# Leicestershire & Rutland (VC55) Moth Review of 2020

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**Introduction**

This is a review of some of the more interesting and noteworthy moths recorded in VC55 in 2020. It is not solely restricted to the rarest moth species recorded in the year, otherwise the same species would feature year after year. However, I 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).

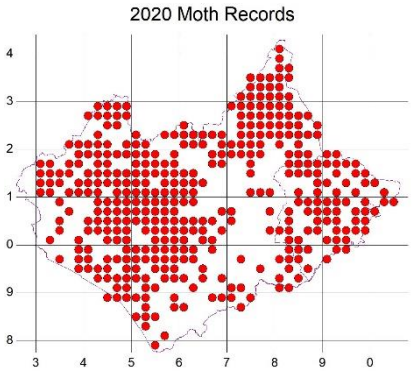
This report would not be possible without the excellent work of the many recorders in the county who submit moth records, be they hard-core moth trappers or casual recorders who simply record the moths that they see on their travels (and these records are often more useful than they might think!). Here are a few statistics that reflect moth recording activity in 2020, with 2019 figures also shown for comparison:

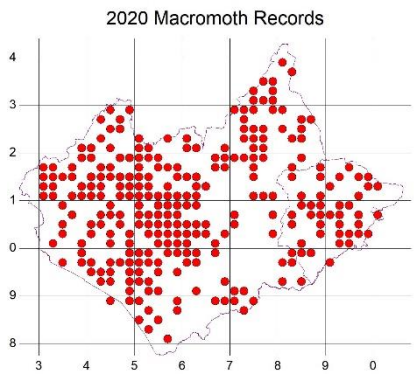
| | **2020** | **2019** |
|---|---|---|
| Number of macromoth records: | 66,715 | 57,070 |
| Number of micromoth records: | 27,360 | 24,938 |
| **Total number of moth records:** | **94,075** | **82,008** |
| | | |
| Number of macromoth species recorded: | 458 | 459 |
| Number of micromoth species recorded: | 590 | 576 |
| **Total number of moth species recorded:** | **1,048** | **1,035** |
| | | |
| Total number of moths recorded: | **275,683** | 333,910 |
| Total number of macromoths recorded: | 208,562 | 246,199 |
| | | |
| Number of people submitting moth records (see note 1 below): | 282 | 245 |
| | | |
| Number of people operating a garden moth trap (see note 2 below): | 82 | 73 |
| | | |
| Tetrads from which moths were recorded: | 393 | 510 |
| | | |

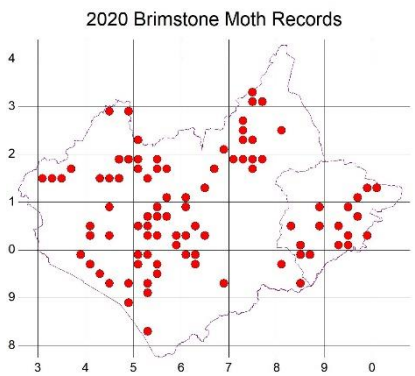
Note 1 This includes moth records submitted to NatureSpot and a number of national online recording schemes.
2 This is based on records submitted. Some recorders will be late submitting and there are also quite a few moth trappers who have never yet submitted records (it's not too late though!).

This shows that there was an increase in garden trapping in 2020 and a 15% increase in the numbers of moth records for the year. The Covid lock-down that was in place for most of the year may have been a factor in this increase in recording activity. But despite this, the total number of moths recorded in the year was down by 17%. The number of species recorded in the year was fairly static. A good year for moth recording but not for moths?

The map below left shows the tetrad distribution of 2020 moth records. But this includes some tetrad-by-tetrad leafmine recording and the map of macromoth records eliminates this. Finally, to perhaps provide a better indication of moth trapping activity, the map for Brimstone Moth records (of which there were 1,616) is also included.



The table below lists the 10 species of macromoth most frequently recorded in 2020. Were micromoths to be included, Light Brown Apple Moth would take 2nd place with 1,943 records. Totals for 2019 are also included for comparison and the species from that list that failed to make the top 10 in 2020 was Vine's Rustic (10th in 2019 with 859 records but only 16th with 887 records in 2020).

| | | | 2020 | | 2019 | |
|---|---|---|---|---|---|---|
| ABH | Taxon | Vernacular | Records | Rank | Records | Rank |
| 73.342 | Noctua pronuba | Large Yellow Underwing | 2,191 | 1 | 1,976 | 1 |
| 73.317 | Agrotis exclamationis | Heart & Dart | 1,751 | 2 | 1,451 | 3 |
| 70.226 | Opisthograptis luteolata | Brimstone Moth | 1,616 | 3 | 1,182 | 4 |
| 73.325 | Agrotis puta | Shuttle-shaped Dart | 1,466 | 4 | 1,116 | 7 |
| 70.258 | Peribatodes rhomboidaria | Willow Beauty | 1,329 | 5 | 994 | 9 |
| 73.162 | Apamea monoglypha | Dark Arches | 1,281 | 6 | 1,127 | 6 |
| 73.359 | Xestia c-nigrum | Setaceous Hebrew Character | 1,258 | 7 | 1,542 | 2 |
| 70.016 | Idaea aversata | Riband Wave | 1,200 | 8 | 1,054 | 8 |
| 73.345 | Noctua comes | Lesser Yellow Underwing | 1,129 | 9 | 1,167 | 5 |
| 73.015 | Autographa gamma | Silver Y | 1,066 | 10 | 670 | - |

With the addition of 2020 records, the VC55 database now holds: 974,026 moth records (1,134,986 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 in 2020 and have kindly submitted records (either directly or via NatureSpot or BC online recording schemes) for the year, including Gavin Bennett (Cotesbach), Max Collins (Uppingham), Ed Darby & Elspeth Cranston (Shepshed), Gavin Deane (Castle Donington), Dale Green (Croft), John Hague (Braunstone), Jane Hollingworth (Quorn), Julian Jones (Quorn), Dylan Pugh (Melton Mowbray) and Peter Shale (Glenfield). Apologies to anyone that I may have inadvertently omitted (please let me know).

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 2020 moths and were, unless otherwise stated, taken either by the recorder or me.

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**References**

Agassiz, D.J.L., Beavan, S.D. & Heckford, R.J. (2013). *A Checklist of the Lepidoptera of the British Isles*. Royal Entomological Society.

Fox R, Dennis EB, Harrower CA, Blumgart D, Bell JR, Cook P, Davis AM, Evans-Hill LJ, Haynes F, Hill D, Isaac NJB, Parsons MS, Pocock MJO, Prescott T, Randle Z, Shortall CR, Tordoff GM, Tuson D & Bourn NAD (2021) *The State of Britain's Larger Moths 2021*. Butterfly Conservation, Rothamsted Research and UK Centre for Ecology & Hydrology, Wareham, Dorset, UK.

Randle, Z., Evans-Hill, L.J., Parsons, M.S., Tyner, A., Bourn, N.A.D., Davis, A.M., Dennis, E.B., O'Donnell, M., Prescott, T., Tordoff, G. M. & Fox, R., 2019. *Atlas of Britain & Ireland's Larger Moths*. Pisces Publications, Newbury.

Timms, S., 2012. Birch leaf-miners. *Leicestershire Entomological Society Occasional Publication* **42**.

## Noteworthy Species and Records

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

**2.003 (8) Eriocrania unimaculella**

Sue Timms recorded mines of this species on birch in Ashby de la Zouch on 06/05/2020 and Bagworth on 09/05/2020, doubling the number of VC55 records of this leafminer.

**2.004 (9) Eriocrania sparrmannella**

Sue also recorded this birch leafminer, of which there are only two previous records, from Bagworth on 19/06/2020.

**2.005 (10) Eriocrania salopiella**

This species was recorded for the first time in 2019 and this has now been followed by two further records in 2020: Sue Timms recorded mines of this species on birch at two different locations in Bagworth on 16/05/2020 and 19/06/2020.

**2.006 (11) Eriocrania cicatricella**

To the three previous records of this birch leafminer can now be added three more records: Sue Timms recorded it from two locations in Bagworth on 26/04/2020 and 02/05/2020 and Graham Calow from Fosse Meadows NR on -3/05/2020.

As the above indicates, Sue Timms (2021) has been doing sterling work recording birch leafminers, and further information on this under-recorded group can be found in a very useful document that she has produced: https://www.naturespot.org.uk/sites/default/files/downloads/LESOPS%2042%20Birch%20leaf-miners.pdf

**4.006 (113) Stigmella sakhalinella**

Recorded for the first time in 2019, there were four further leafmine records of this species in 2020, from widely separated locations: Willowbrook Park, Leicester on 19/10/2020 (Adrian Russell), Sapcote on 04/11/2020 (Graham Calow), Harby on 08/11/2020 (Pete Leonard) and Croft Glebe on 12/11/2020 (Graham Calow).

**4.012 (102) Stigmella aceris**

With 38 records of this Field Maple and Norway Maple leafminer in 2020, nearly doubling the number of VC55 records, it is clear that this species is now well established in VC55. But it still very variable in its occurrence: sometimes abundant, sometimes just the odd one or two mines and sometimes completely absent.

**4.024 (104) Stigmella magdalenae**

Mark Young recorded a mine of this species from Ulverscroft on 11/09/2020. There are only two previous records of this Rowan leafminer.

**4.068 (46) Trifurcula immundella**

Searching for leafmines can often prove challenging but finding mines on the stems of Broom is quite an achievement. However, Sue Timms recorded mines of this species in Bagworth on 09/12/2020 – only the third record from VC55.

**4.084 (24) Ectoedemia turbidella**

Grey Poplar leafmines also tend to be elusive and there is only one previous record (of an adult) of this species. The first leafmine record came from Sence Valley Forest Park on 09/11/2020 by Sue Timms.

**7.009 (153) Cauchas fibulella**

The smallest of the British Adelinae, this distinctive day-flying species was recorded twice from Cloud Wood NR: by David Nicholls at on 20/05/2020 and by Keith Tailby (photo right) on 25/05/2020. There are only four previous records from VC55. This is a species well worth looking out for flying around its larval foodplant, Germander Speedwell, in sunshine during May.

**10.006 (127) Coptotriche angusticollella**
Mark Skevington recorded this species as a leafmine on Rose at Ketton Quarry NR on 05/09/2020. Despite a dramatic increase in leafmine recording in recent years, this remains the only knows site for this species, from where it was previously recorded in 2013 and 2018.

**12.006 (203) Infurcitinea argentimaculella** **First post-VCH record for VC55**
On 05/03/2020 Keith Tailby & Mark Hammond found numerous larval tubes of this lichen feeding Tineid on the walls between Buddon Wood and Swithland Reservoir, and subsequently at Ulverscroft NR and Burrow Wood NR. They also successfully reared out and photographed (right) the adult moths.

**12.019 (219) Nemapogon ruricolella**
Sean Wileman's record of this species from his Ashby-de-la-Zouch garden on 23/06/2020 was only the second record of this species from VC55.

**14.008 (272) Bucculatrix cidarella**
This was also only recorded for the second time, from a mine on Alder found on 08/11/2020 by Graham Calow.

**15.001 (299) Parectopa ononidis**
This is a species that seems to be expanding its range in Britain and was first recorded in VC55 in 2019. There were two further records in 2020, both at MV: from Adam Poole's Broughton Astley garden on24/05/2020 and from The Drift, Pickworth on 31/07/2020 by Graham Finch.

**15.012 (290) Caloptilia semifascia**
There were 16 previous records of this species, which primarily feeds on Field Maple, and a further 11 records in 2020. What is interesting about this species is that there is a single brooded population and a double-brooded population. The latter has been expanding its range northwards in Britain. The summer generation of the double-brooded population used to be considered to be a separate species, Calybites hauderi, until DNA barcoding proved otherwise. The two generations are also quite different in appearance as the photographs below show. Both were caught in Adrian Russell's Evington garden, the summer generation example on 08/08/2020 (below left) and the autumn generation individual just two days later on 10/08/2020 (below right).

**16.002 (425) Yponomeuta padella** **Orchard Ermine** (Hawthorn, Blackthorn & Cherry)
**16.003 (426) Yponomeuta malinellus** **Apple Ermine** (Apple)
**16.004 (427) Yponomeuta cagnagella** **Spindle Ermine** (Spindle & Euonymus japonicus)
**16.005 (428) Yponomeuta rorrella** **Willow Ermine** (White Willow & occasionally Grey Willow)
It is worth again providing a reminder that adult moths of Orchard Ermine, Apple Ermine, Spindle Ermine and Willow Ermine cannot be separated, even if dissected; they should be recorded as "Ermine sp.". The only means of recording these moths to species level is on the basis of larval webs or adults reared from a known larval web.

Hence, we have relatively few confirmed records of these species and recorders are encouraged to look out for and submit records of larval webs, the larval foodplants being shown on the previous page. It would also be good to rear out adult moths from such larval webs, so as to provide both voucher specimens for the Leicestershire reference collection and for photographs as, apart from Spindle Ermine and Willow Ermine, we currently have neither.
In 2020 the only larval web records of these four species were two records of Spindle Ermine from Rutland and one record of Willow Ermine from Watermead County Park.

**16.006 (429) Yponomeuta irrorella** **First post-VCH record for VC55**

This species can be identified and recorded as an adult and the one caught by Ted Gaten (photo right) in his Thurlaston garden on 05/08/2020 was the first post-VCH record for VC55. Its larval foodplant is Spindle.

**16.008 (431) Yponomeuta sedella**

This species was first recorded in VC55 from Ron Follows' Barrowden garden in 2018 (twice), 2019 and 2020. But it was also recorded from John Tinning's Queniborough garden in 2020. This species' larval foodplant is *Sedum telephium* (Orpine)and related cultivars and the pattern of records of this species suggest that it is breeding locally on cultivated Sedums.

**16.007 (430) Yponomeuta plumbella**

For the sake of completeness, the status of this species is that it has only been recorded from Rutland on 8 occasions between 2001 and 2018.

**32.037 (673) Depressaria pimpinellae**

There was only one previous record of this species, but skilful fieldwork on the part of Sue Timms resulted in two records of larvae on Greater Burnet-saxifrage, from Gelscoe on 03/07/2020 and from Bagworth on 05/07/2020

**35.002 (849) Syncopacma cinctella**

Pete Leonard doubled the number of VC55 records of this species when he took one at light at Holwell Mineral Line NR on 23/06/2020. Moth of this genus can be difficult to separate, but this identification was confirmed by dissection.

**35.0191 (857a) Anarsia innoxiella**

2019 saw the first VC55 record of this species and a further two were recorded in 2020: from Graham Calow's Sapcote garden on 17/07/2020 and from Andy Mackay's Evington garden on 01/08/2020.

**35.135 (831) Caryocolum proxima** **First record for VC55**

The first VC55 record of this species came from The Drift, Pickworth when one was taken at light by Graham Finch & Keith Tailby on 31/07/2020. Identification was confirmed by dissection.

**37.026 (509) Coleophora violacea** **First record for VC55**

Peter Smith found a larval case of violacea on Blackthorn (photo right) at Cadeby on 18/10/2020, the first VC55 record of this species.

**37.030 (512) Coleophora binderella**

Sue Timms recorded larval cases and mines of this species on alder in Bagworth on 09/05/2020 – only the second record of this species from VC55.

**37.074 (581) Coleophora taeniipennella** **First record for VC55**

A moth (below left) caught at light by Dave Gamble in his Leicester Forest East garden on 31/07/2020 was dissected by Andy Mackay and found to be the first VC55 record of this species.

**43.008 (920a) Scythris inspersella** **First record for VC55**

Keith Tailby reared this moth (above right) from a larva found in spun willowherb leaves at Cloud Wood on 25/05/2020, a first for VC55.

**45.001 (1488) Agdistis bennetii Saltmarsh Plume** **First record for VC55**

This is one of the most surprising of VC55 firsts in 2020. John Tinning caught two in his Queniborough garden light trap on 12/08/2020 (photo below left). This species inhabits coastal saltmarshes on the south and east coasts of England, where its larva feeds on Common Sea-Lavender. Very occasionally it has been recorded inland, though never previously this far inland. The fact that **two** were caught in John's trap is even more surprising.

**45.009 (1503) Gillmeria ochrodactyla Tansy Plume**

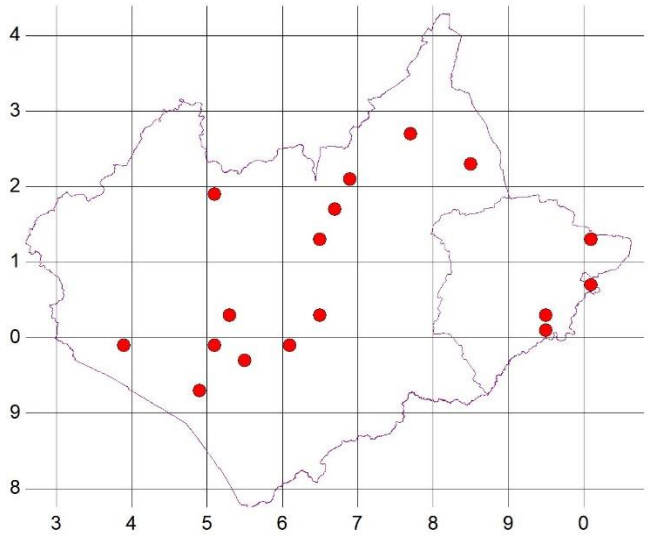
There are really only two species of plume moth (Pterophoridae) that can be described as being commonly recorded in garden moth traps: the Common Plume with 3,114 VC55 records in total and the Beautiful Plume with 1,590 VC55 records. In comparison, this species, caught in Mark Skevington's Whetstone garden on 02/06/2020 (photo above left), is only the 7th record of this species from VC55, making this a noteworthy record.

**49.121 (939) Aethes tesserana**

This moth was taken in Rob Cooke's Geeston (Ketton) garden on 23/06/2020, which is only the fourth record of this species from VC55. The three previous records came from Ketton and South Luffenham and indicate the very local nature of this species' distribution in VC55.

**49.138 (964a) Cochylis molliculana**

First recorded from Queniborough in 2015, there were a total of 6 records of this species, from widely separated locations up until the end of 2019. In 2020 there were 18 records (from 13 different locations), indicating that this species is becoming well established in VC55, as the map (right) shows.




**49.187 (1098) Endothenia oblongana**

There were only three previous records of this species from VC55 until Graham Finch and Keith Tailby recorded four from light traps operated at The Drift, Pickworth on 31/07/2020.

**49.330 (1269) Cydia conicolana**

This species, one of a group that can be tricky to identify, was recorded from Dave Gamble's Leicester Forest East garden on 21/05/2020 and by Pete Leonard from Harby on 26/05/2020. Both identifications were confirmed by dissection of the genitalia. The first and only previous record of this species came from Evington in 2014.

**49.356 (1249) Grapholita lobarzewskii**

First recorded from Whetstone in 2018 and then from Harby and Thurlaston in 2019, a further 7 records in 2020 show that this is another species that is colonising VC55. On 12/06/2020 Keith Tailby recorded 3 from his Ravenstone garden using the SKI pheromone lure, which might indicate that it is more common that light trapping records might indicate.

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

On 10/06/2020 Tim Goodlife discovered what appears to be an established colony of this species in Somerby, making it only the 3rd known colony in VC55. There were also three records from the known colony in Ketton in 2020, with Mark Skevington attracting three using the HOR pheromone lure (whose efficacy has at times been questioned, though it seems to be effective over short distances) on 15/06/2020.

**52.003 (371) Sesia bembeciformis Lunar Hornet Moth**

Although there had been 20 records of this species up until the end of 2019, it has always been considered to be an elusive species in VC55. However, use of the new LUN pheromone lure in 2020 has dramatically improved our means of recording this species, which now appears to be far more common than it was previously thought to be. The moth below was from Rutland Water, photographed by John Tinning.

| | | | |
|---|---|---|---|
| Kelham Bridge NR | 11/07/2020 | David Taylor | 1 to LUN lure |
| Ulverscroft NR | 12/07/2020 | Mark Skevington | 1 to LUN lure |
| Aylestone Meadows NR | 12/07/2020 | Mark Andrews | 1 to LUN lure |
| Aylestone Meadows NR | 12/07/2020 | Mark Andrews | 1 to LUN lure |
| Rutland Water NR | 17/07/2020 | Adrian Russell | 3 to LUN lure |
| Misterton Marshes | 18/07/2020 | Mark Skevington | 3 to LUN lure |
| Croft | 19/07/2020 | Mark Skevington | 1 to LUN lure |
| Huncote Embankment | 19/07/2020 | Mark Skevington | 1 to LUN lure |
| Narborough | 19/07/2020 | Mark Skevington | 1 to LUN lure |
| Watermead Country Park South | 19/07/2020 | John Hague | 1 to LUN lure |
| Owston Wood | 20/07/2020 | Adrian Russell | 1 to LUN lure |
| Coombs Meadow NR | 24/07/2020 | Pete Leonard | 1 to LUN lure |
| Cossington Meadows NR | 24/07/2020 | John Hague | 2 to LUN lure |
| Pickworth Great Wood | 31/07/2020 | Adrian Russell | 1 to LUN lure |

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

This clearwing moth, whose main larval foodplant is Wayfaring Tree was first recorded from Tinwell in 2005 and this was the only known site for this species until 2019, when it was also recorded from Pickworth Great Wood. In 2020, using the VES lure, it was recorded on 5 occasions and from two new locations in Rutland (where Wayfaring Tree is mainly found) by Adrian Russell: Ketton Quarry NR on 24/06/2020 and Stretton Wood on 06/07/2020. But more interestingly, it was also recorded from Croft Hill by David Taylor on 12/07/2020, the first record from outside of Rutland.

**54.002 (163) Adscita statices Forester**

The Atlas of Britain & Ireland's Larger Moths (Randle et al, 2019) describes this species as being much declined and that is also generally the same in V55. But the Forester seemed to do well in 2018 & 2019, with a total of 29 records of 52 moths at 16 different sites, all of which were in the Charnwood/Loughborough area. There were fewer records in 2020, just 7 records of 11 moths from 5 different sites. However, it was encouraging to note the record from Muston Meadows NNR in the north-east of the county, with the last record from that site being in 2014. But Saharima Roenisch's record from the golf course in Evington is the most exciting record; it was last recorded from there in 1980, which was at that time the first modern (i.e. post-1950) record of this species from VC55.

| | | | |
|---|---|---|---|
| Lea Meadows NR | 26/05/2020 | Dave Robinson | 3 |
| Rough Hill, Newtown Linford | 28/05/2020 | Adrian Russell | 3 |
| Charnwood Lodge NR | 02/06/2020 | Margaret McLoughlin | 1 |
| Lea Meadows NR | 09/06/2020 | Dave Robinson | 1 |
| Evington golf course | 09/06/2020 | Saharima Roenisch | 1 |
| Muston Meadows NNR | 09/06/2020 | Steven Lewis | 1 |
| Ulverscroft NR, Herbert's Meadow | 20/06/2020 | Michael Lester | 1 |

**54.008 (169) Zygaena filipendulae Six-spot Burnet**

The 38 records of this species in 2020 isn't particularly noteworthy, but two of those records included sightings of individuals of the form *flava*, in which the red colour is replaced by yellow throughout. Both came from Ketton Quarry: on 29/05/2020 (Paul Bennett) and 15/06/2020 (Mark Skevington, photo right). Although not always noted by recorders when submitting records, the only other VC55 record of this form is from a specimen in the VC55 reference collection, taken in Loddington in 1964 by Simon Davey. It would be interesting to know of any other records (past or future) of this form of the Six-spot Burnet.

**62.013 (1444) Moitrelia obductella** **First record for VC55**

A most unlikely VC55 first was the example of this species caught in Ted Gaten's Thurlaston garden on 27/7/2020 (photo right). It is primarily a species restricted to Kent with a few other records coming from Essex, Surrey, Dorset and Cardiganshire. Its larval foodplant is *Origanum*, plenty of which grows in Ted's garden.

**62.021 (1441) Oncocera semirubella**

The first VC55 record of this species of this species came from Leicester Forest East garden in 2019. This is a southern England chalk and limestone grassland species, which is also a known migrant and vagrant. A second record came from Raita Hayes' Enderby garden on 15/07/2020, but it is still too soon to know whether or not this species is colonising VC55 or just a visitor.

**62.047 (1461) Assara terebrella**

There were three records of this Norway Spruce feeding moth in 2014, but none since then, until it was recorded twice in 2020: from Luffenham Heath golf course (one of the sites from which it was recorded in 2014) by Ron Follows on 16/07/2020 and from Charnwood Lodge NR on 04/08/2020 when 5 were caught in a light trap by Stuart Moffat.

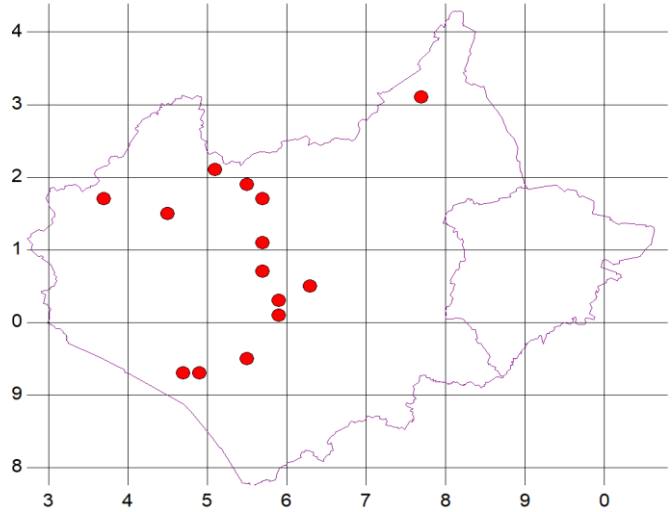
**62.050 (1469) Euzophera cinerosella**

There are only 5 previous records of this species from VC55, three of which came from sites in Harby. It was recorded twice in 2020: from a different site in Harby by Pete Leonard on 26/05/2020 and from John Tinning's Queniborough garden on 13/07/2020.

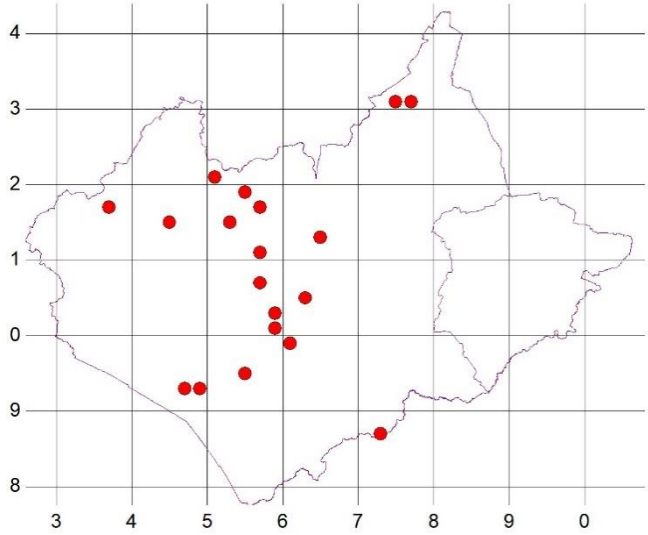
**63.054 (1409a) Cydalima perspectalis Box-tree Moth**

This species first arrived in VC55 in 2017 and numbers have since been roughly doubling year on year: 3 records in 2017, 7 in 2018, 19 in 2019 and 37 in 2020. However, its distribution in the county has hardly changed as the maps below show and this is partly a reflection of the fact that it's larval foodplant, Box, is mainly found in gardens. But the frequency and number of moths caught has increased, with the highest single count being 5 from Graham Calow's Sapcote garden on 24/07/2020. Therefore, despite not significantly expanding its range in the county, it does appear to be strengthening its presence.

**20017-2019**




**2017-2020**




**63.109 (1323) Pediasia contaminella**

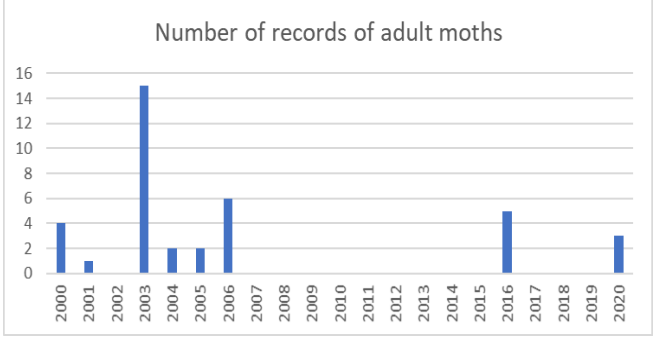
This species was first recorded in Sapcote in 2018. There were no records in 2019, but in 2020 there were six records. Three records (of four moths) came from Graham Calow's Sapcote garden (the site of the 2018 record), and there were singleton records from Andy Johnson's Dadlington garden on 29/07/2020, Adam Poole's Broughton Astley garden on 05/08/2020 and from Kate Nightingale's Cropston garden on the same night. The question remains as to whether this is a colonising species or a migrant or vagrant visitor.

**66.005 (1633) Eriogaster lanestris Small Eggar**

On 03/04/2018, the first post-VCH record of this species came from a moth caught in a Morcott moth trap. On 28/05/2020 Rob Cooke found larvae of this species on a roadside hedge in Geeston, which is approximately 4 miles from Morcott. Over the next few days a further seven larval webs were found on Hawthorn and Blackthorn in hedgerows at a number of other locations in the immediate vicinity. Clearly this is now a resident species in VC55 and it will be interesting to see if this remains the case and if it expands its range beyond the south-eastern fringe of Rutland.

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

According to the VC55 database, there have been 101 records of this species, the earliest dating back to 1846. Yet, it's best described as an uncommon migrant that's very irregular in its appearance, as illustrated by the chart of records over the last 20 years. But it's also unique in the fact that records from moth recorders are in the minority and most records are of moths found at rest, often in very conspicuous places, and of moths seen nectaring at *Nicotianas*. There must have been well over 300 moth trappers in the county over the years and the records show that only six VC55 moth recorders have ever caught a Convolvulus Hawk-moth in their garden moth trap!



In 2020, after an absence of three years, and for only the second time in the last 14 years, this species was recorded in the county. The first record was of a moth found at rest in Great Glen by Sue Hitchens on 26/06/2020. The second was one caught in Adrian Russell's Evington garden moth trap on 01/09/2020 (photo right), making him the seventh member of that exclusive club! Three days later, on 04/09/2020, Dalbir Uppal found one at rest on a clothes line of washing in Wigston. The final two records of the year came from Gavin Bennett, who found larvae on Bindweed growing in his Cotesbach garden on 23/09/2020 and 26/09/2020 (photo below) – the first ever records of larvae of this species being found in VC55.

**69.005 (1973) Acherontia Atropos Death's-head Hawk-moth**

For the second year running there has been a single record of this hawk-moth. In 2019 it was of a larva found in an Ullesthorpe garden. In 2020, it was of an adult moth found at rest adjacent to potato plants in Jo & Graham Osborn's Medbourne garden on 09/06/2020 (photo right). This is only the 4th VC55 record of an adult moth of this species in the last 40 years.

**Resident Species of Hawk-moth**

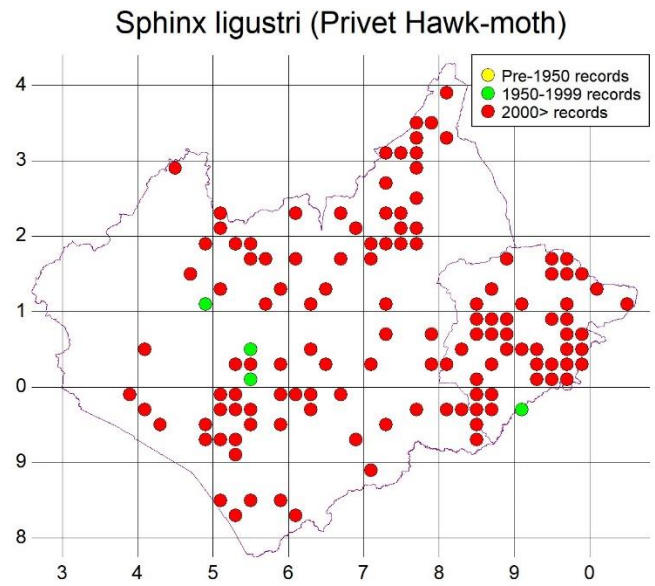
Pre-COVID Annual Moth Recorders' Meetings often featured a ranked list of the number of records of each of the species of hawk-moth resident in VC55. The table below provides updated data in relation to the number of records of each species:

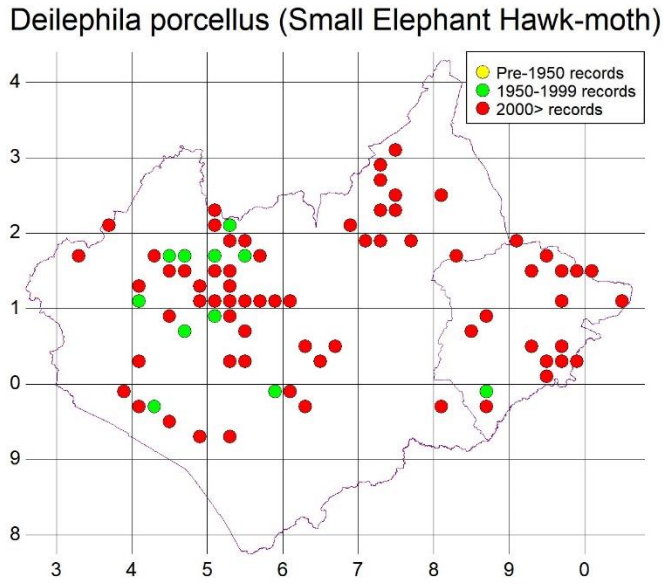
| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2014-2019 | % | 2020 | % |
|---|---|---|---|---|---|---|---|---|---|---|
| Elephant Hawk-moth | 286 | 329 | 207 | 329 | 571 | 490 | 2,212 | 41% | 773 | 42% |
| Poplar Hawk-moth | 336 | 293 | 290 | 356 | 437 | 390 | 2,102 | 39% | 512 | 37% |
| Privet Hawk-moth | 51 | 51 | 35 | 47 | 103 | 163 | 450 | 8% | 177 | 9% |
| Lime Hawk-moth | 50 | 36 | 23 | 20 | 33 | 49 | 211 | 4% | 104 | 4% |
| Eyed Hawk-moth | 31 | 27 | 21 | 28 | 28 | 48 | 183 | 3% | 48 | 3% |
| Small Elephant Hawk-moth | 18 | 12 | 8 | 20 | 26 | 32 | 116 | 2% | 44 | 2% |
| Pine Hawk-moth | 12 | 10 | 10 | 12 | 20 | 42 | 106 | 2% | 41 | 2% |
| **Total** | **784** | **758** | **594** | **812** | **1,218** | **1,214** | **5,380** | | **1,699** | |

As the total number of records varies each year, the %age of the total hawk-moth catch is included, and the following tentative conclusions can be drawn from the data:

- The proportions of the total catch and the rankings for each species remain fairly stable over the period;
- 2020 saw the highest ever number of records of Elephant Hawk-moth;
- Privet Hawk-moth records have increased significantly in recent years;
- Lime Hawk-moth appears to have had a good year in 2020; and
- The number of Pine Hawk-moth records have also increased significantly in recent years;

Until the early 1990's, the Privet Hawk-moth was a very rare species in VC55, but it is now a regular visitor to moth traps over most of VC55. However, it still has not been recorded from the far north-west of the county as the map (below left) shows:

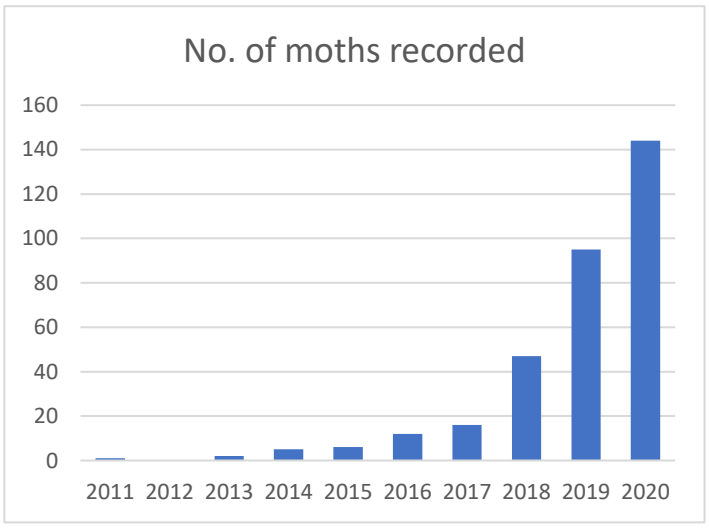


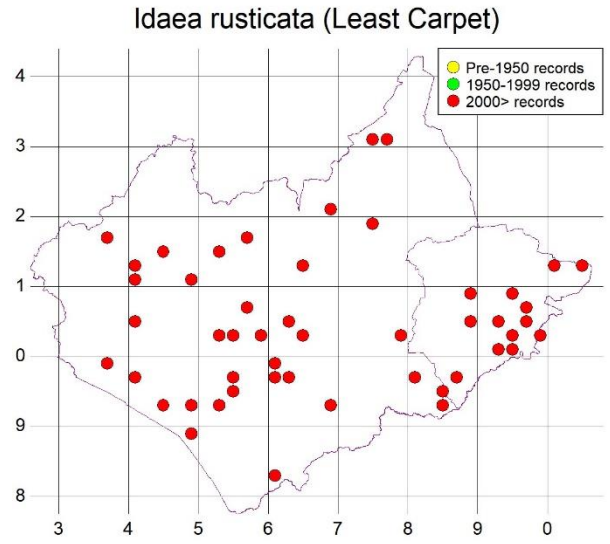




The Small Elephant Hawk-moth has traditionally had two strongholds in VC55, with Charnwood being the main one with a smaller population in the Ketton area. But in recent years it has been turning up more frequently outside of these two areas and thanks to Pete Leonard's trapping in the Vale of Belvoir, that area may also prove to be a favoured area for this species.

**70.004 (1699) Idaea rusticata Least Carpet**

"The State of Britain's Larger Moths" (Fox et al, 2021) identifies this as the species with the second highest increase in abundance over the previous 10 years (Buff Footman having the highest). Records from VC55 also show a dramatic increase, with there being 81 records of 144 moths in 2020. It is now also widely distributed over the whole of the county as the map below shows.




**70.032 (1677) Cyclophora albipunctata Birch Mocha** **First confirmed record for VC55**

On 11/08/2020 Anthony Plummer recorded this species in his Quorn garden. This is the first confirmed record of this species from VC55.

There is an unconfirmed record from 1988 and it is also included in Herbert Buckler's unpublished "List of Lepidoptera of Leicestershire" of 1954. Buckler and his co-collaborator, Arthur Lisney, both bequeathed their Lepidoptera collections to the Leicester Museum and as a result of this we have a voucher specimen, caught by Lisney on 02/09/1936 in Spencefield Lane, Leicester and which is actually a False Mocha.

**70.159 (1855) Eupithecia phoeniceata Cypress Pug**

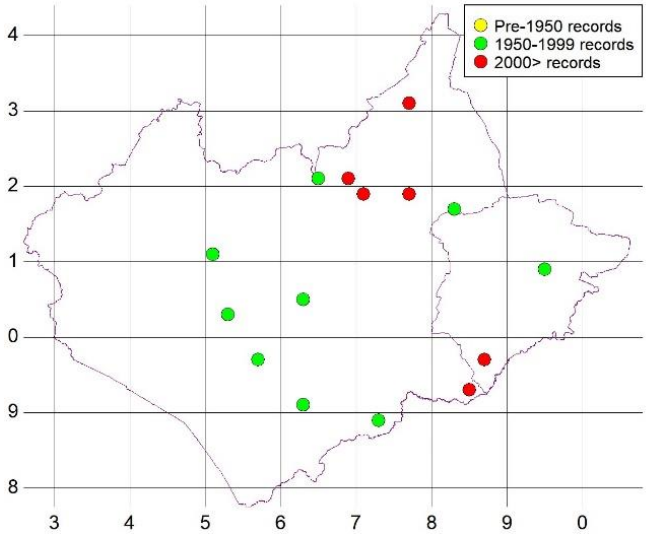
This species was first recorded from Kirby Muxloe in 2017 and six records in 2020 now confirm that this species is resident in VC55. The first two of these records came on the same night, 18/08/2020 from Adam Poole's Broughton Astley garden (photo below left) and Michael Lester's Littlethorpe garden. The next came from Eric Leese's Sapcote garden on 01/09/2020, before Adam caught another on 07/09/2020. Sean Wileman caught one in his Ashby-de-la-Zouch garden on 08/09/2020 and finally, Dale Green caught one in his Croft garden on 16/09/2020.

**70.164 (1824) Eupithecia egenaria Pauper Pug**

On 17/05/2020 a moth caught in John Tinning's Queniborough garden trap became only the 4th VC55 record of this species (photo above right). The previous records were from Barnsdale Gardens, Exton on 15/07/2008, Swithland Wood on 26/06/2015 and a Sapcote garden on 22/05/2017. The Swithland Wood record was of two moths caught amongst Small-leaved Lime, this species' larval foodplant. Although all were confirmed by dissection, the other three records might seem less likely. However, the online BSBI atlas shows that Small-leaved Lime is present within all of the tetrads from which these records came. The national macromoth atlas (Randle et al, 2019) highlights the fact that whilst this species' historical strongholds were in the Wye Valley and East Anglia, it has been recorded from many other areas this century. Hence these VC55 records provide local evidence of this.

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

Because of the identification challenges associated with many pug species, historical records of this group of species can be difficult to assess. But this shouldn't as much of an issue with this distinctive species. There are no Victorian records of this species and the first VC55 record didn't come until 1952, when one was caught in a Great Bowden moth trap. There were then approximately 20 records up until the end of 1999, though these indicate a largely localised distribution. Between then and the end of 2019, and despite a massive increase in moth recording, there were only seven records: from Asfordby in 2001, Melton Mowbray (twice) in 2002, Great Easton in 2005 and Lyddington in 2005, 2008 and 2009. Then, after 10 years without records, two were recorded in 2020: from Coombs Meadow NR, Stathern on 20/05/2020 by Pete Leonard (photo below) and from Toby Carter's Grimston garden on 22/05/2020. The map shows a north-east "cluster" of recent records.



**71.001 (2022) Thaumetopoea processionea Oak Processionary** **First record for VC55**

Considered to be a pest of oak, this species was accidently introduced in London in the mid-2000s and is now spreading, despite control measures (Randle et al, 2019). One recorded from Rutland Water Lyndon NR by Paul Bennett and Martin Grimes on 30/07/2020 is the first record for VC55. Only time will tell if this was a migrant/vagrant or an indication that this species is breeding locally. Should we celebrate this addition to the VC55 list or be worried about the future of our oak woodlands?!

**72.012 (2029) Euproctis chrysorrhoea Brown-tail**

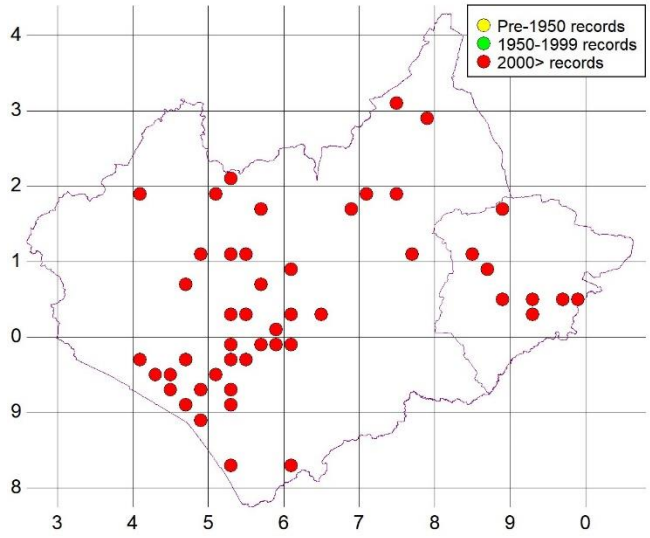
2019 saw the first VC55 record of a larval web of this species and 2020 saw twice as many records as in any previous year: 24 records and a total of thirty moths.

**72.023 (2059) Diacrisia sannio Clouded Buff** **First post-VCH record for VC55**

This moth (photo right) was caught in Ron Follows' Barrowden garden moth trap on 31/05/2020. This species was included in the VCH list for Rutland, without comment. This is a species of heathland and, less frequently, chalk and limestone grassland. Its larval foodplants are heather and various herbaceous plants. It was known from the Soke of Peterborough (approximately 12 miles to the east of Barrowden) in the first half of 20th century, apparently being abundant on heathland in the area, but the last record came in 1965. Looking at the national atlas (Randle et al, 2109), the nearest post-2000 record is in Cambridgeshire some 50 miles away. Hence this record from Barrowden is a real surprise.

**72.029 (2068) Callimorpha dominula Scarlet Tiger**

The colonisation of VC55 by this species continues apace. In 2020 there were 61 records, twice as many as in any previous year and the species is now occupying nearly twice as many tetrads (map right). But its status varies across the county - it is still absent from some areas, yet locally common in others. Two hotspots for this species are Edith Weston, from where it has been regularly recorded by Vic Arnold and others for the last 8 years and Littlethorpe, where Tony Fletcher recorded dayflying moths at a few locations on several occasions in 2020 and Michael Lester caught 5 in his garden trap on 23/06/2020 and 7 on 25/06/2020.

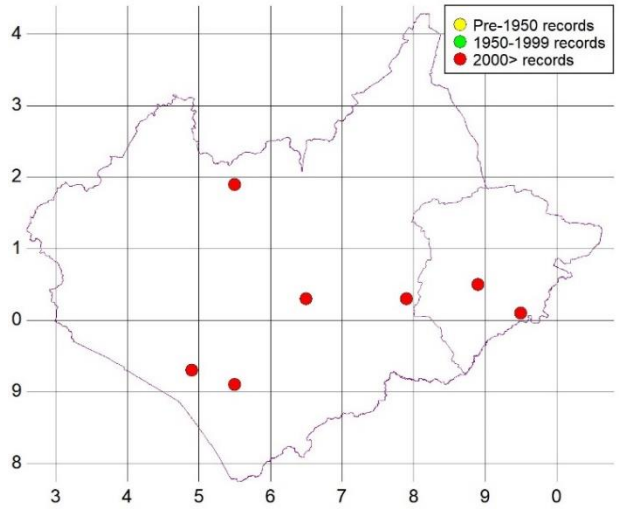



**72.052 (2493) Macrochilo cribrumalis Dotted Fan-foot**

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 has always been a little puzzling as extensive MV light trapping at the reserve over the years failed to record this species. But Rothamsted light traps use a tungsten light source which attracts species in differing quantities to MV light. For example Common Footman is often the most frequently caught species, yet other species such as Large Yellow Underwing are caught in much smaller numbers. This may be the explanation. Ron has also been catching Dotted Fan-foot in sites just over the border in Northants in the years leading up to and including 2020, indicating that this species has been increasing its range towards Rutland in recent years.

**72.066 (2475) Parascotia fuliginaria Waved Black**

There were 3 records of this species in 2020: From Eric Leese's Sapcote garden on 26/07/2020 (photo below), from Rutland Water Lyndon NR (Paul Bennett & Martin Grimes) and from a Dunton Bassett garden (Stewart McDonald), the latter two records both being on 30/07/2020. There are only 6 previous VC55 records of this species.




**72.076 (2451) Catocala fraxini Clifden Nonpareil**

The eight Clifden Nonpareil recorded in 2019 were one of the main highlights of that year and the question was, would there be further records in 2020. Well, the good news is that there were seven further records in 2020:

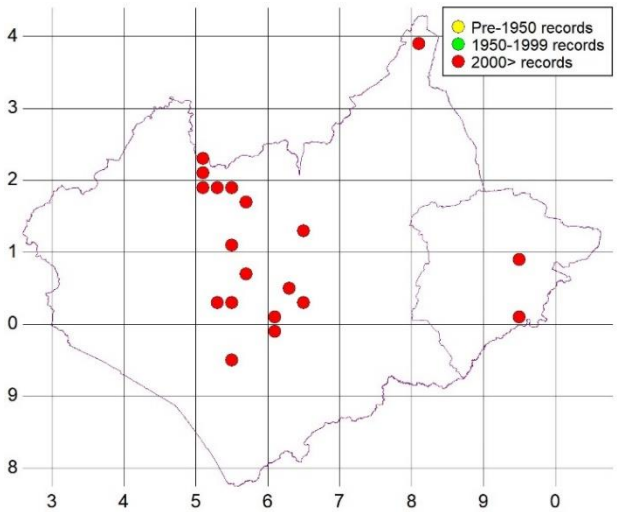
| | | | |
|---|---|---|---|
| Hoby garden | 23/08/2020 | Candice Barker | 1 |
| Ravenstone garden | 12/09/2020 | Keith Tailby | 1 |
| Luffenham Heath golf course | 14/09/2020 | Ron Follows | 1 |
| Asfordby Hill garden | 16/09/2020 | Sam Pitt Miller | 1 |
| Harby | 19/09/2020 | Gareth Hirons | 1 at rest |
| Wymondham | 19/09/2020 | Katie Field | 1 |
| Asfordby Hill garden | 19/09/2020 | Graham Munton | 1 at rest |

**72.081 (2455) Catocala sponsa Dark Crimson Underwing**

This species was first recorded from VC55 in 2019, with two moths caught on the same night (26/08/2019) in Barkestone Wood and Sapcote. We now have a third record: from Luffenham Heath golf course on 29/07/2020 by Ron Follows.

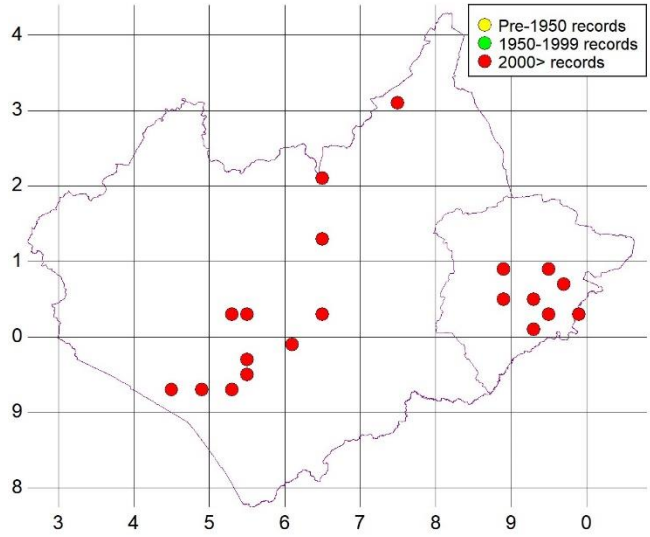
**73.059 (2223) Calophasia lunula Toadflax Brocade**

This species first arrived in VC55 in 2018 and by the end of 2019 there had been 13 records. In 2020, there were a total of 32 records: 20 records of moths and 12 records of larvae, the latter mainly from a variety of locations within Hathern. The distribution map shows how its distribution is still mainly centred on the greater Leicester area, though it has how expanded its range northwards along the Soar valley corridor. Photo below by Mark Skevington.



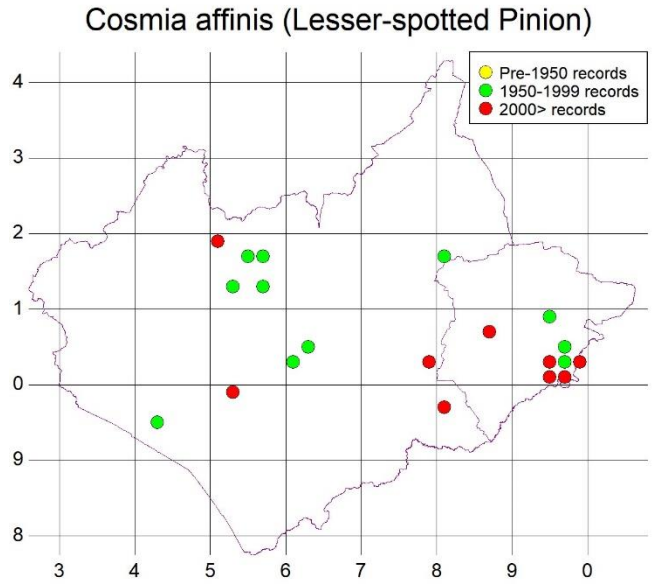

**73.082 (2292) Cryphia algae Tree-lichen Beauty**

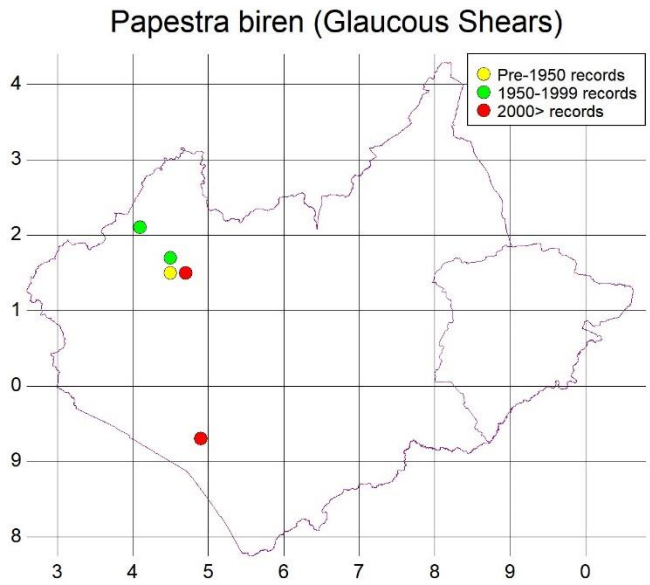
Like the Toadflax Brocade, this species arrived in 2018 and has seen the number of records increase from 10 records up to the end of 2019 to 29 in 2020. But this species shows a different pattern of colonisation, with a strong cluster of records in Rutland and another to the south-west of Leicester. Photograph below by Mark Skevington.




**73.215 (2316) Cosmia affinis Lesser-spotted Pinion**

Although this appears to have never been a common species in VC55, there have been very few records in recent years, with only 14 post-2000 records. The distribution map (below left) appears to show a population in the south-east Rutland area and there have been very few records from other areas of the county. As in 2019, there was only one record in 2020, from Dave Robinson's Loughborough garden on 08/08/2020. This is the third record from his garden in the last three years, which seems to indicate that there is probably a small population in that area too.




**73.272 (2162) Papestra biren Glaucous Shears**

Sometimes records are very difficult to explain. The status and distribution of this species (map above right) was well known: Nationally declining and in VC55 restricted to the higher parts of Charnwood Forest and for the last 20 years only recorded in small numbers from Charnwood Lodge NR. And then one (confirmed by dissection) turns up in Graham Calow's Sapcote garden on 19/05/2020!

**73.297 (2194) Mythimna albipuncta White-point**

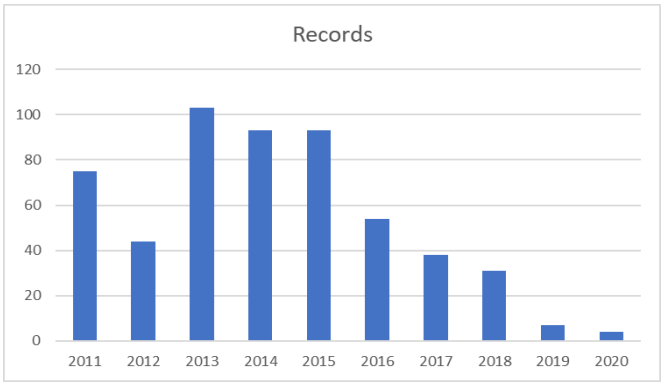
There were only 8 previous records of this migrant visitor to VC55 but in 2020 there were 6 records of 8 moths. Interestingly, this included two early records: from Rutland Water on 30/06/2020 (Ben Jacklin) and from Luffenham Heath golf course on 29/07/2020 (Ron Follows), raising the prospect that these might be from the resident population that has been advancing in our direction from southern and eastern England.

**73.356 (2135) Xestia agathina Heath Rustic**

This species is a species of heath and moorland, but which also has a tendency to "wander" as evidenced in 2020 with a record from Andy Johnson's Dadlington garden on 07/09/2020.

**73.368 (2136) Naenia typica Gothic**

If experienced VC55 moth recorders were to be asked about the status of this species in the county, they'd probably say that it's a fairly common species, as it was. But in 2020 there were only 5 records of singletons of this species. It's not unusual for species to have bad years, but in this instance, there would seem to be clear evidence of a local decline that has also been reported nationally (Randle et al, 2019). The chart (right) shows the number of VC55 records over the last 10 years.




**74.002 (2076) Meganola albula Kent Black Arches**

On 24/06/2020 Ray Morris caught a Kent Black Arches in his Dadlington garden trap. Two nights later on 26/06/2020 Andy Johnson caught one (and it was a different one!) just a few hundred metres away in his Dadlington garden.

There are only two previous records of this species from VC55: from the Loddington Rothamsted light trap in 2014 and from Angela Davies' Carlton garden in 2016. The latter is just over 4 miles from Dadlington and this supports the hypothesis that the species could now be resident in VC55.

**Summary**

In terms of the number of new species recorded in the year, 2020 cannot match the 2019 total (15), but that was an exceptional year. Nevertheless, six species of micromoth were recorded from VC55 for the first time (Caryocolum proxima, Coleophora violacea, Coleophora taeniipennella, Scythris inspersella, Saltmarsh Plume and Moitrelia obductella) and two species were recorded for the first times since the Victoria County History of 1907 (Infurcitinea argentimaculella and Yponomeuta irrorella). There were also two species of macromoth recorded from VC55 for the first time (Birch Mocha and Oak Processionary).

But what was perhaps more notable about 2020 was 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. This report has highlighted a number of such species: Cochylis molliculana, Grapholita lobarzewskii, Box-tree Moth, Cypress Pug, Brown-tail, Scarlet Tiger, Clifden Nonpareil, Toadflax Brocade and Tree-lichen Beauty.

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 highlighted in this report.

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, I would like to again thank all our local moth recorders 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.

Adrian Russell
County Moth Recorder for VC55