

Macro-moths 2011

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Introduction

This was a strange year weather-wise, as can be seen from the Meteorology report. April and May were much warmer than usual, meaning that many species were flying earlier than expected. Those that were the earliest ever recorded in the county appear below in Table 1. The run of poor summers continued, with June and July being cooler and wetter than average but despite this there were several good records. The autumn was like the spring i.e. warmer than usual with a number of species having extended flight periods, and some small second broods appearing in November and even December. This is summarised in Table 2.

The usual phenology of many species was therefore upset by these weather patterns, with some species that are double or triple-brooded having rather early first broods followed by larger than usual second broods. Most third broods suffered due to the poor mid-summer weather.

There were two new county records this year – Many-lined and Blossom Underwing. For further details see species list below.

During the year the Recorders ran lights in the field at the following places – Amptill Park, Bromham LNR, Chicksands Wood, Cooper's Hill, Dunstable STW, Flitwick Moor, The Lodge (RSPB Sandy), Maulden Wood, Marston Thrift, Sandhouse Lane NR and Stockgrove CP. We trapped several times in Chicksands and Maulden Wood, which contributed to a joint Butterfly Conservation/Forestry Commission project looking at Lepidoptera in a number of woods in Bedfordshire and Northamptonshire.

We are assisted in recording by a network of people regularly running light traps in their gardens. These are at Amptill (two sites), Bedford (two sites), Biggleswade (four sites), Bromham (two sites), Carlton, Clifton, Clophill, Dunstable, Eaton Bray, Eaton Ford (two sites), Haynes, Heath & Reach (two sites), Kempston, Langford, Leighton Buzzard, Lower Stondon (two sites), Luton (two sites), Potton (three sites), Renhold, Sandy, Southill, Stotfold, Studham, Turvey, Upper Caldecote, Wilden and Wrestlingworth. Some individuals also run portable traps in good habitat in their own locality which adds to the coverage. In addition, with the kind assistance of Ian Woiwod and Phil Gould, 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.

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 2011 but it should be noted that 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.

A list of the macro-moths of VC30 with their current status is on the Beds Moth Group website www.vc30moths.org.uk or available from the Recorders on request. This is amended at least once a year and often more frequently.

Table1 Earliest-ever dates for county

Species	2011 date	previous earliest date	Species	2011 date	previous earliest date
Common Swift	30 Apr	1 May 2010	Dwarf Pug	26 Apr	27 Apr 2010
Six-spot Burnet	2 June	13 June 2009	V-Pug	30 Mar	14 Apr 2009
Hornet Moth	31 May	4 June 2010	Sloe Pug	7 May	2 June 2008
Currant Clearwing	2 June	8 June 1992	Green Pug	5 Apr	8 Apr 2010
Red-belted Clearwing	4 June	7 June 2009	Double-striped Pug	25 Feb	8 Mar 2000
Red-tipped Clearwing	17 May	5 June 2010	Treble-bar	4 May	9 May 2007
Lackey	7 June	10 June 2004	Chimney Sweeper	14 May	30 May 2010
Scalloped Hook-tip	2 Apr	14 Apr 1997	Dingy Shell	6 May	7 June 2004
Oak Hook-tip	22 Apr	1 May 2005	Small White Wave	14 May	15 May 2010
Frosted Green	7 Apr	9 Apr 2004	Small Yellow Wave	6 May	6 June 1977
Common Emerald	17 May	12 June 2007	Seraphim	2 Apr	1 May 2009
Clay Triple-lines	21 May	24 May 1976	Scorched Carpet	6 Apr	12 Apr 2004
Small Blood-vein	2 June	9 June 2006	Scorched Wing	6 May	16 May 1936
Cream Wave	26 Apr	4 May 2009	August Thorn	5 July	22 July 1983
Least Carpet	14 June	17 June 2009	September Thorn	2 July	9 July 2003
Treble Brown Spot	6 May	23 May 2010	Scalloped Oak	6 May	1 June 1981
Flame Carpet	23 Apr	4 May 2008	Small Brindled Beauty	6 Feb	12 Feb 2004
Red Twin-spot Carpet	7 Apr	25 Apr 2009	Waved Umber	6 Apr	10 Apr 2007
Large Twin-spot Carpet	12 June	14 June 1976	Pale Oak Beauty	23 Apr	24 Apr 2007
Silver-ground Carpet	3 May	4 May 1978	Engrailed	2 Feb	23 Feb 1990
Chalk Carpet	2 July	5 July 1934	Brindled White-spot	6 May	19 May 2009
Royal Mantle	7 June	25 June 2010	Common Heath	8 Apr	21 Apr 2007
Common Carpet	22 Apr	27 Apr 2010	White-pinion Spotted	15 Apr	1 May 2009
Spinach	4 June	9 June 2003	Light Emerald	8 May	9 May 2007
Common Marbled Carpet	1 May	11 May 2007	Privet Hawk-moth	8 May	18 May 2010
Barred Yellow	29 May	11 June 1999	Pine Hawk-moth	10 May	21 May 2010
Juniper Carpet	10 July	10 Oct 2009	Lime Hawk-moth	6 Apr	14 April 2007
July Highflyer	6 May	12 June 1964	Eyed Hawk-moth	23 Apr	13 May 2009
Sandy Carpet	10 May	21 May 2003	Poplar Hawk-moth	22 Apr	30 Apr 2002
Foxglove Pug	20 Apr	23 Apr 2007	Elephant Hawk-moth	17 May	18 May 2005
Lime-speck Pug	25 Apr	9 May 2009	Buff-tip	1 May	13 May 2008
Freyer's Pug	10 May	15 May 2007	Sallow Kitten	7 Apr	18 Apr 2010
Currant Pug	15 Apr	21 Apr 2009	Lobster Moth	21 May	23 May 2007
Tawny-speckled Pug	4 May	27 May 2005	Pebble Prominent	2 Apr	14 Apr 2007
Bordered Pug	5 June	21 June 2010	Great Prominent	21 Apr	1 May 2009
Plain Pug	4 May	9 June 2010	Swallow Prominent	8 Apr	11 Apr 2007
Ochreous Pug	21 Apr	10 May 2008	Pale Prominent	8 Apr	16 Apr 2004
Oak-tree Pug	9 Apr	14 Apr 1946	Lunar Marbled Brown	7 Apr	11 Apr 2004
			Vapourer	15 June	27 June 2009
			White Satin	22 June	24 June 1984

Species	2011 date	previous earliest date	Species	2011 date	previous earliest date
Round-winged Muslin	26 June	28 June 2003	Sycamore	6 May	15 May 2005
Orange Footman	24 Apr	1 May 2009	Marbled Beauty	14 June	17 June 2002
Scarlet Tiger	26 June	2 July 2001	Copper Underwing	26 June	10 July 1995
Short-cloaked Moth	9 June	12 June 1982	Bird's Wing	19 May	20 May 2010
Heart and Dart	11 May	20 May 2007	Brown Rustic	7 May	17 May 2007
Flame	6 May	7 May 2006	Lesser-spotted Pinion	26 June	6 July 2006
Large Yellow Underwing	9 May	15 May 1977	Dun-bar	2 June	24 June 2007
Broad-bordered Yellow Underwing	18 June	24 June 2009	Lunar-spotted Pinion	28 June	1 July 2009
True Lover's Knot	15 May	24 May 2009	Light Arches	22 May	4 June 2005
Triple-spotted Clay	15 June	23 June 1970	Reddish Light Arches	14 June	16 June 1973
Double Square-spot	25 May	1 June 2005	Clouded Bordered	6 May	14 May 1990
Shears	5 May	9 May 2009	Brindle		
Grey Arches	2 June	9 June 2003	Rustic Shoulder-knot	20 Apr	29 Apr 2004
Light Brocade	28 Apr	1 May 2010	Rufous Minor	21 May	30 May 1987
Bright-line Brown-eye	9 Apr	10 Apr 2005	Tawny-marbled Minor	4 May	6 May 2007
Broad-barred White	27 May	31 May 1978	Mere Wainscot	22 June	25 June 2002
Small Ranunculus	15 June	25 June 2010	Large Wainscot	28 July	1 Aug 2008
Campion	18 Apr	5 May 2010	Treble-lines	25 Apr	1 May 2010
Lychnis	25 Apr	29 Apr 2007	Vine's Rustic	29 Apr	1 May 2007
Lead-coloured Drab	24 Feb	14 Mar 2009	Marbled White-spot	6 May	25 May 2003
Common Quaker	9 Feb	12 Feb 2004	Cream-bordered	23 Apr	29 May 2008
Hebrew Character	27 Dec	7 Jan 2001	Green-pea		
Obscure Wainscot	29 May	13 June 2009	Scarce Silver-lines	15 June	26 June 2010
Shoulder-striped Wainscot	22 May	23 May 2007	Green Silver-lines	1 May	5 May 1946
Shark	7 May	24 May 2008	Burnished Brass	9 May	12 May 2007
Toadflax Brocade	6 May	13 May 2010	Beautiful Golden Y	21 May	22 May 1998
Tawny Pinion	24 Mar	13 Apr 2010	Mother Shipton	30 Apr	7 May 2005
Lunar Underwing	9 Aug	16 Aug 2008	Beautiful Hook-tip	25 May	3 June 2009
Orange Sallow	29 Aug	1 Sept 2006	Straw Dot	8 May	19 May 2004
Poplar Grey	23 Apr	30 Apr 2009	Snout	7 May	18 May 2010
			Fan-foot	29 May	10 June 2007
			Small Fan-foot	19 May	23 May 2010

Table 2 Latest-ever dates for county

Species	2011 date	previous latest date	Species	2011 date	previous latest date
Least Carpet	29 Sept	26 Sept 2006	Lilac Beauty	22 Sept	17 Sept 2006
Treble Brown Spot	4 Oct	30 Sept 2009	Swallow-tailed Moth	13 Oct	21 Sept 2003
Red Twin-spot Carpet	13 Sept	23 Aug 2010	Waved Umber	14 Aug	24 July 2008
Pine Carpet	13 Oct	9 Oct 2009	Satin Beauty	3 Aug	14 July 1989
V-Pug	25 Sept	30 Aug 2008	Clouded Silver	2 Oct	11 Sept 2006
Lesser Treble-bar	24 Sept	21 Sept 1995	Light Emerald	7 Oct	3 Oct 2010
Small White Wave	28 July	11 July 2010	Black Arches	29 Sept	8 Sept 2007
Latticed Heath	15 Sept	10 Sept 2004	Orange Footman	11 July	23 June 2010

Species	2011 date	previous latest date	Species	2011 date	previous latest date
Ruby Tiger	2 Oct	21 Sept 2010	Large Nutmeg	30 Nov	18 Oct 2006
Heart and Dart	9 Sept	7 Sept 2008	Ear Moth	20 Aug	7 Aug 2009
Shuttle-shaped Dart	23 Nov	5 Nov 2010	Webb's Wainscot	12 Oct	28 Sept 2008
Flame Shoulder	30 Oct	30 Sept 1983	Large Wainscot	17 Nov	12 Nov 2010
Lesser Yellow	18 Nov	2 Nov 2010	Uncertain	22 Nov	18 Oct 2007
Underwing			Vine's Rustic	12 Nov	13 Oct 1998
Six-striped Rustic	3 Oct	27 Sept 2010	Cream-bordered	3 Sept	9 Aug 1992
Dusky Lemon Sallow	21 Oct	17 Oct 2009	Green-pea		
Old Lady	28 Sept	27 Sept 2010	Spectacle	30 Sept	22 Sept 2008
Dark Arches	22 Dec	16 Nov 2004	Pinion-streaked Snout	23 Sept	18 Sept 2009

Zygaenidae

169 Six-spot Burnet *Zygaena filipendulae* (L.)

Of note about 100 were seen at Stratton Park Balancing Lake, near Biggleswade on 2nd June (AMB).

171 Narrow-bordered Five-spot Burnet *Zygaena lonicerae* (L.)

Amongst 'hundreds' of the normal form in the grassy areas around the roundabout by Whipsnade Heath on 19th and 20th June, was one of the rare yellow form *citrina* (DGi).

Sesiidae

The following clearwings were recorded this year: Raspberry, Hornet Moth, Lunar Hornet Moth (emergence holes and larval feeding signs only), Currant, Yellow-legged, Orange-tailed, Red-belted, Red-tipped and Six-belted. Sightings of note are listed below. A record of Large Red-belted was not accepted – see below.

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

A larva was found under the bark of a *Malus* sp in Bedford on 23rd Feb and bred through (BHe).

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

The earliest record of this species in the county was of one seen and photographed at Harrold-Odell Country Park on 17th May (MN, det. MGB). The previous earliest record was of one seen at Great Barford on 5th June 2010.

381 Large Red-belted Clearwing *Synanthedon culiciformis* (L.) [Nb]

There was a report of at least four to lures on 4th June at The Lodge (RSPB Sandy) (NP & SP). Unfortunately no supporting evidence was provided – specimen or photograph – so the record cannot be verified. Various people including the Recorders tried the relevant lure at the same area of the site where they were reported during the following week without success.

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

A larva was found inside Bird's-foot Trefoil growing in a Biggleswade garden on 30th May after the finder dug up a sickly-looking plant (RCR). There was only one other record of the species, a female egg-laying on Bird's-foot Trefoil at The Lodge (RSPB Sandy) on 9th Aug (MW).

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

Only larval webs were reported as follows: 4th May at Little Staughton (1) and Thurleigh (2) (DVM); 8th May Thurleigh (13) (AMB & MGB); and 19th May Yelnow New Wood (1) (HAS). The Recorders also received records of a further 15 larval webs found along a hedgerow c400m WNW of Scald End Farm on their land in May (TC) (these are most likely additional to the other Thurleigh ones reported in early May, which were along the roadside), and a single web was photographed near to Chelveston Airfield (at the time of writing no further details were available).

Saturniidae**1643 Emperor Moth** *Saturnia pavonia* (L.)

Of note at least 15 males were attracted to two assembled females at around 6pm on 7th Apr at Shefford (AMH).

Geometridae**1661 Orange Underwing** *Archiearis parthenias* (L.)

The species had a good year and were reported at Cooper's Hill, The Lodge (RSPB Sandy) and Cox Hill, Sandy. There was also one attracted to an actinic light trap in Luton (AG, conf. AMB & MGB), which was somewhat unusual as it is primarily a day-flier.

1662 Light Orange Underwing *Archiearis notha* (Hb.) [Nb]

Of 16 seen in Marston Thrift on 25th Mar, five were photographed and three shown to be Light Orange rather than Orange Underwing (KB, conf. AMB).

1662x Orange/Light Orange Underwing *Archiearis* sp.

If the critical identification features cannot be seen to separate the two species, records will be assigned to the aggregate group. Undetermined species were seen in Potton Wood and The Lodge (RSPB Sandy).

1681 Clay Triple-lines *Cyclophora linearia* (Hb.)

A singleton on 21st May at Maulden Wood (AMB & MGB) was the only record this year.

1719 Oblique Carpet *Orthonama vittata* (Borkh.)

A female on 15th Aug at Leighton Buzzard (AW) was, at present, the ninth county record and the first since 1973.

1720 Gem *Orthonama obstipata* (Fabr.) [Migrant]

There were at least three, and possible four Gems this year – a female on 13th June Leighton Buzzard (AW), a female on 8th Nov Luton (AG), and a male on 8th and 12th Nov (possibly the same or a second individual) Biggleswade (LB).

1731 Chalk Carpet *Scotopteryx bipunctaria* (Prout) [Nb]

This was reported yet again from Heath & Reach. It was trapped on four occasions from 2nd to 30th July. It does seem most likely that the species is breeding in the area. Its foodplant does occur in the sandpits, and the upper levels of Bryant's Lane Quarry contain chalk in the glacial drift.

1735 Ruddy Carpet *Catarhoe rubidata* ([D. & S.]) [Nb]

Singletons were recorded at Upper Caldecote 7th June (MB), Cockayne Hatley RIS trap 15th June (IPW), Bedford 27th June (AY & TY), Biggleswade 1st July (LB) and Turvey Abbey 4th July (BrJM).

1736 Royal Mantle *Catarhoe cuculata* (Hufn.)

One was disturbed from rough grassland on Galley Hill, Luton on 7th June (AG).

1739 Wood Carpet *Epirrhoe rivata* (Hb.)

A singleton on 15th June was in the Cockayne Hatley RIS trap (IPW).

1741 Many-lined *Costaconvexa polygrammata* (Borkh) [Migrant]

This was the complete surprise of the year with one on 7th May 2011 at Eaton Ford (AAL, conf. by BD, AMB & MGB). This was a new county record for this rare migrant, which generally turns up on or near the coast.

1749 Dark Spinach *Pelurga comitata* (L.)

There was a single record this year of one on 20th Aug at Potton (JD).

1757 Spinach *Eulithis mellinata* (Fabr.)

Singletons were recorded at Potton on 4th June (JD) and Eaton Ford on 28th June (RIB).

1767 Pine Carpet *Thera firmata* (Hb.)

Just one was recorded for the year, at Leighton Buzzard on 13th Oct (AW), which was a new site for it in the county.

1771 Juniper Carpet *Thera juniperata* (L.)

One on 10th July in Luton was exceptionally early (AG, conf. by genet AMB). The species normally flies in Oct/Nov. All the other 17 records from the year were between the 12th and 30th Oct.

1777 July Highflyer *Hydriomena furcata* (Thunb.)

The first of the year – 30 at Flitwick Moor on 6th May (AMB & MGB) – were 37 days earlier than the previous earliest date of 12th June 1964. There was one on the 7th May at Lower Stondon (AMB & MGB), then none until 13th June when one was recorded at Great Hayes Wood (HAS). It should be noted that the beginning of May was very warm and Flitwick Moor, which from experience is normally damp and cold, was surprisingly dry underfoot and very warm for the time of year.

1788 Scarce Tissue *Rheumaptera cervinalis* (Scop.)

A singleton to light at Bromham on 15th Apr (PA, conf. AMB & MGB) was the only one of the species seen this year.

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

One to MV at Marston Thrift on 25th June was the only record in 2011 (AMB & MGB).

1804 Barred Rivulet *Perizoma bifaciata* (Haw.)

This species had not been recorded since 2008, so it was good to have two records this year, both were singletons from Leighton Buzzard 26th July (AW) and Biggleswade 1st Aug (LB).

1809 Twin-spot Carpet *Perizoma didymata* (L.)

There was just one record this year, on 11th July at Bromham (MaH & MiH), versus six records in 2010.

1823 Netted Pug *Eupithecia venosata venosata* (Fabr.) [Nb]

Again only a single record was received of this uncommon moth this year, which was in the Cockayne Hatley RIS trap on 25th May (IPW).

1826 Triple-spotted Pug *Eupithecia trisignaria* H.-S.

This species was recorded again in Maulden Wood this year in July and Aug (AMB & MGB), the site where it was first found in the county in 2003.

1841 Yarrow Pug *Eupithecia millefoliata* Rössler

There were only larval records this year of this scarce pug with two at Sandy Smith NR on 24th Sept and one at Great Barford on 14th Oct (AMB & MGB).

1864 Streak *Chesias legatella* ([D. & S.])

It was nice to get three records of this Broom feeder in 2011. There was one at The Lodge, (RSPB Sandy) on 14th Oct (MW), four at Clophill (two in an actinic trap and two to a porch light) on 30th Oct (RC) and six at Maulden Wood on 31st Oct (AMB & MGB). The latter record was in a 15w Actinic trap deliberately placed amongst the foodplant and was the first record at the site since 1985.

1868 Lesser Treble-bar *Aplocera efformata* (Guen)

A singleton at Turvey Abbey on 24th Sept (BrJM, conf AMB & MGB), was the sixth county record and the first since one in 1994 in the Eaton Bray II RIS trap.

1894 Latticed Heath *Chiasmia clathrata clathrata* (L.)

The best year for records of this species for some time, with a total of 16 records from eight sites. These were split into two date ranges with six records from 19th July to 2nd Aug and the other ten from 31st Aug to 15th Sept.

1910 Lilac Beauty *Apeira syringaria* (L.)

There were three records this year from Clophill on 15th June (1) (RC), Marston Thrift on 25th June (3f) (AMB & MGB) and Cockayne Hatley on 22nd Sept (1) (IPW).

1912 August Thorn *Ennomos quercinaria* (Hufn.)

A singleton to light at Luton on 5th July (AG, conf. AMB & MGB) was the first of these for a few years.

1915 September Thorn *Ennomos erosaria* ([D. & S.])

There were two records this year: one at Heath & Reach on 2nd July (MHo, conf. from photo AMB & MGB) and one from Clifton on 19th Aug (ARO, det. AMB & MGB).

1940 Satin Beauty *Deileptenia ribeata* (Cl.)

A singleton to MV light at Maulden Wood on 3rd Aug (AMB & MGB) was a surprise. It was a new addition to the wood, the sixth county record and the first since one in 2007.

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

Strangely, there are not that many recent records for this species which seems to have declined alarmingly in the county since the late 1980s. Its foodplant, hawthorn, is common so that cannot be a factor. Records this year were of singletons at Chicksands wood on 15th Apr (AMB & MGB) and Studham on 6th May (CRBB), and three at Maulden Wood on 21st May (AMB & MGB).

Sphingidae

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

There were 44 records this year, the first was of one at Pavenham on 26th May (RB) and the last was of one at Wrest Park on 16th Oct (JP). The maximum number seen was up to seven nectaring on various plants at the Black Horse pub in Ireland in the evening of 1st July (AMH).

Notodontidae

2020 Figure of Eight *Diloba caeruleocephala* (L.)

This species was caught regularly in the 1970s, '80s and early '90s but in recent times has been very sporadic in the county and was thought possibly to have gone from the county having last been caught in Oct 2006 in Studham. It was therefore particularly pleasing to receive three records of it in 2011. These were from Home Wood, Northill on 29th Oct (2) (LB & MB); Heath Wood, Whipsnade on 2nd Oct (1) (CRBB); and Upper Caldecote (1) on 7th Oct (MB).

Arctiidae

2035 Round-winged Muslin *Thumatha senex* (Hb.)

After 2010's bumper count of six records it was back to a more usual two this year – at Eaton Ford on 26th June (AAL) and at Bedford on 6th July (DR).

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

For the second consecutive year this species was netted at Yelnow New Wood, with three on 14th June (HAS & DVM).

2057 Garden Tiger *Arctia caja* (L.)

The first record following two blank years was one at Pavenham on the early date of 19th May (RB).

2067 Jersey Tiger *Euplagia quadripunctaria* (Poda)

The second county record was trapped at Bromham on 5th Aug (MaH & MiH). This follows on from the first, which was trapped at Biggleswade in 2009.

2068 Scarlet Tiger *Callimorpha dominula* (L.)

It was excellent to again have this species recorded in the county, and this year at two sites, with five at Marston Moretaine (the same garden site as in 2010) on 26th June (CHa & MHa) and a singleton at Heath & Reach on 27th June (MHo).

Noctuidae

2082 Garden Dart *Euxoa nigricans* (L.)

The first confirmed records of this species since 2008 were as follows: Luton on 3rd and 20th July (AG, conf. AMB & MGB), Eaton Ford on 20th July (AAL, conf. BD) and Biggleswade on 15th Sept (LB, gendet AMB).

2087 Turnip Moth *Agrotis segetum* ([D. & S.])

This species was especially abundant in 2011, even more so than 2010 when it was also very prevalent. Using a very simple mathematical comparison of numbers caught divided by the total numbers of all moths caught in the year, 1.91% were of this species. This compares with 1.84% in 2010, 0.3% in 2009, 0.29% in 2008 and 0.35% in 2007. It is difficult to compare directly with too many other years as until recently full counts were often not submitted by recorders.

2123 Small Square-spot *Diarsia rubi* (Vieweg)

There were only four records of this species in 2011, the lowest in any year from 1969 onwards (the first year for which there is enough data). The table below shows the number of records of this species per year from 2000 onwards. The counts in 2008 and 2009 were very high followed by a crash in 2010 and 2011. The species seems to have had occasional boom years but has never been this low.

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
26	70	62	24	14	19	38	47	137	168	32	4

2127 Triple-spotted Clay *Xestia ditrapezium* ([D. & S.])

The same garden trap at Upper Caldecote produced all three records this year, with singletons on 15th and 25th June and 7th July (MB, conf. by AMB & MGB). This species can be difficult to separate from the far more common Double Square-spot *Xestia triangulum*.

2140 White-marked *Cerastis leucographa* ([D. & S.])

There had been a report of one from 19th April 1998 at Turvey Abbey (BrJM), which appears not to have been accepted by a past Recorder, and had remained unverified. The Turvey record has now been re-evaluated and accepted as the first county record. Contemporaneous notes and a drawing from Br. Mayhead showed the salient features, and distribution maps from Northamptonshire show the species was present not far from the VC30 boundary in north Bedfordshire at that time.

One to MV light in Chicksands Wood on 22nd March 2011 and then a second individual in the same place on 15th April (AMB & MGB) represent the second and third records for the county after a gap of nearly 13 years.

2142 Beautiful Yellow Underwing *Anarta myrtilli* (L.)

Following on from the find of this species at The Lodge (RSPB Sandy) in 2010 it was again recorded from the same site with five seen on the Old Heath on 25th July (WG).

2158 Pale-shouldered Brocade *Lacanobia thalassina* (Hufn.)

For the third year running this species turned up in a wood in the NW of the county, with a single record from Halsey Wood, Sharnbrook, on 9th May (HAS, conf. by AMB & MGB).

2163 Broom Moth *Melanchnra pisi* (L.)

Since the mid-1980s this species seems to have become scarcer in the county with only nine records since 2000. Two larvae, found at Sandhouse Lane NR on 20th Aug (AMB & MGB) were the only record of this species in 2011.

2171 Marbled Coronet *Hadena confusa* (Hufn.)

It was good to have three records of this locally scarce species in the year – at Luton on 14th June (AG) and Eaton Ford on 22nd and 25th June (AAL).

2176 Antler Moth *Cerapteryx graminis* (L.)

This grassland species was only seen twice in the year after a blank year in 2010. One was found in Ampthill Park on 16th Aug (JP, det. AMB & MGB) and another was in the RIS trap at Cockayne Hatley on 12th Sept (IPW).

2178 Feathered Gothic *Tholera decimalis* (Poda)

This was a very good year for the species with 13 records spanning dates from 26th Aug to 10th Sept. Of note, ten were recorded at Turvey Abbey on 1st Sept (BrJM) and 11 at Turvey disused railway track on 2nd Sept (HAS).

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

The first county record of this species came to light at Bromham on 28th March (PA, conf. AMB & MGB). A second individual was later trapped at Turvey Abbey on 23rd April (BrJM, conf. AMB & MGB).

2204 Obscure Wainscot *Mythimna obsoleta* (Hb.)

Another singleton turned up at Dunstable STW this year on 29th May (AW) and follows the first site record there in 2010.

2211 Wormwood *Cucullia absinthii* (L.)

A singleton of this scarce species came to MV light at Southill on 3rd Aug (PD, conf. AMB & MGB).

2223 Toadflax Brocade *Calophasia lunula* (Hufn.)

Following on from the first county records in 2010, there were 11 records in 2011 but from only two sites. Ten of these records were from Biggleswade on 6th, 7th, 9th, 12th 13th and 16th May, 16th July, 2nd (2), 3rd (2) and 5th Aug (LB). The only other record was from Turvey Abbey on 28th June (BrJM).

2225 Minor Shoulder-knot *Brachyloimia viminalis* (Fabr.)

There were just two records this year – five at Potton Wood on 3rd July (IPW) and one at Biggleswade on 14th July (SCB).

2235 Tawny Pinion *Lithophane semibrunnea* (Haw.)

This species has always been scarce in the county. One at Dunstable on 24th Mar (LC) was the first in the 10km square TL02 since 1993.

2260 Dotted Chestnut *Conistra rubiginea* ([D. & S.])

With only three previous records in 2007, 2008 and 2010 it was good to have five records this year. These were from Turvey disused railway track on 25th Mar (HAS), Clophill on 25th Mar (RC), in the Cockayne Hatley RIS trap on 1st and 6th Apr (IPW) and at Leighton buzzard on 12th Oct (AW).

2265 Flounced Chestnut *Agrochola helvola* (L.)

One at Potton on 2nd Oct (WG) was the first in the county since one was recorded at The Lodge (RSPB Sandy) in 2007.

2276 Pale Lemon Sallow *Xanthia ocellaris* (Borkh.)

One trapped at Ampthill on 24th Sept (DTW, conf. AMB & MGB) was only the tenth county record of this species.

2283 Dark Dagger *Acronicta tridens* ([D. & S.])

A singleton at The Lodge (RSPB Sandy) on 14th July (DB) was the only record this year. There are 39 records of this in the database compared to 333 for Grey Dagger, plus there are 907 records of the *tridens/psi* aggregate.

2292 Tree-lichen Beauty *Cryphia algae* (Fabr.)

One to light at Upper Caldecote on 30th Aug (MB) was surprisingly only the second county record. The first was recorded at Barton Hills in 2007.

2305 Small Angle Shades *Euplexia lucipara* (L.)

There was only one record of this rather attractive moth this year at Clophill on 4th July (RC).

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

There were two records this year. One was recorded again at Upper Caldecote on 2nd Aug (MB) - one was trapped there in Aug 2009 - and one was recorded at Biggleswade on 3rd Aug (LB), a new site for this species.

2321 Dark Arches *Apamea monoglypha* (Hufn.)

There were a surprising number of late records of this species in 2011, probably indicative of a small second brood. The dates and locations were as follows: 29th Sept Eaton Ford (AAL); 5th Oct Biggleswade site 1 (LB); 29th Oct Biggleswade site 1 (LB) and Eaton Ford (AAL); 30th Oct Biggleswade site 2 (PM); 31st Oct Biggleswade site 1 (LB) and Potton (WG); 12th Nov Biggleswade site 1 (LB); 14th Nov Biggleswade site 1 (LB); 17th Nov Clifton (ARO), Luton (AG) and Upper Caldecote (MB); 22nd Nov Biggleswade site 1 (LB); 23rd Nov Biggleswade site 1 (LB); 24th Nov Biggleswade site 1 (LB); and finally two on 22nd Dec at Bromham (PA).

Previous to 2011 there had only been five October records and the latest had been at Clophill on 16th Nov 2004.

2331 Small Clouded Brindle *Apamea unanimitis* (Hb.)

Following on from 15 records of this species in 2009 and four in 2010 there were only two records in 2011 - at Studham on 25th May (CRBB) and Leighton Buzzard on 2nd June (AW).

2333 Large Nutmeg *Apamea anceps* ([D. & S.])

There were a number of very late records this year, indicative of a partial second generation. These were from 30th Oct and 11th Nov Lower Stondon (AMB & MGB); 3rd and 30th Nov Biggleswade (LB); 9th Nov Eaton Ford (AAL); and 9th, 12th, 18th and 22nd Nov Upper Caldecote (MB).

Previous to 2011 there had only been two records after 1st Sept and these were in the RIS trap at Cockanye Hatley on 15th Sept 1987 and at Lower Stondon on 18th Oct 2006 (AMB & MGB).

2342 Rosy Minor *Mesoligia literosa* (Haw.)

Just one was recorded this year on 3rd Aug at Maulden Wood, and it was new to the site too (AMB & MGB).

2368 Crescent *Celaena leucostigma* (Hb.)

The eighth and ninth county records came to light at Eaton Ford on 3rd and 5th Aug (RIB). These are the first since 2008, also in Eaton Ford.

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

One to light at Upper Caldecote on 24th Aug (MB) was the first of this uncommon migrant to be recorded for a couple years.

2397 Small Yellow Underwing *Panemeria tenebrata* (Scop.)

Two recorded at The Lodge (RSPB Sandy) during the day on 10th May (WG) were the only ones seen in the year in the county.

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

Again there was just one record of a singleton this year on 4th Nov at Biggleswade (LB), the same site as in 2010.

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

A welcome three records for this migrant this year: 3rd July Biggleswade (SCB), 11th July Lower Stondon (AMB & MGB) and 10th Aug Upper Caldecote (MB). These are the first since 2006.

2410 Cream-bordered Green Pea *Earias clorana* (L.)

This species had a good year with seven reported, including one at Upper Stondon on 23rd April (JE, conf. AMB & MGB). This is the earliest date for it in the county, the next earliest date being the 29th May 2008. One trapped at Biggleswade on 3rd Sept (LB) was also the latest it has ever been recorded in the county too.

2437 Golden Plusia *Polychrysis moneta* (Fabr.)

There were two records of this moth in 2011, both singletons and both at the same site in Dunstable, on 22nd June and 12th July (LC). In recent years this is the only site Golden Plusia has been recorded at. It is a species that was definitely more common 20 years ago.

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

The first record of the year was one on 11th Apr at The Lodge (RSPB Sandy) (DOM) and the last was of one on 30th Nov at Biggleswade (LB). The maximum count was of four on 18th Sept at Bedford (DR).

2443 Plain Golden Y *Autographa jota* (L.)

A singleton on 17th June at Dunstable was the only record this year (LC).

[2465 Four-spotted *Tyta luctuosa* ([D. & S.]) [Na]

Yet again, there were no records of this species this year.]

2484 Pinion-streaked Snout *Schrankia costaeirigalis* (Steph.)

There was a single record of this on 23rd Sept at Upper Caldecote (MB).

VC20 records

Sphingidae

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

There was one at Dunstable on 18th Sept (WP).

VC24 records

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

One was reported at Linslade on 14th June and 5th July (MJS).

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.

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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.