

Leicestershire & Rutland (VC55) Moth Review of 2021

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Introduction

This is a review of some of the more interesting and noteworthy moths recorded in VC55 in 2021. It is not solely restricted to the rarest moth species recorded in the year, otherwise the same species would feature year after year. However, we have endeavoured to include all species recorded from VC55 for the first time and provide an update on some of the species whose status and distribution is rapidly changing (especially new colonisers).

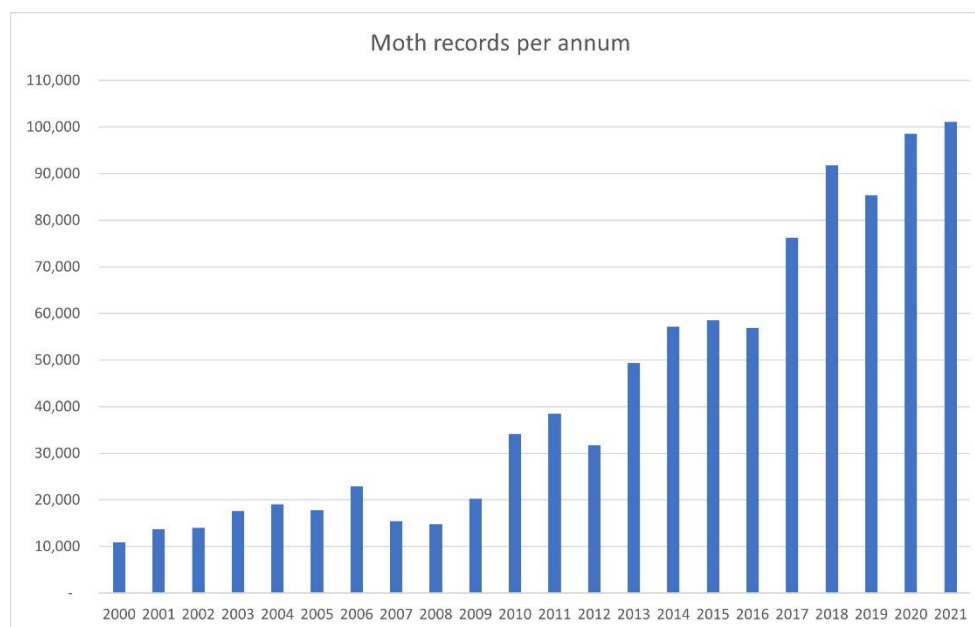
This report would not be possible without the excellent work of the many recorders in the county who submit moth records, be they hard-core moth trappers or casual recorders who simply record the moths that they see on their travels (and these records are often more useful than they might think!). Here are a few statistics that reflect moth recording activity in 2021, with 2020 figures also shown for comparison (N.B. the 2020 figures are different from those given in last year's report, as they now include records submitted after that report was prepared):

	2021	2020
Number of macromoth records:	71,276	71,055
Number of micromoth records:	29,836	27,457
Total number of moth records:	101,112	98,512
Number of macromoth species recorded:	467	463
Number of micromoth species recorded:	637	592
Total number of moth species recorded:	1,107	1,055
Total number of moths recorded:	327,487	287,292
Total number of macromoths recorded:	240,036	220,072
Number of people submitting moth records (see note 1 below):	261	290
Number of people operating a garden moth trap (see note 2 below):	88	85
Tetrads from which moths were recorded:	400	393

Note 1 This includes moth records submitted to NatureSpot and a number of national online recording schemes.

2 This is based on records submitted. Some recorders may be late submitting and there are also quite a few moth trappers who have never yet submitted records (it's not too late though!).

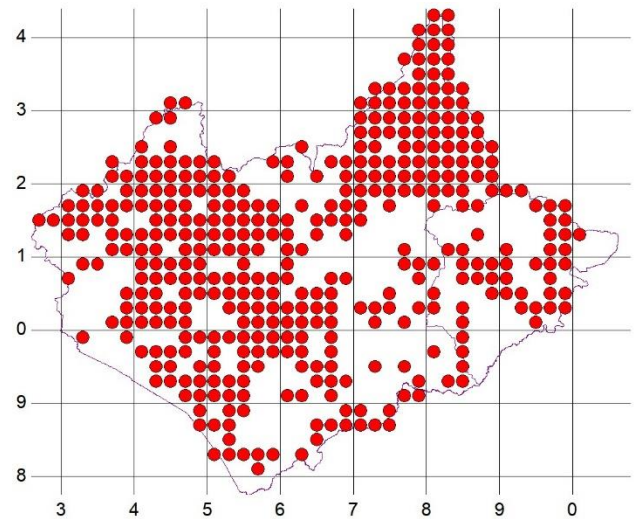
There aren't many significant differences between 2020 and 2021, but it is noteworthy that in 2021, for the first time, the annual number of records exceeded 100,000. The chart below shows the steady increase in the annual number of moth records since 2000.



The map right shows the tetrad distribution of 2021 moth records.

The table below lists the 10 species of macromoth most frequently recorded in 2021. Were micromoths to be included, Light Brown Apple Moth would take 3rd place with 1,603 records. Totals for 2020 are also included for comparison and the species from that list that failed to make the top 10 in 2021 was Silver Y (10th in 2020 with 1,066 records but only 23rd with 728 records in 2021).

The list of top ranking macromoths appears not to vary that much year-on-year. There are probably more significant changes lower down the ranking lists, but these are unfortunately more difficult to analyse.



ABH Taxon	Vernacular	2021		2020	
		Records	Rank	Records	Rank
73.342 <i>Noctua pronuba</i>	Large Yellow Underwing	1,960	1	2,191	1
70.226 <i>Opisthagraptis luteolata</i>	Brimstone Moth	1,867	2	1,616	3
70.258 <i>Peribatodes rhomboidaria</i>	Willow Beauty	1,442	3	1,329	5
70.016 <i>Idaea aversata</i>	Riband Wave	1,285	4	1,200	8
73.359 <i>Xestia c-nigrum</i>	Setaceous Hebrew Character	1,250	5	1,258	7
73.317 <i>Agrotis exclamationis</i>	Heart & Dart	1,238	6	1,751	2
73.162 <i>Apamea monoglypha</i>	Dark Arches	1,110	7	1,281	6
73.325 <i>Agrotis puta</i>	Shuttle-shaped Dart	1,094	8	1,466	4
73.345 <i>Noctua comes</i>	Lesser Yellow Underwing	1,091	9	1,129	9
70.049 <i>Xanthorhoe fluctuata</i>	Garden Carpet	1,047	10	715	24

With the addition of 2021 records, the VC55 database now holds: 1,084,056 moth records (1,146,654 Lepidoptera records).

All recorders are thanked for the records. It is not only rare/noteworthy records that are important; ALL records are valuable as they help to understand the status and distribution of species in VC55, i.e., enabling changes in numbers of even the commonest species to be analysed, improving the accuracy of phenology charts and the representativeness of distribution maps.

We would like to welcome all of the local moth recorders who started moth trapping or submitting records in 2021 and have kindly submitted records (either directly or via NatureSpot) for the year, including: Philip Adams (Shearsby), Keith Ashford (Bottesford), Tony Cook (Slawston), Stephen Gray (Wymeswold), Mike Higgott (Anstey), Neil Hughes (Melton Mowbray), Lee Kimpton (Rearsby), Stewart McDonald (Dunton Bassett), Robert Meeks (Wigston Harcourt), Jonathan Morton (Melton Mowbray), Stephen North (Melton Mowbray), Christine Pochin (Stonegate), Jeremy Robson (Mountsorrel), Kate Strong (Peckleton), Chris Tivey (Syston), Grant Weselby (Houghton-on-the-Hill). Apologies to anyone inadvertently omitted.

Thanks must also go to everyone retaining specimens for identification/confirmation/dissection and/or for photography, and to all of those involved in assisting with the identification of photographs and specimens. Photographs can, in some circumstances, act as a permanent voucher record, as well as being a useful means of illustrating reports such as this. All the photographs in this report are photos of 2021 moths and were, unless otherwise stated, taken either by the recorder or the CMR team.

Noteworthy Species and Records

The list is presented in Agassiz, Beavan & Heckford (2013) (ABH) checklist order, with Bradley numbers in brackets.

1.003 (3) *Micropterix aureatella*

This moth was recorded from Charnwood Lodge NR on 03/06/2021 by Lindsy Donovan and photographed by Kate Nightingale (below left). It was also recorded from there by Keith Tailby on 13/06/2021. These represent only the second and third records of this species from VC55.



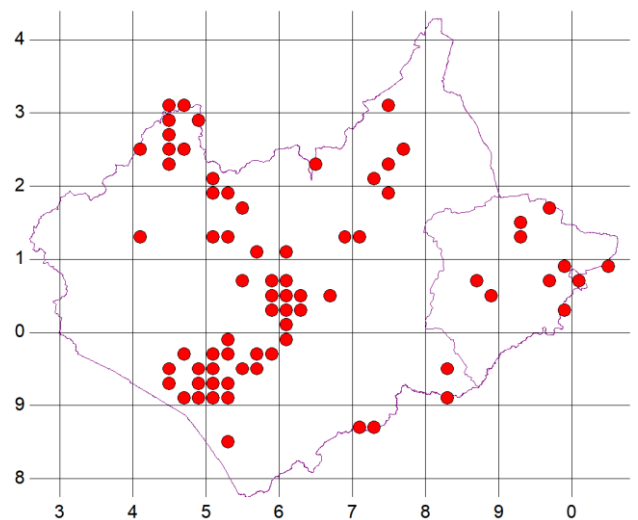
2.002 (7) *Paracrania chrysolepidella*

First record for VC55

The distinctive mines of this species (above right) were recorded on Hazel in Burbage Wood on 25/05/2021 and 01/06/2021 by Graham Calow and from Burbage Common on 03/06/2021 by Sue Timms. These are the first VC55 records of this species.

4.012 (102) *Stigmella aceris*

There were 47 records of this Field Maple (& Norway Maple) leafminer in 2021, bringing the total number of records of this species from VC55 to 125. This species was only recorded for the first time in 2018, so it is clearly now well-established in VC55. The distribution map (right) seems a little unusual, but this is probably due to recording bias. For those new to leafmine recording, this is a relatively easy species to record on Field Maple, as it is the only species that produces long gallery mines.



4.036 (72) *Stigmella myrtillella*

Having Bilberry as a larval foodplant, this leafminer would only be expected in the Charnwood area, which was where the two previous records were made: a leafmine record from Charnwood Lodge NR in 2003 and an adult moth record from Browns Hay in 2018. A third VC55 can also now be added, also from Charnwood Lodge NR, where Sue Timms recorded a mine on Bilberry.

4.024 (104) *Stigmella magdalenae*

There were two records of leafmines on Rowan from Sue Timms, at Bardon Hill on 26/07/2021 and Cademan Wood on 02/08/2021. All three of the previous records were made by notable visiting Lepidopterists in 1974, 2007 and 2020. This species is more prevalent north and west of the Humber – Severn line, so searching Rowans in the Charnwood area is perhaps the best chance of further records.

6.002 (159a) *Antispila petryi*

First record for VC55

Pete Leonard recorded this species as a leafmine on Dogwood on 10/11/2021 at Strift's Plantation, in Garthorpe parish. This is the first record of this species from VC55. Identification was confirmed by Rob Edmunds.

6.005 (157) *Heliozela hammoniella*

Sue Timms recorded this Birch leafminer from Bagworth Heath on 23/08/2021 and from Newfields Colliery on 26/08/2021. There are only three previous records of this species from VC55.

7.002 (147) *Nemophora metallica*

There were three records of this dayflying species that is associated with Field Scabious within the space of five days in 2021: the first record came from Andrew Dejardin's Empingham garden on 19/07/2021 (below left), the second record was from Matthew Berriman during a visit to Bloody Oaks Quarry NR on 22/07/2021 and the third was a specifically targeted visit by Adrian Russell to King Lud's Entrenchments, on 23/07/2021. It had been recorded from this site by Keith Tailby in 2018, though at that time was classed as an unconfirmed record, as this species had not previously been recorded from VC55.



12.019 (219) *Nemapogon ruricolella*

One netted in flight at Dunton Gorse by Mark Skevington on 08/07/2021 (above right) was confirmed by gen det and is only the third confirmed record.

15.057 (336) *Phyllonorycter dubitella*

First record for VC55

A leafmine collected from Goat Willow at Burbage Common on 05/11/2021 by Graham Calow (below left) was successfully reared through and confirmed as this species, the first record for VC55. Subsequently, Graham also recorded this species from Sapcote on 13/12/2021 and again reared out the moth (below right), whose identity was confirmed by dissection.



16.003 (426) *Yponomeuta malinellus* Apple Ermine

Sue Timms recorded a larval web of this species on Crab Apple at Carlton on 24/06/2021, though the larvae had disappeared by the time a follow-up visit was made to try and collect and rear some for a much-needed photograph of the adult of this species.

16.005 (428) *Yponomeuta orrella* Willow Ermine

On 21/06/2021 Adrian Russell visited a willow plantation by the River Soar at Rothley to check-out a report of masses of larval webs on the trees there.



Every willow there had been virtually totally defoliated, with trunks covered in webbing and larvae hanging in large clumps as they fed on the few remaining leaves. There must have been well over a million larvae there, of which a handful were collected and reared out so as to obtain a photograph of the adult moth (right).



17.015 (252) Ochsenheimeria urella

On 26/07/2021 Sue Timms recorded this species (below left) at Bardon Hill. This is only the second record of this species from VC55, the previous one being from Mark Skevington's Whetstone garden in 2014.

**18.007 (469) Eidophasia messingiella**

There were two records of this distinctive species, both of singles, at Willesley Wood on 30/06/2021 from Sean Wileman and one at Watermead CP North on 01/07/2021 from Mick Braker (above right). There are three previous records from two sites, Shenton Cutting on 23/06/2007 and Browns Hay on both 10/07/2010 and 02/07/2011. It is generally associated with wasteland or disturbed land, with the foodplant being Hoary Cress which appears to be occasional in VC55.

20.002 (403) Argyresthia glabratella

One from Steve Woodward's Groby light trap on 24/08/2021 was confirmed as this species by gen det, only the second record for VC55 after one at Sapcote in 2016.

20.014 (413) Argyresthia sorbiella

First Post-VCH record for VC55

One found during the day at Charnwood Lodge by Margaret McLoughlin on 17/06/2021 (right) was the first post-VCH record for VC55. Amazingly, there were then two further records of singletons from Dave Gamble's Leicester Forest East garden on 02/07/2021 and 08/07/2021. As the name suggests, this attractive species feeds on Rowan and Whitebeam.

**30.003 (660) Pseudatemelia josephinae**

First record for VC55

Two were found during the day at Grange Wood on 02/07/2021 by Graham Finch (below left), and confirmed as this species by gen det, the first record for VC55. This species is extremely similar to Pseudatemelia flavifrontella for which there are 11 VC55 records, and which generally flies earlier. However, there is an overlap in the flight periods from late June, and all records of either of these species from mid-June onwards will require gen det to confirm (records in May and early June may be safely assigned to P. flavifrontella).

**32.050 (646) Telechrysis tripuncta**

One from Ted Gaten's Thurlaston light trap on 08/06/2021 (above right) is only the third VC55 record, following singles at Sapcote on 28/05/2011 and Eyebrook Reservoir on 30/05/2014.

35.0191 (857a) *Anarsia innoxia*

There was a dramatic increase in records for this species: there were three records of singles from three well separated sites prior to 2021, but 25 records from 12 sites involving 32 individuals during 2021. The foodplant is *Acer* spp., but particularly Field Maple, so there should be no reason why this will not quickly spread even further.

The following two species have similar foodplants, a predominantly south-eastern distribution in the UK and have National Scarce B status. Remarkably, both were added to the VC55 list within three days of each other. It seems unlikely that either species will become common here.

35.032 (809) *Pexicopia malvella* Hollyhock Seed Moth**First record for VC55**

One taken at light at The Drift on 16/06/2021 by Mark Hammond, Graham Finch and Keith Tailby (below left) is the first record for VC55. This species feeds on Marsh Mallow and cultivated Hollyhock.

**35.033 (808) *Platyedra subcinerea*****First record for VC55**

One taken at light in Whetstone on 13/06/2021 by Mark Skevington (above right) and confirmed by gen det is the first record for VC55. This species feeds on Common Mallow and cultivated Hollyhock.

35.066 (735) *Monochroa tenebrella*

This fairly non-descript Gelechiid is difficult to identify when fresh, impossible when worn, and quite likely to be overlooked or disregarded in a moth trap. It was good that one swept by day at Charnwood Lodge by Elspeth Cranston on 08/07/2021 was retained for gen det and confirmed as this species, only the second VC55 record after one at Markfield in 2004.

35.101 (802a) *Gelechia sororculella*

One taken at light in Whetstone by Mark Skevington on 22/07/2021 (right) is the second VC55 record, after one at Bradgate Park in 2014. It predominantly feeds on various *Salix* spp. so perhaps should be more common than records suggest.

**37.009 (496) *Coleophora milvipennis***

A larval case found on Birch at Bagworth Heath on 06/09/2021 by Sue Timms is the third VC55 record.

38.019 (593) *Elachista regificella*

Leafmines found on Great Wood-rush along Kinchley Lane at the edge of Buddon Wood by Mark Hammond and Keith Tailby on 22/03/2021 was the first record since 1993, with all of the previous four records coming from Swithland Wood.

40.006 (890) *Mompha jurassicella*

One taken at light at Rutland Water on 10/09/2021 by Ron Follows was confirmed by gen det and is the third record for VC55.

45.001 (1488) *Agdistis bennetii* Saltmarsh Plume

Two together in Queniborough on the same night in 2020 was a most unexpected and surprising first VC55 record. It is incredible that yet another has turned up, this one in Adrian Russell's Evington garden on 28/08/2021 (right). The NBN Atlas clearly shows the coastal nature of the foodplant for this saltmarsh species, Common Sea-lavender.

**48.002 (388) *Prochoreutis myllerana***

One collected from Skullcap at Rutland Water on 29/07/2021 by Graham Finch and Keith Tailby is only the third VC55 record, and the first since 2004.

49.033 (988) *Aphelia viburnana* Bilberry Tortrix

One swept from Bilberry at Charnwood Lodge on 08/07/2021 by Margaret McLoughlin (right) is the first modern record for VC55, albeit one that is perhaps to be expected at this site. It was last recorded by Herbert Buckler from Whitwick in 1940. This species will use other foodplants, though is usually on moorland, heathland and bogs. It is more likely to be found by sweeping or netting dayflying moths than at light.

**49.043 (1026) *Exapate congelatella***

One recorded from Charnwood Lodge on 09/10/2021 by Graham Finch is only the fourth VC55 record, the first since 2005 and perhaps most surprisingly the first away from a garden.

49.108 (930) *Gynnidomorpha alismana*

One was taken at light by Pete Leonard at Normanton Thorns on 29/07/2021, only the third VC55 record following two in 2014. Photograph below left.

**49.172 (1073) *Phiaris schulziana***

Andy Johnson recorded one to light in his Dadlington garden on 26/06/2021, the second record for VC55 and the first since one at Markfield in 2001. This species feeds on Heather and Crowberry and is predominantly a Northern species on moorland, so this is likely to have wandered quite some distance. Photograph above right.

49.191 (1102) *Endothenia nigricostana*

Sue Timms identified a larva in Hedge Woundwort in Bagworth on 30/12/2021, the fifth VC55 record. Sweeping or dusking for this species around the foodplant during the late afternoon and early evening in June may show it to be more widespread than records at light suggest.

49.228 (1153) *Epinotia sordidana*

One caught in Barrowden on 07/10/2021 by Ron Follows was confirmed by gen det and is only the third VC55 record.

49.277 (1199) *Eucosma pupillana*

There were two records, the fourth and fifth for VC55 but the first since 1997. One came to Dave Nicholl's garden trap in Ratby on 19/07/2021 (below left), and one to Andy Johnson's Dadlington garden on 26/07/2021.

**49.358 (1246) *Grapholita tenebrosana***

There were two records of singles taken at light and confirmed by gen det, one from Graham Calow at Sapcote on 01/07/2021 and one from Mark Skevington at Whetstone on 12/07/2021 (above right), the second and third confirmed records of this species for VC55.

49.362 (1227) *Pammene giganteana*

Recently there has been a widespread realisation that some tortrix species were turning up to relatively new pheromone lures, or to pheromone lures intended for other species. Prior to 2021 there had been five records of this species in VC55 and it appeared to be scarce.

However, during 2021 there were 17 records and all but one were of moths attracted to pheromone lures: the SKI lure intended for *Grapholita lobarzewski* and the MOL lure intended for *Grapholita molesta* (both potential orchard pests). The records were all between 23/03/2021 and 13/04/2021 with many being of multiple individuals attracted within minutes. Most were in or close to oak woodland, such as Pickworth Wood (right, Adrian Russell), but records also came from Bouskell Park in Blaby and Croft Hill. It is now clear that this is a widespread species in VC55, and likely to be found anywhere with a strong stand of mature oaks where it breeds on oak-apple galls.

**49.364 (1230) *Pammene suspectana***

This is another species that was found in 2021 to be turning up to relatively new pheromone lures, and it was perhaps inevitable that it would be duly added to the VC55 list. There were records from two sites: Keith Tailby recorded five to the specific SUS lure at Ravenstone on 28/05/2021, and Mark Skevington recorded one to the MOL lure at Whetstone on 29/05/2021 (right). This species feeds under the bark of Ash and will almost certainly prove to be common and widespread in VC55.

First record for VC55

**52.002 (370) *Sesia apiformis* Hornet Moth**

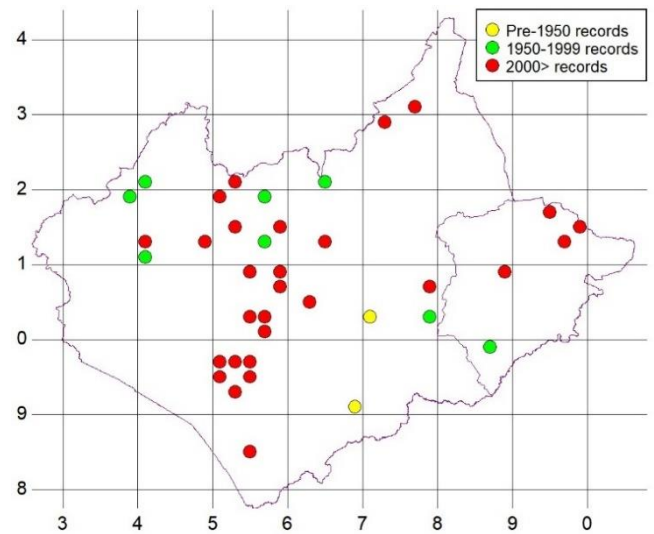
The only 2021 records of this species came from a newly discovered colony in VC55. In the summer of 2020, high winds brought down a mature Black Poplar var. in Adrian Russell's Evington garden. That exposed the previously hidden lower section of the trunk of that tree and revealed what was assumed to be old Hornet Moth emergence holes. It was something of a surprise that on 22/06/2021 four freshly emerged Hornet Moths were found on the remaining stump of that fallen tree. Two more were observed on 23/06/2021 (photo right) and further two on 26/06/2021.



They showed no real urgency to take flight and often remained in place for most of the morning. This must surely be the only instance of a County Moth Recorder overlooking a Hornet Moth colony in their own garden!

52.003 (371) *Sesia bembeciformis* Lunar Hornet Moth

Following on from the 14 records of this species recorded in 2020, an additional 16 records were generated in 2021, the majority of which came via use of the LUN pheromone lure. The map (right) shows all records of this species to date and indicates that this species has a fairly widespread distribution in VC, perhaps with a bias towards the Soar valley (where there will generally be plenty of willows), though this may just be due to recorder bias. It is certainly more common than we previously thought. As in 2020, all records came in the month of July.

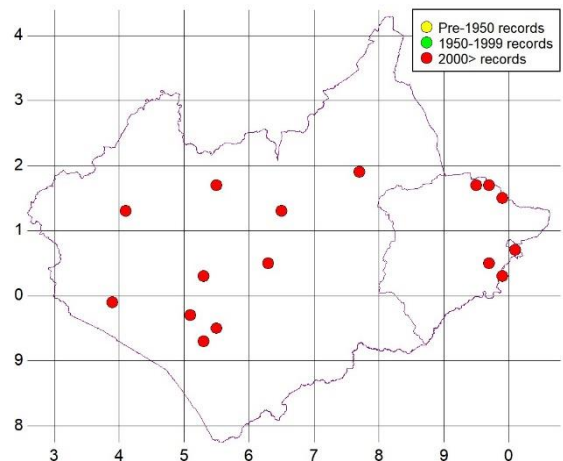


52.008 (380) *Synanthedon formicaeformis* Red-tipped Clearwing

Again, the use of pheromone lures has shown that this species has a far wider distribution than previously thought. It is probably present wherever there are good stands of willow and especially Osier.

52.010 (378) *Synanthedon andrenaeformis* Orange-tailed Clearwing

Last year, the first VC55 record from outside of Rutland was reported. Pheromone luring in 2021, especially when used in conjunction with the short-term deployment of traps, has dramatically changed our understanding of the status and distribution of this species in the county, as the map right shows. There was a total of 19 records in 2021, with 17 of these records coming from gardens. Looking at the national distribution map for this species, it is clear that it has recently expanded its range northwards and westwards and whilst the larval foodplants are given as Wayfaring-tree and, less often, Guelder-rose, the number of garden records may also indicate that cultivated Viburnums are also being utilised.



54.002 (163) *Adscita statipes* Forester

Whilst this species appeared to fare well in VC55 in 2018 and 2019, and to a lesser extent in 2020, there was only one record in 2021, albeit from a new site for this species: recorded by Uta Hamzaoui from Sandhills Lodge, Newtown Linford on 03/06/2021. Whilst this apparent dip in itself may not be significant, recorders are asked to keep an eye out for this species in 2022.

62.021 (1441) *Oncocera semirubella*

For the third consecutive year there was a record of one to light, this year from Rod Baker's Wigston Magna garden on 22/07/2021 (photo right). The main foodplants are Bird's-foot Trefoil and clovers, so there should be no reason why this species could not colonise VC55.



63.014 (1370) *Sitochroa palealis*

One was taken at light at The Drift near Pickworth on 17/07/2021 by Adrian Russell and Mark Skevington, the sixth record for VC55 and the first since 2014.

63.015 (1371) *Sitochroa verticalis*

Along with the *Sitochroa palealis* mentioned on the previous page, three *Sitochroa verticalis* were recorded during the same session at The Drift, Pickworth making a nice double-act (photo right). One was also recorded at Bloody Oaks Quarry on 21/07/2021 by Paul Bennett. These are just the third and fourth records following one at Ullesthorpe in 1976 and Evington in 2013.

63.016 (1386) *Anania fuscalis***63.022 (1385) *Anania crocealis***

In another moment of symmetry, again from The Drift on the same night as each other, singles of both of the above species were recorded on 16/06/2021 by Graham Finch and Keith Tailby – both being the fifth records for VC55.

**63.045 (1401) *Maruca vitrata*****Mung Moth**

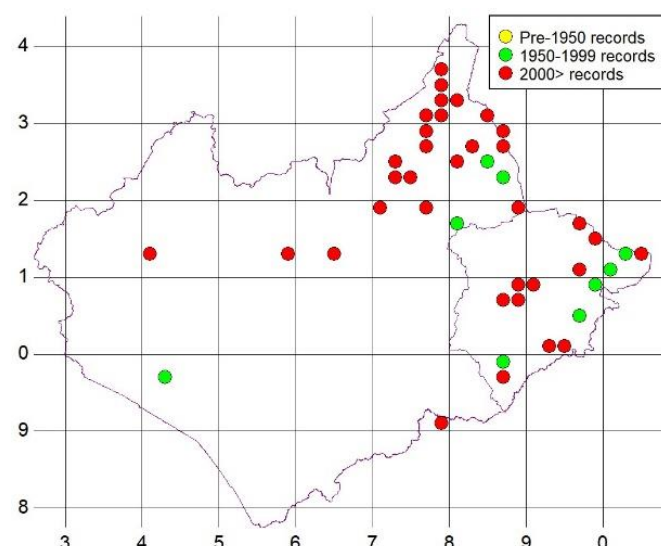
A completely unexpected addition to the VC55 list, this species is generally adventive but also potentially a very rare vagrant.

One was taken in a light trap in Angela Davies' Carlton garden near Market Bosworth on 08/10/2021, and only identified a few days later via a query to the CMR e-mail.

First record for VC55

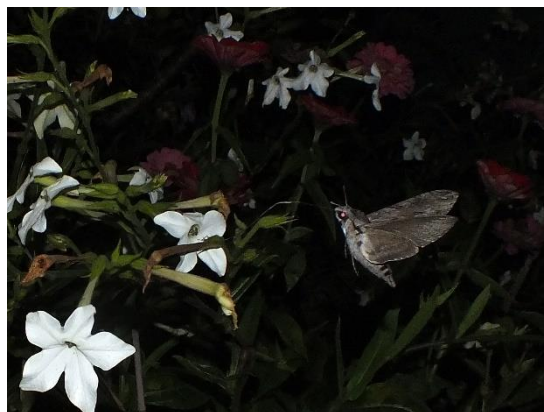
**68.001 (1643) *Saturnia pavonia*****Emperor Moth**

Prior to 2021 there had only been 31 records of Emperor Moth from VC55 and its status and distribution has always been somewhat uncertain, though those records indicated a preference for the north-east of the county. That hypothesis appears to have been borne out by pheromone recording (using the EMP lure) by Pete Leonard in the Vale of Belvoir in 2021. Between 17/04/2021 and 26/04/2021 he recorded this species at 16 different locations, dramatically changing the distribution map for this species. There were two other records in 2021: one recorded in Medbourne on 19/05/2021 by Robert Smith, also with the aid of an EMP lure, and 5 larvae recorded from Cribb's Meadow NR on 10/06/2021 by Laura Hackett (photo below right).



69.004 (1972) *Agrius convolvuli* Convolvulus Hawk-moth

There were three records of this uncommon migrant to VC55 in 2021: Brian Stafford reported one from Kirby Muxloe on 14/09/2021 and Sue Hitchens twice had the pleasure of seeing one nectaring at *Nicotianas* in her Great Glen garden on 21/09/2021 and 27/09/2021 (photo right).

**69.010 (1984) *Macroglossum stellatarum* Humming-bird Hawk-moth**

This migrant hawk-moth has been a fairly common visitor in recent years (e.g. 77 records in 2020), but there were only 13 records in 2021, one of the lowest totals in recent years.

70.038 (1716) *Rhodomatra sacraria* Vestal

With five records in 2021, this migrant had its best year since 2017. The first record was an early one, from John Tinning's Queniborough garden on 12/05/2021 (photo right). The remaining four were recorded from Angela Davies' garden on 11/08/2021, Andy Johnson's Dadlington garden on 15/09/2021, Margaret McLoughlin's Whiwick garden on 16/09/2021 and finally from Pete Leonard's Harby garden on 18/09/2021.

**70.047 (1720) *Nyctosea obstipata* Gem**

There were four records of the Gem in 2021, more than in any other previous year, the latter three clearly represent a short-term influx of this species:

Shacklewell Spinney	1	08/06/2021	Paul Bennett
Hinckley garden	1	22/07/2021	David Taylor
Sapcote garden	1	22/07/2021	Graham Calow
Loughborough garden	1	23/07/2021	Hazel Graves

70.057 (1735) *Catarhoe rubidata* Ruddy Carpet

With only 16 previous records, this is one of our rarer resident species. There were three records in 2021: from Rob Cooke's Geeston garden on 08/07/2021 and The Drift, Pickworth on 17/07/2021. Additionally, Pete Leonard recorded one from South Quarry, Sproxtton on 14/07/2021, outside of this species' previously known range in VC55, but like other records is from an area of limestone.

70.083 (1771a) *Thera cupressata* Cypress Carpet
First record for VC55

This species is a recent colonist in Britain, having been first recorded in West Sussex in 1984. Since then, it has rapidly expanded its range.

On 13/10/2021 it made its first appearance in VC55 when one was caught by Gianpiero Ferrari in his Barrow-upon-Soar garden (photo right). At first sight, this moth could be mistaken for the somewhat similar Juniper Carpet, which is fairly common and on the wing at the same time of year, so recorders should be on the look-out for this species in 2022.



70.098 1762 *Dysstroma citrata* Dark Marbled Carpet

There were only six records of this species in 2021, compared with 1,042 records of Common Marbled Carpet. Is this an accurate reflection of the relative abundances of these two species? Nationally, Dark Marbled Carpet appears to be a declining species. It is also single-brooded, whereas the Common Marbled Carpet is double-brooded and recorders are therefore asked to pay particular attention to moths caught in late July and early August and to carefully check the hindwing underside markings, which enable these two species to be separated.

70.101 (1775) *Colostygia multistrigaria* Mottled Grey

With this being primarily a species of northern and western Britain, Charnwood has always been its heartland in VC55. But in the last few years it has turned-up in a few other areas: Asfordby in 2018, Evington in 2019, Dunton Bassett in 2020 and on 08/04/2021 Pete Leonard recorded one from Croxton Kerrial in the far north-east of VC55.

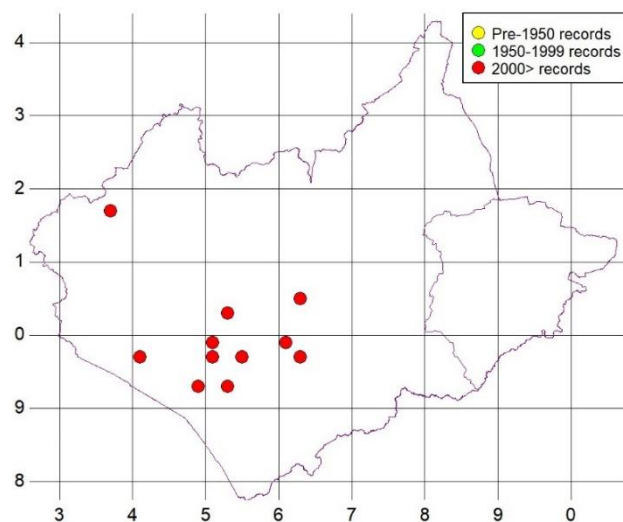
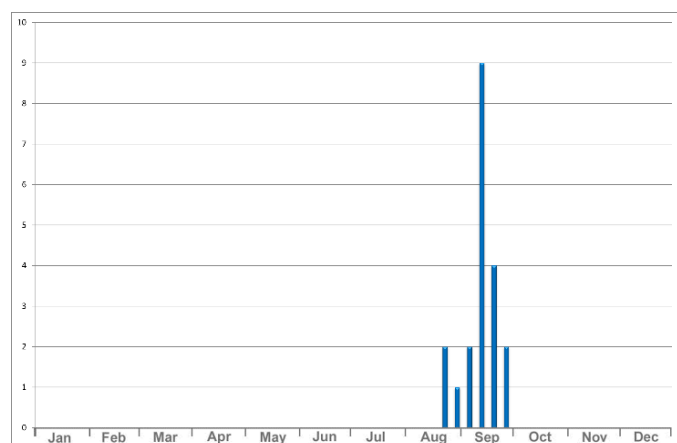
70.159 (1855) *Eupithecia phoeniceata* Cypress Pug

This is another new coloniser, first recorded from Kirby Muxloe in 2017, followed by six records in 2020. There were a further 13 records in 2021:

Wigston Magna garden	1	29/08/2021	Rod Baker
Newton Harcourt garden	1	06/09/2021	David Scott
Broughton Astley garden	1	07/09/2021	Adam Poole
Sapcote garden	1	08/09/2021	Graham Calow
Dadlington garden	1	09/09/2021	Andy Johnson
Sapcote garden	2	10/09/2021	Graham Calow
Leicester Forest East garden	1	10/09/2021	Dave Gamble
Leicester Forest East garden	1	11/09/2021	Dave Gamble
Thurlaston garden	1	13/09/2021	Ted Gaten
Thurlaston garden	1	14/09/2021	Ted Gaten
Littlethorpe garden	1	16/09/2021	Michael Lester
Evington garden	1	24/09/2021	Adrian Russell
Evington garden	1	25/09/2021	Adrian Russell

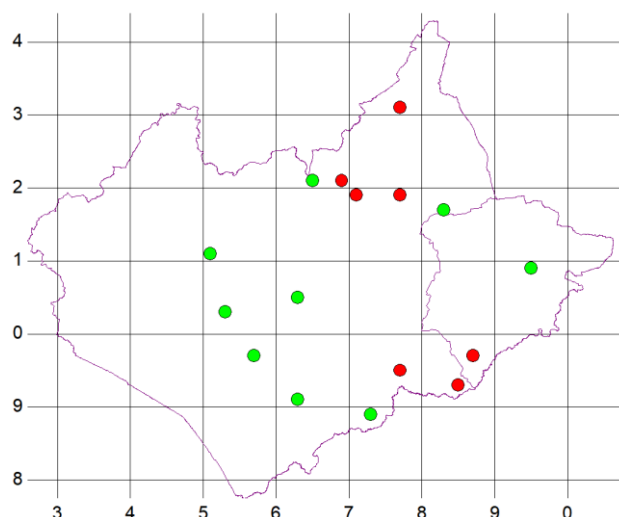


The area that has currently been colonised is clear from the distribution map (right) and the phenology chart is shown below:



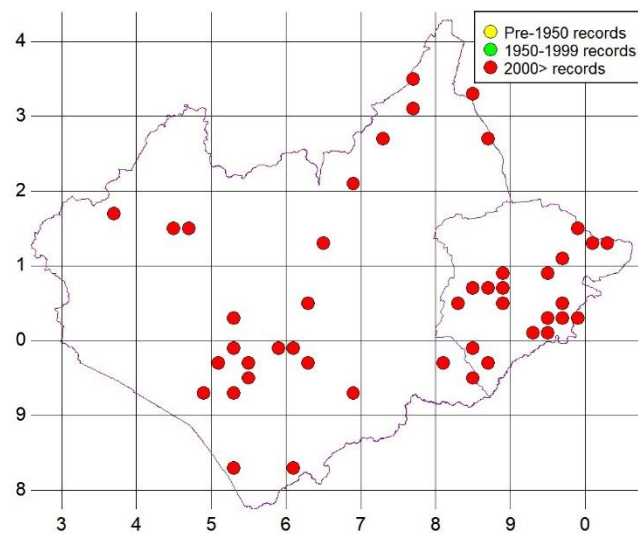
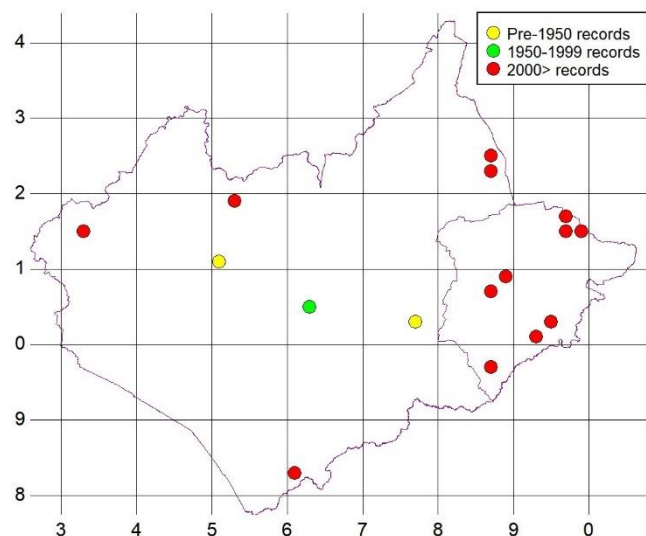
70.174 (1820) *Eupithecia insigniata* Pinion-spotted Pug

This is a rare and elusive species in VC55 and last year a cluster of records from the north-east of VC55 was highlighted. There were only two records in 2021, from Tony Cook's Slawston garden on 29/05/2021 and 02/06/2021. This adds a new dot to the map (right), in SP79, one of the most under-recorded 10km squares in VC. It seems we now also have a south-east cluster of recent records



70.246 (1925) *Apocheima hispidaria* Small Brindled Beauty

There have been relatively few recent records of this species outside of Rutland, yet all four records in 2021 were from 'new' areas of the county (map below left): Sean Wileman caught a total of seven at Willesley in the far north-west of the county on 24/02/2021 & 28/02/2021 and Pete Leonard caught singletons at two sites in Buckminster in the far north-east on 13/03/2021.



72.012 (2029) *Euproctis chrysorrhoea* Brown-tail

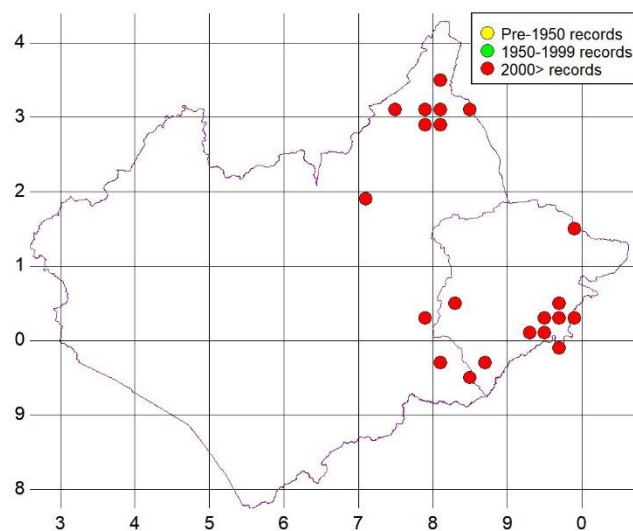
The 31 records in 2021 have nearly doubled the number of records from VC55 and the distribution map (above right) indicates that it's now pretty well established in VC55. The highest numbers still seem to be from Rutland, with a total of 24 being recorded by Adrian Russell & Mark Skevington at The Drift, Pickworth on 17/07/2021.

72.026 (2057) *Arctia caja* Garden Tiger

The ongoing national and local decline of this species is apparent from there being only two records in 2021: Singletons from Sean Wileman's Ashby-de-la-Zouch garden on 02/07/2021 and from Gavin Bennett's Cotesbach garden on 20/07/2021.

72.035 (2037) *Miltochrista miniata* Rosy Footman

As well as the usual records from Rutland, Pete Leonard's moth trapping recorded this species from four additional sites in the Vale of Belvoir in 2021. The map below now shows this species to now be fairly well established in that area of the county.



72.047 (2045) *Eilema caniola* Hoary Footman

Past experience has shown that this species cannot always be reliably identified on external features. Hence, records from new sites for this species have to be gen-detted. On 22/07/2021 a contender for this species was recorded from Ed Darby & Elspeth Cranston's Shepshed garden, which was subsequently confirmed by dissection of the specimen.

72.052 (2493) *Macrochilo cribrumalis* Dotted Fan-foot

As explained in last year's report, this species was recorded from Luffenham Heath Golf Course by Ron Follows on 15/06/2020. The only previous record of this species from VC55 was from the Rothamsted light trap at Rutland Water NR on 05/07/2011. That record was always somewhat puzzling as extensive MV light trapping at the reserve over the years failed to record this species. However, on 04/07/2021 Ron recorded one at MV from the reedbeds at Rutland Water NR., thereby providing additional confirmation of the presence of this species at Rutland Water.

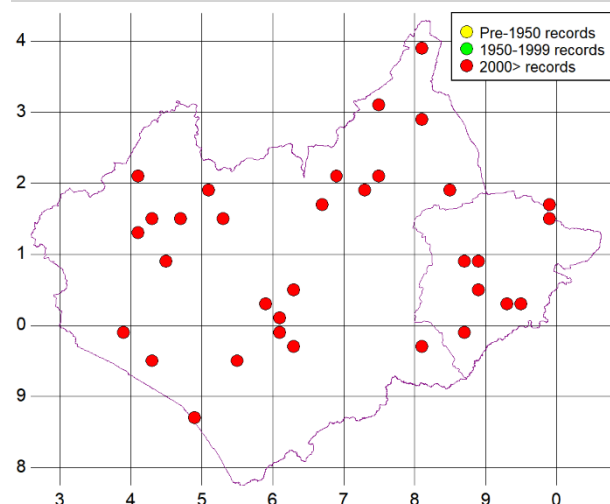
**72.074 (2409a) *Eublemma purpurina* Beautiful Marbled**

Will Kirby was lucky enough to record this moth (photo right) in his Horninghold garden on 09/09/2021. This is only the third record of this rare migrant visitor to VC55, the previous two records being in 2019.

72.076 (2451) *Catocala fraxini* Clifden Nonpareil

With eight records in 2019 and a further seven in 2020, it appeared that this species could be resident in VC55. This was confirmed on 11/07/2021 when Philip Lee recorded a larva of this species in Cloud Wood NR (photo right). Subsequently there were a total of 23 records of adult moths:

05/09/2021	Asfordby Hill garden	1	Sam Pitt Miller
06/09/2021	Melton Mowbray garden	1	Jonathan Morton
07/09/2021	Wigston Magna garden	1	Rod Baker
07/09/2021	Charnwood Lodge NR	1	Dave Robinson
09/09/2021	Thornton	1	Dave Wright
09/09/2021	Horninghold garden	1	Will Kirby
10/09/2021	Rutland Water Egleton NR	2	Ron Follows
10/09/2021	Whetstone garden	1	Mark Skevington
11/09/2021	Grimston garden	1	Gary Carter
15/09/2021	Rutland Water Lyndon NR	2	Paul Bennett
15/09/2021	Grimston garden	1	Toby Carter
16/09/2021	Whitwick garden	1	Margaret McLoughlin
19/09/2021	Hinckley garden	1	Harvey Wood
24/09/2021	Stoneygate garden	1	Ron Ellis
25/09/2021	Grimston garden	1	Toby Carter
25/09/2021	Clipsham Park Wood	1	Paul Bennett
29/09/2021	Stoneygate garden	1	Ron Ellis
01/10/2021	Botanic Gardens, Oadby	1	Rachel Benskin
03/10/2021	Evington garden	1	Adrian Russell
06/10/2021	Loughborough garden	1	Hazel Graves
07/10/2021	Branston garden	1	Pete Leonard
08/10/2021	Bottesford garden	1	Keith Ashford
24/10/2021	Rotherby garden	1	Charles Richards



The distribution map of records of this species over the last few years shows just how widespread this species is in VC55 now.



73.010 (2436) *Macdunnoughia confusa* Dewick's Plusia

2018 saw the first two records of Dewick's Plusia from VC55 and there were three further records in 2021: the first came from Adrian Russell's Evington garden in 13/08/2021, the second from Neil Oldham's Market Harborough garden on 23/09/2021 and finally Adrian Russell was fortunate enough to record another from his mother's Evington garden on 06/10/2021 (photo right). Although primarily a migrant species, it is now also thought to resident in certain areas of the county and it will be interesting to see what further VC55 records emerge in the coming years.

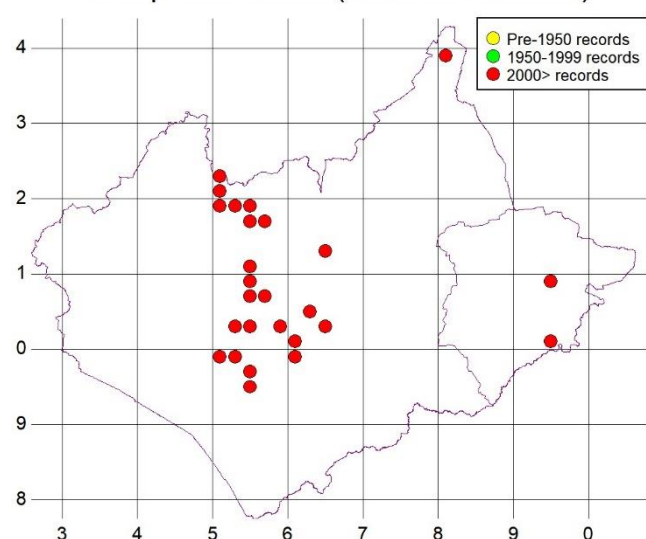
Experience from other counties appear to show that it is also strongly attracted to the NI pheromone lure, which is primarily aimed at attracting the Ni Moth.



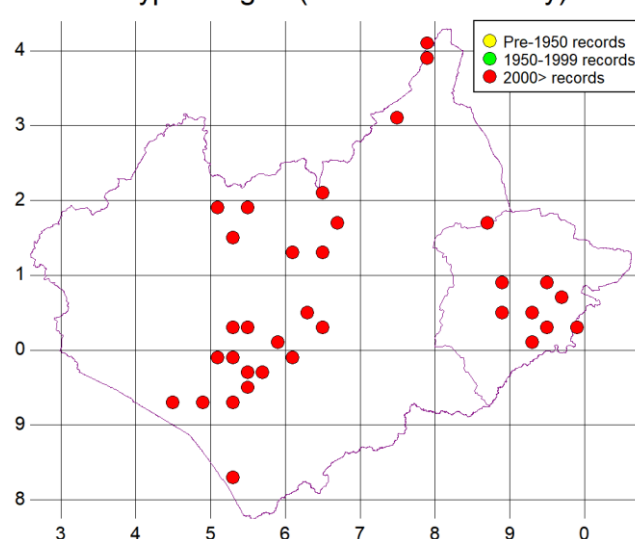
73.059 (2223) *Calophasia lunula* Toadflax Brocade

There were 39 records of this species from VC55 in 2021 and whilst having been recorded from seven new tetrads in the year, it hasn't yet significantly expanded its range in the county (see map below left).

Calophasia lunula (Toadflax Brocade)



Cryphia algae (Tree-lichen Beauty)

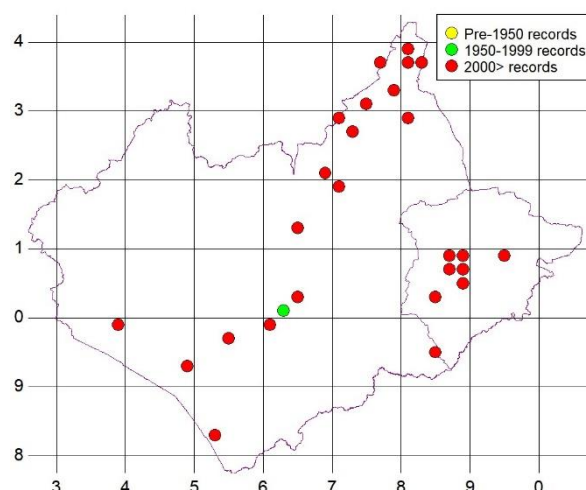


73.082 (2292) *Cryphia algae* Tree-lichen Beauty

There were 60 records of this species in 2021, significantly adding to the 39 previous records from VC55. It was also recorded from 13 new tetrads and overall, this species is colonising the county faster and more widely than Toadflax Brocade (see map above right), which arrived in VC55 at around the same time. One reason might be the fact that the larvae of Tree-lichen Beauty feed on lichens, whilst Toadflax Brocade may be favouring Purple Toadflax which is mainly found in urban and suburban areas.

73.151 (2373) *Globia sparganii* Webb's Wainscot

From the first VC55 record of this species in 1999, the annual number of records has steadily increased and by the end of 2020 there had been 99 records, 78 of which have been from Rutland Water NR where there was a clearly well-established colony. There were 23 records in 2021, 20 of which came from outside of Rutland Water, nearly doubling the number of such records. Some of these records would appear to be of wanderers, but the distribution map (right) would seem to show that there are good populations of this species in the north-east of the county, associated with the Wreake Valley and the Vale of Belvoir/Grantham Canal. Bulrush and a number of other aquatic plants are the larval foodplants of Webb's Wainscot and this probably explains why its distribution is quite different from the reed-feeding wainscots.

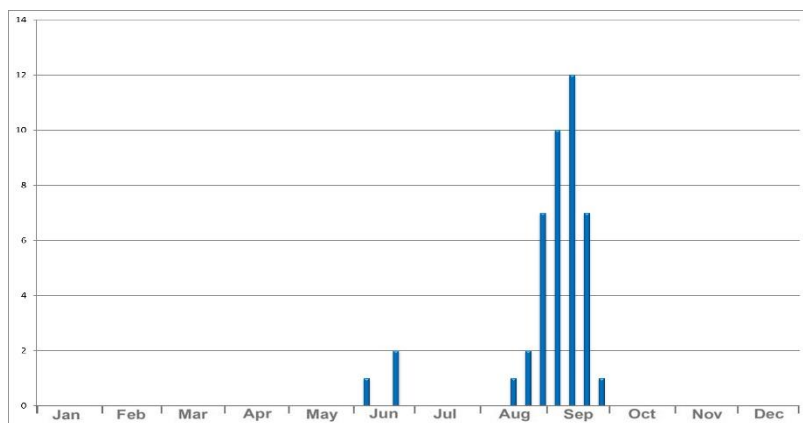


73.295 (2195) *Mythimna vitellina* Delicate

There were two records of this species in 2021: from Gavin Bennett's Cotesbach garden on 25/09/2021 (photo right) and from Adrian Russell's Evington garden on 10/10/2021. With only 19 previous records this is a rare migrant visitor to VC55.

73.297 (2194) *Mythimna albipuncta* White-point

Historically, this is another rare migrant visitor to VC55, but in 2020 there were two early season records raising the prospect that these might have been from the double-brooded resident population that has been advancing in our direction from southern and eastern England. With 43 records in 2021, this would now appear to be the case.



The phenology chart (left) shows the dates of the 2021 records of this species.

Below is a well-marked example caught by Stuart Lyon in his Kibworth garden on 29/08/2021.

VC55 moth recorders need to now be on the look-out for this species, which is somewhat similar to the Clay. However, the external markings are subtly different and the overall wing proportions, compared with the longer-winged Clay are a good indicator of this species. N.B. the males of both species possess the tuft of black scales on the underside of the abdomen, and this therefore cannot be used to separate the two species.

Date of capture helps too: the Clay is single-brooded, mainly occurring between late June and early August. Moths caught later in the year are therefore more likely to be of the White-point. It is therefore moths caught in June and July that require closest scrutiny.

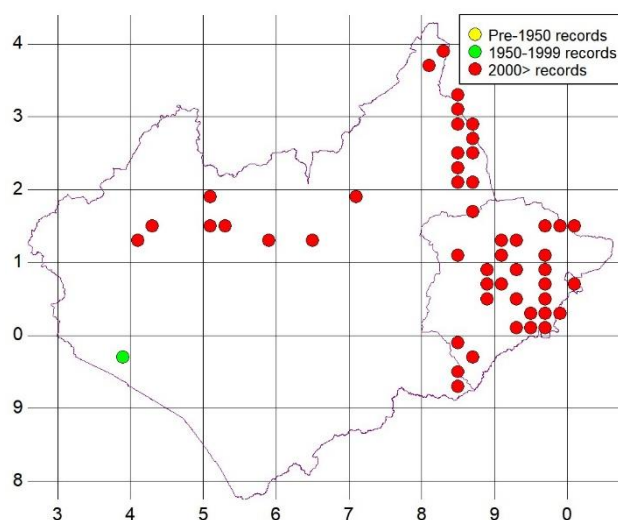


73.354 (2131) *Xestia stigmatica* Square-spotted Clay

This species has an interesting distribution in VC55 as the map right shows. Historically, it was a species largely restricted to Rutland, though a band of records across the northern half of Leicestershire subsequently developed. But of the 26 records in 2021, 12 were from the area of limestone in extreme north-east of VC55. This was one of the most under-recorded areas of the county and the recent recording has highlighted the fact that the area probably has an interesting moth fauna.

73.356 (2135) *Xestia agathina* Heath Rustic

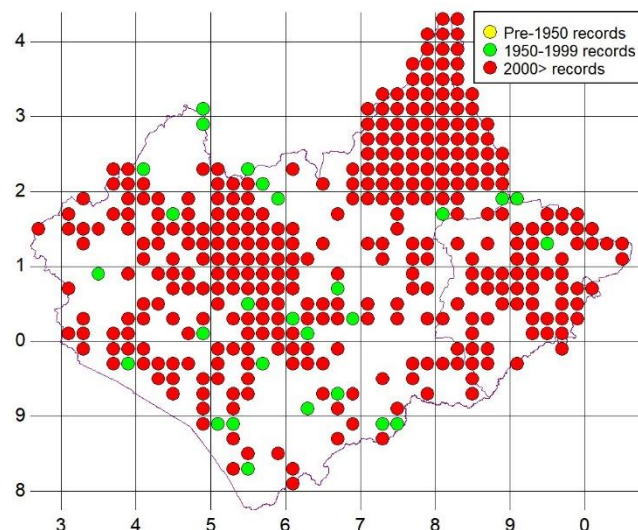
As mentioned in last year's report, this is a species of heath and moorland that also tends to wander. There were two such records of wanderers in 2021: from Ted Gaten's Thurlaston garden on 01/09/2021 and from a garden in Sproxtton on 10/09/2021.



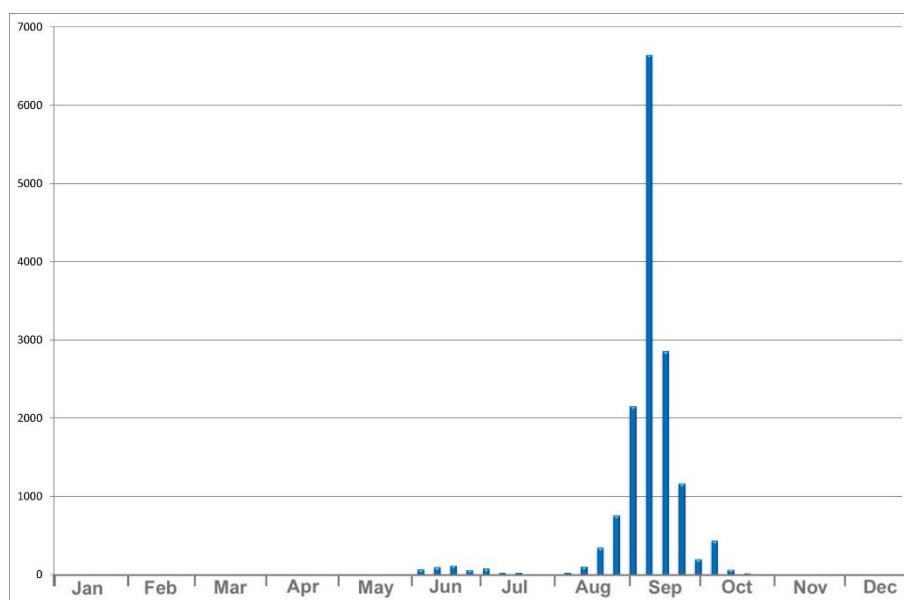
73.359 (2126) *Xestia c-nigrum* Setaceous Hebrew Character

These annual moth reports obviously tend to focus on the rarer species and sometimes it helps to include a widespread and common species for comparison. In 2021 there were 1,250 records of Setaceous Hebrew Character (ranked 6th), with the total number of moths of this species caught being 15,242 (ranked 2nd). As the distribution map (right) shows it is also widely distributed throughout VC55 (with gaps highlighting under-recorded areas).

But the phenology chart for this species in 2021 (showing the number of moths caught, rather than the number of records) is striking and clearly shows the massive influx that occurred in the first half of September, when some incredibly high catches were reported, e.g.



Date	Location	Catch	Recorder	Method
05/09/2021	Nr. Jericho Covert, Redmile	586	Pete Leonard	20W Wemlite trap
08/09/2021	Bagworth garden	466	Sue Timms	2x 20W Wemlite trap



73.368 (2136) *Naenia typica* Gothic

Last year I highlighted the apparent decline of this species, with there being only five records of singletons in 2020. Well, the situation was exactly the same in 2021 - only five records, all of singletons.

74.002 (2076) *Meganola albula* Kent Black Arches

On 09/07/2021 Dave Robinson caught two moths of this species at Sandhills Lodge/Browns Hay, providing more evidence of this now being a resident species in VC55. There are only four previous records of this species: from the Loddington Rothamsted light trap in 2014, from Angela Davies' Carlton garden in 2016 and from both Ray Morris' and Andy Johnson's Dadlington gardens in 2020.



Summary

Nine species (eight micromoths and one macromoth) were recorded from VC55 for the first time in 2021:

ABH	B&F	Taxon	Vernacular
2.002	7	<i>Paracrania chrysolepidella</i>	
6.002	159a	<i>Antispila petryi</i>	
15.057	336	<i>Phyllonorycter dubitella</i>	
30.003	660	<i>Pseudatemelia josephinae</i>	
35.032	809	<i>Pexicopia malvella</i>	Hollyhock Seed Moth
35.033	808	<i>Platyedra subcinerea</i>	
49.364	1230	<i>Pammene suspectana</i>	
63.045	1401	<i>Maruca vitrata</i>	Mung Moth
70.083	1771a	<i>Thera cupressata</i>	Cypress Carpet

Additionally, *Argyresthia sorbiella* was recorded for the first time since the VCH (1907) and *Bilberry Tortrix* for the first time since 1940.

As was the case in 2020, of particular note is the progress made by new colonisers, species that arrived in VC55 just a few years ago, but which are in the process of establishing themselves as widespread and not uncommon species.

As moth recorders we enjoy seeing these new species in increasing numbers, but in reality, their spread is a reminder that all is not well within our local moth fauna. Climate change is a significant factor in many of these changes, and it is much harder to see and mourn the steady decline of many of our resident species, e.g. the Gothic, which is again highlighted in this report. Only a few years ago it would have been unimaginable that we would have a year when there would be 24 records of Clifden Nonpareil but only five records of the Gothic!

A more scientific assessment of the changes affecting our moth fauna at a national level can be found in the recently published “The State of Britain’s Larger Moths 2021” (Fox et al, 2021) and which can be downloaded from here:

<https://butterfly-conservation.org/sites/default/files/2021-03/StateofMothsReport2021.pdf>

Butterfly Conservation is leading much of the research into moth population changes, the conservation of many of our threatened species, promoting moths to the wider public, as well as supporting the work of the moth recording community. If you care about butterflies and moths, please support Butterfly Conservation, if you can.



Finally, all our local moth recorders are thanked for their records, all of which help to improve our knowledge of the status and distribution of moths in VC55 and make reports such as this possible.

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