphinx* (Hufn.) [2227]

A total of five larvae were recorded in 2014 at Chicksands Wood on 5th May (AMB & MGB), having been noted on the following foodplants – elm, Hazel, lime, oak and sallow. There were also 15 records of adults this year.

73.068 Green-brindled Crescent *Allophyes oxyacanthae* (L.) [2245]

There were 70 records of this species in 2014. Of these, three were larval; a total of five (from 2 1km squares) were beaten from Blackthorn and Hawthorn in Chicksands Wood on 12th April, and one was beaten from Hawthorn at Rowney Warren on 4th May (AMB & MGB).

73.069 Early Grey *Xylocampa areola* (Esp.) [2243]

A larva beaten from Honeysuckle at Flitwick Moor on 21st May (AMB & MGB) became the only larval record in the county database, though Arnold *et al.* has this foodplant starred.

73.070 Bordered Sallow *Pyrrhia umbra* (Hufn.) [2399]

There were two records of adults, which were trapped at Upper Stondon (2) on 3rd July (JE) and Kempston (1) on 16th July (MJP). There were also larval records in 2014: two records came from Totternhoe Quarry, with larvae being swept off Rest-harrow on 17th July (1) (LW, det. MGB) and 30th August (3) (AMB); and 15+ (brown and green forms) were found feeding on Spiny Rest-harrow at Maulden Church Meadow in the early evening on 15th August (AMB & MGB). These are the first larval records for the county.

73.082 Tree-lichen Beauty *Cryphia algae* (Fabr.) [2292] [Migrant]

There are 17 records of this species in the county database and nine came from 2014. They were recorded at Biggleswade (4 recs, 2 sites), Luton (1 rec), Pottton (1 rec of 2) and Upper Caldecote (2 recs).

73.100 Silky Wainscot *Chilodes maritimus* (Tausch.) [2391]

This species was recorded twice in 2014, at MVCP using a 6W actinic trap; two were trapped on 11th July and one on 5th September (AD, conf. by AMB & MGB). These brought the total number of records in the county to eight.

73.107 Old Lady *Mormo maura* (L.) [2300]

There were 60 records of Old Lady in 2014. Of these just one was a larval record – a singleton was found climbing up the back wall of the Recorders' house in Lower Stondon, about 00.40am on 10th April (AMB & MGB).

73.113 Angle Shades *Phlogophora meticulosa* (L.) [2306]

This species is a polyphage, and larvae can be found on a wide range of plants. A larva swept from low-growing plants at Maulden on 2nd July took Honeysuckle, cultivated *Hypericum*, *Melissa officinalis*, nettle and St. John's Wort in captivity. Larvae were also found at Aspley Heath (on Green Alkanet), Flitwick Moor (on birch, and also took Hawthorn in captivity) and Toddington.

Adults (206 records) were recorded between 10th March and 30th November.

73.119 Crescent *Helotropha leucostigma leucostigma* (Hb) [2368]

One was trapped at Upper Caldecote on 30th July (MB, KBu & LARB).

73.120 Dusky Sallow *Eremobia ochroleuca* ([D. & S.]) [2352]

Larvae were swept from grasses at two sites in 2014 – Lower Alders NR (1) on 20th June (MGB) and near Knocking Hoe NR (6 from 2 1km squares) on 21st June (AMB & MGB). There were also 80 records of adults.

73.187 Brown-spot Pinion *Agrochola litura* (L.) [2266]

There were 28 records of this species in 2014, including one of larva beaten from Honeysuckle at Flitwick Moor on 21st May (AMB & MGB). This was the first larval record for the county.

73.192 Brick *Agrochola circumcellaris* (Hufn.) [2262]

In 2014 adults were trapped at The Lodge (RSPB Sandy) (1) on 16th October (RE) and Sharnbrook on 25th (2) and 31st (1) October (DVM); and a total of six larvae were beaten from elm and sallow at Chicksands Wood on 5th May (AMB & MGB).

73.193 Lunar Underwing *Omphaloscelis lunosa* (Haw.) [2270]

Of the 249 records of this species, one was larval. A single larva was found in a sand pit at Sandy Smith NR on 8th April (JP, det. MGB). This was the first larval record for the county.

73.202 Grey Shoulder-knot *Lithophane ornitopus* ssp. *lactipennis* (Dadd) [2237]

A larva beaten from oak at MVCP on 8th June (MGB) seemed fine but was obviously parasitised, as it was surrounded by a number of small cocoons on 10th June. This was the only larval record for 2014 and the first for the county. There were also 21 records of adults in 2014.

73.210 Satellite *Eupsilia transversa* (Hufn.) [2256]

Larvae (5 records) were recorded from early May to late June at the following locations: Chicksands Wood (beaten from Hawthorn and elm), Marston Thrift (found on Hazel), MVCP (beaten from Hawthorn) and Pegsdon Hills (found on Creeping Thistle). There were also 35 records of adults in 2014.

73.216 Dun-bar *Cosmia trapezina* (L.) [2318]

Of the 116 records for 2014, ten were larval. Larvae were recorded from mid-April to late May on a variety of foodplants (it is a polyphage and also cannibalistic) at the following locations: Chicksands Wood, Flitwick Moor, Jordans Mill, Lowe's Wood, Marston Thrift, Rowney Warren, Sandy Smith NR and Totternhoe Old Quarry.

73.220 Minor Shoulder-knot *Brachylochia viminalis* (Fabr.) [2225]

The only record in 2014 was of a singleton trapped at Home Wood on 2nd July (MB, LRB & BS).

73.225 Brindled Green *Dryobotodes eremita* (Fabr.) [2248]

There were 12 records of Brindled Green in 2014, including a single record of a larva, which was beaten from oak at Sandy Smith NR on 14th May (MGB). The only other larval record in the county database was also of one beaten from oak, from 2011.

73.242 Clouded Drab *Orthosia incerta* (Hufn.) [2188]

There were 271 records in 2014, including three of larvae. All of the larval records came from MVCP; on 31st May (two different 1km squares) singletons were beaten off Hawthorn and sallow, and on 8th June another larva was beaten from Hawthorn (AMB & MGB).

73.243 Blossom Underwing *Orthosia miniosa* ([D. & S.]) [2183]

There were three records in 2014; three were trapped at Turvey Abbey on 4th April (BrJM), and singletons were trapped at Heath & Reach on 9th April (MH) and Bromham on 17th April (MaH & MiH).

73.244 Common Quaker *Orthosia cerasi* (Fabr.) [2187]

Of the 354 records from 2014 only five were larval. Larvae were found at the following locations between mid-May and early June – Flitwick Moor, Marston Thrift, MVCP and Totternhoe Old Quarry – and beaten from birch, Hawthorn, oak, poplar, sallow and Sycamore.

73.245 Small Quaker *Orthosia cruda* ([D. & S.]) [2182]

There were 162 records of this species in 2014. A singleton beaten from Blackthorn at Marston Thrift on 17th May (MGB) was the only larval record of the year.

73.249 Hebrew Character *Orthosia gothica* (L.) [2190]

There were 430 records of adults in 2014 but only two records of larvae. At Marston Thrift on 17th May one was beaten from Blackthorn (MGB), and at Flitwick Moor on 21st May one was beaten from oak (AMB & MGB).

73.250 Twin-spotted Quaker *Anorthoa munda* ([D. & S.]) [2189]

There was one larval record amongst the 44 records for 2014. A total of two larvae were beaten from oak and lime in Chicksands Wood on 5th May (AMB & MGB).

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

The only records in 2014 were of an adult trapped at Biggleswade on 26th July (SCB), and eight larvae found on Heather on the old heath at The Lodge (RSPB Sandy) on 20th August (CCa).

73.267 Bright-line Brown-eye *Lacanobia oleracea* (L.) [2160]

There were 326 records of this species in 2014, including four of larvae. In Luton single larvae were found in the same garden on three occasions – 11th and 28th August and 2nd September (HJG). In addition one larva was beaten off Golden Hop in Lower Stondon on 15th August (MGB).

73.270 Dot Moth *Melanchnra persicariae* (L.) [2155]

Only five of the 209 records for 2014 were of larvae. They were found in the following locations between late August and mid-September: Luton, Greenfield (on Raspberry), MVCP (on Agrimony) and at the Woburn Forest Center Parcs site (on Alder).

73.276 Champion *Sideridis rivularis* (Fabr.) [2166]

There were 40 records of Champion in 2014, including one of a larva found on Ragged Robin in a garden in Luton on 12th July (HJG). This is the only larval record in the county database but Arnold *et al.* has White Champion starred.

73.280 Small Ranunculus *Hecatera dysodea* ([D. & S.]) [RDBK] [2165]

There were 63 records of this species in 2014. Larvae were found three times on Prickly Lettuce at Heath & Reach on 5th August (MH), Maulden (5) on 15th August (AMB & MGB) and Lower Stondon (3) on 6th September (MGB).

73.281 Lychnis *Hadena bicruris* (Hufn.) [2173]

Of the 49 records for 2014, three were of larvae. Two larvae were found feeding in Bladder Champion seedheads at Totternhoe Old Quarry on 4th July (AMB & MGB); one was found feeding in a White Champion seedhead in Maulden on 15th August (AMB & MGB); and one was found dead, also in a seedhead of White Champion, at the Woburn Forest Center Parcs site on 4th September (AMB). There is one further larval record in the database from 2006, when one was found feeding on champions in a Biggleswade garden on 17th July (PMc).

Of interest, a 'live' pupa was also found in 2014 in a garden in Clophill on 9th May (RC).

73.286 Tawny Shears *Hadena perplexa perplexa* ([D. & S.]) [2167]

There were six records of this species in 2014. Adults were trapped at Biggleswade, Markyate and Upper Caldecote, and larvae were found twice in seedheads of Bladder Campion at Totternhoe Quarry on 4th and 17th July (AMB & MGB). There are no other larval records in the county database, though Arnold *et al.* has the foodplant starred.

73.290 Brown-line Bright Eye *Mythimna conigera* ([D. & S.]) [2192]

Out of 150 records of this species, one was of a larva. This was found in leaf litter on the John Bunyan Trail (SP9638) on 1st November (AMB, det. MGB). It appears not to have been found as a larva in the county before.

73.297 White-point *Mythimna albipuncta* ([D. & S.]) [Migrant] [2194]

This species is believed to be more of a resident in the county rather than a migrant species. There were nine records in 2014 between mid-June and mid-October from the following locations: Biggleswade, Clophill, Luton, The Lodge (RSPB Sandy), Turvey and Upper Caldecote.

73.302 Obscure Wainscot *Leucania obsoleta* (Hb.) [2204]

A singleton was trapped at Upper Caldecote on 1st July (MB, KBu & LARB, conf. AMB & MGB). This was a new site for it, as all previous records were from Chalton STW and Dunstable STW.

73.316 Light Feathered Rustic *Agrotis cinerea* ([D. & S.]) [Nb] [2084]

This moth is a chalk downland specialist, which feeds on Wild Thyme, and had not been recorded in the county since 1998. The Recorders ran a single MV light at Barton Hills LNR on 20th May to see if it was present there, and subsequently 11 were attracted to the light, including at least one female. The Recorders also ran lights at Totternhoe Old Quarry on 23rd May as part of a joint Wildlife Trust and Beds Moth Group event and 11 were also recorded there.

73.317 Heart and Dart *Agrotis exclamatoris* (L.) [2089]

There were four rather late records in 2014, which were all later than the previous late date for the county of 30th September (1995). Singletons were trapped on 20th and 23rd October at Biggleswade (LRB), and on 31st October at Sharnbrook (DVM) and Upper Caldecote (MB, KBu & LARB).

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

There were six records of this migrant moth in the county in 2014. It was recorded between late July and mid-October from the following locations: Biggleswade, Bromham, Clophill, The Lodge (RSPB Sandy), Turvey and Upper Caldecote.

73.332 Purple Clay *Diarsia brunnea* ([D. & S.]) [2122]

An unknown, and virtually scaleless noctuid trapped at Home Wood on 2nd July was found to be a male Purple Clay on dissection (MB, LRB & BS, gendet AMB). This was formerly more common, and the species had not been seen in the county since 1995, when it was recorded in Studham on 10th July (CRBB).

73.345 Lesser Yellow Underwing *Noctua comes* Hb. [2109]

This is a common moth in the county and there were 484 records of it in 2014. A maximum of 42 adults were trapped in Luton on 26th September (LC). Larvae were recorded between April and May at the following locations: Arlesey (feeding on comfrey), Bromham, Flitton Moor (on

comfrey), Lower Stondon (on *Carex* sp.), Sandy Smith NR (on comfrey) and Stotfold Mill Meadows (found amongst grass mowings).

73.344 Lunar Yellow Underwing *Noctua orbona* (Hufn.) [Nb] [2108]

There were two records of Lunar Yellow Underwing in 2014, and these were the first confirmed records for the county. The first was trapped at Potton on 30th May (FW & RW, seen by AMB & MGB), and the other was trapped at Upper Caldecote on 14th September (MB, KBu & LARB, conf. AMB & MGB). Following a review a few years ago by the current Recorders, all previous records purporting to be this species were removed from the county database. There was some doubt about whether they had been correctly identified, and as there are no specimens they remain unverified.

73.351 Double Dart *Graphiphora augur* (Fabr.) [2114]

A singleton to MV light at Cranfield University, near to the sewage works, during a bioblitz event on 14th June was a complete surprise for the Recorders (AMB & MGB). Double Dart was formerly more common in the county and had not been seen for 11 years, when one was recorded in the Cockayne Hatley RIS trap on 25th June 2003 (IPW).

73.352 Green Arches *Anaplectoides prasina* ([D. & S.], 1775) [2138]

There were two recorded in 2014, both from light traps: Turvey Abbey on 14th June (BrJM) and Bromham on 20th June (MaH & MiH).

73.357 Square-spot Rustic *Xestia xanthographa* ([D. & S.]) [2134]

One was trapped at Upper Caldecote on the very early date of 21st June (MB, KBu & LARB, photo seen by AMB & MGB). This was about a month earlier than the previous earliest record of the species – 22nd July 2012. The second record in 2014 was from 26th July.

Nolidae

74.002 Kent Black Arches *Meganola albula* ([D. & S.]) [2076]

A singleton was trapped at Biggleswade on 17th July (LRB, conf. AMB & MGB). This was a new county record.

74.003 Short-cloaked Moth *Nola cucullatella* (L.) [2077]

Of the 43 records in 2014, two were larval – two larvae were beaten from Hawthorn at Sandy Smith NR on 14th May (MGB), and one larva was beaten from Field Maple at Barton Hills LNR on 20th May 2014 (MGB).

There was an adult recorded at The Lodge (RSPB Sandy) on the very late date of 16th September (CCa), which was nearly a month later than the previous latest date of 18th August (1993). In 2014 the second latest date was 19th July.

74.004 Least Black Arches *Nola confusalis* (H.-S) [2078]

There were 17 records in 2014, including one of a larva beaten from oak at Flitwick Moor on 28th June (MGB). There are no previous records of larvae in the database. The foodplants are lichens (not starred in Arnold *et al.*), so therefore it was probably feeding on lichens on the branches of the oak it was beaten from, however, it was not kept long enough to see what it would feed on in captivity.

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 when requested.

Acknowledgements

Records and support gratefully acknowledged from the following:

B.Almond, P.Almond (PA), V.W.Arnold, C.R.B.Baker (CRBB), K.Balmer (KB), R.I.Bashford, R.Bee, G.Bellamy (GBe), R.Billing, M.Bird, S.C.Blain (SCB), S.Braybrooke, S.E.Brooke, D.Buckingham (DB), K.Burgess (KBU), Lionel Burgess (LRB), Louis Burgess (LARB), M.Burgess (MB), J.Burkett, G.Buss, C.Campbell (CCa), L.Carman (LC), C.Carpenter, G.Castle (GC), R.Christopher (RC), J.Cole (JCo), J.Comont (JCom), G.Conridge (Gco), R.G.Cornes, J.Curd, B.Dawson, I.K.Dawson (IKD), A.Day (AD), J.Day, A.De Winter, M.De Winter, R.Dennis, B.Dickerson, L.Downton, R.Earwaker (RE), R.Ellis, J.England (JE), P.Ford, Forestry Commission, G.Frith, D.Fryer-Saxby, K.Fuller, W.George, D.Girvan (DGi), M.Gordon, M.Gouck, S.Gray, A.J.Green (AJG), Greensand Trust, H.J.Griffiths (HJG), J.Griffiths, A.Grimsey (AG), S.Halton, A.V.Harding, J.Harding-Morris (JHM), A.Harper (AH), Marg Harrison (MaH), Mike Harrison (MiH), S.Heath, L.J.Hill, G.Hitchcock (GH), P.Holden (PH), M.Holloway (MH), P.Howard, T.Illot, K.Isgar, L.King (LK), R.Knock (RK), A.A.Lawrence, M.Lawrence (ML), R.Lawrence, S.Lill (SL), J.MacPherson, G.Madge, D.V.Manning (DVM), A.D.Marsh, Br J.Mayhead (BrJM), P.McMullen (PMc), P.Meads (PM), E.Milne, T.Morgan (TM), R.E.Morrisey, R.Murphy (RM), Natural England, M.Nicholls, P.Nicholls, B.J.Nightingale, J.O'Donoghue, J.O'Sullivan (JOS), D.Oakley-Martin, D.J.Odell, A.R.Outen, M.J.Palmer (MJP), A.Peabody, D.Pennington, J.Pitts (JP), C.W.Plant (CWP), J.Porter, J.Powell, W.Powell, S.Raven, T.Robson, RSPB, M.Russell, B.Sale (BS), D.Sedgley, J.T.R.Sharrock, M.J.Sheridan, A.Skinner (AS), H.A.Smith (HAS), P.Smith, D.Squires (DS), J.Stafford, P.Stafford, S.Thompson, J.Tomlin, J.Ullyet (JU), L.Wagstaff (LW), S.Wallace, A.Whitney, The Wildlife Trust for Bedfordshire, Cambridgeshire, and Northamptonshire, N.D.Willits (NDW), Woburn Safari Park, I.P.Woiwod (IPW), C.Woods, E.Wright, R.Wright, F.Wynde (FW), R.Wynde (RW), A.Yates, T.Yates, S.Young and ZSL Whipsnade.

References

- Agassiz, D.J.L., Beavan, S.D. & Heckford, R.J. 2013 *Checklist of the Lepidoptera of the British Isles*. Royal Entomological Society.
- Arnold, V.W., Baker, C.R.B., Manning, D.V. & Woiwod, I.P. 1997 *The Butterflies and Moths of Bedfordshire*. Bedfordshire Natural History Society.
- Banthorpe, A.M. 2010 Recording boundaries revisited. *Bedf. Nat.* **63**
- Bradley, J.D. 2000 *Checklist of Lepidoptera recorded from the British Isles*. Second Edition (revised).

Melissa and Andy Banthorpe are the Society's joint Recorders for Macro-moths, a position they have held in an honorary capacity since late 2006.