

**LEICESTERSHIRE & RUTLAND
ENTOMOLOGICAL SOCIETY**

**The status of Diptera in
VC55**

**Asilidae, Psilidae &
Scatopsidae**

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Asilidae

Dioctria baumhaueri with prey
(Kate Nightingale, NatureSpot)



Psilidae

Psila fimetaria
(Graham Calow, NatureSpot)



Scatopsidae

Scatopse notata
(Annie Smith, NatureSpot)

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Preface

This LESOPS continues the review of the status of the Diptera in Leicestershire & Rutland based on known data to the end of 2020.

Much reliance has been placed on retrieving records from the ORCA database maintained by the Leicestershire & Rutland Environmental Records Centre (LRERC). The county collections (CRC) at Barrow upon Soar have been checked for VC55 specimens along with the paper files held by the site. Several planning surveys have contributed records (thanks to LRERC for making copies available). Commoner, i.e. the more readily identifiable, species have come from NatureSpot contributors which, at least for some species, gives a better idea of VC55 distributions. Historical publications and journals on British entomology have also been checked for early records of species. Finally, the NBN Atlas has been checked for records that have not been reported locally.

Notes have been drawn from a range of publications while distribution maps for local species have been produced using MapMate®.

Asilidae

Introduction

Colloquially known as “Robberflies”, the Asilidae are a group of predatory insects that can be readily recognised by a noticeable “moustache” and a notched appearance between the eyes (Figure A1).

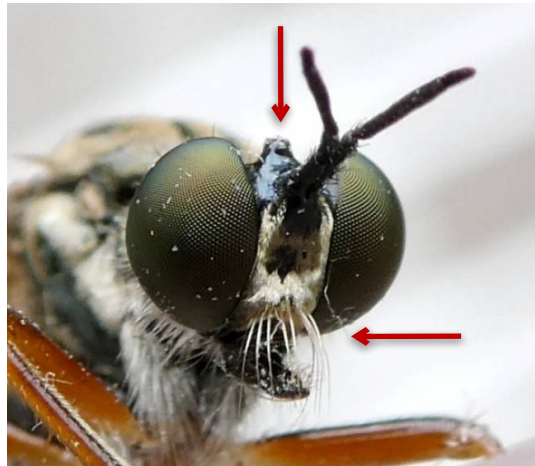


Figure A1: Family diagnostic characters
Kate Nightingale (NatureSpot 2017)

These flies sit in the sun waiting for passing prey which they then pounce upon piercing them with their sharp mouthparts. There are 29 British species of which 13 have been seen in Leicestershire & Rutland (VC55). Modern keys for their identification are readily available with the British species being covered by Harvey (2016). Particularly recommended is the field guide to asilids found in the Netherlands and Belgium, also covering Britain, by van den Broek & Schulten (2017) which is packed with information about the family including extensive illustrations of diagnostic characters, keys to 70 species (some of which may appear in Britain in time), descriptions of morphology and behaviour as well as notes on distribution. The family is also present in amber (Figure A2).



Figure A2: Asilid in Cretaceous amber
(Dikow & Grimaldi, 2014)

The national scarcity rating of members of the Asilidae have been considered by Drake (2017).

- van den Broek, R. & Schulten, A. (2017). *Field guide to the Robberflies of the Netherlands and Belgium*. Jeugdbonds uitgeverij (JBU Dutch Youth for Nature publishing house).
- Dikow, T. & Grimaldi, D.A. (2014). Robber flies in Cretaceous amber (Insecta: Diptera: Asilidae). *American Museum Novitates*, **3799** 1-19.
- Drake, C.M. (2017). A review of the status of Larger *Brachycera* flies of Great Britain. Natural England Commissioned Report NERC192.
- Smart, M.J. (2005). Identification of the females of the smaller British species of *Machimus* sensu lato (Diptera, Asilidae) with a note on the morphology of the ventral abdominal and thoracic plates. *Dipterists Digest*, **12**, 61-68.
- Stubbs, A.E. & Drake, M. (2016). *British Soldierflies and their allies*. British Entomological & Natural History Society.
- VCH-L (1907). *Victoria County History – Leicester*.

Dioctria atricapilla Meigen

26 records Figure A3

The male has a dark brown face whilst that of the female is more golden. The eyes of the male are violet-blue and the legs are totally black, the only one of this genus to do so. The thorax has a thin silvery line on the side which is distinctive for this species. Common throughout much of England and the Welsh borders

First recorded by PAH Muschamp from the canal in Leicester in 1943 and then in 1977 by Derek Lott at The Brand, Woodhouse Eaves. Since the 1990s, the fly has been noted in most years usually in June, occasionally in May and July.

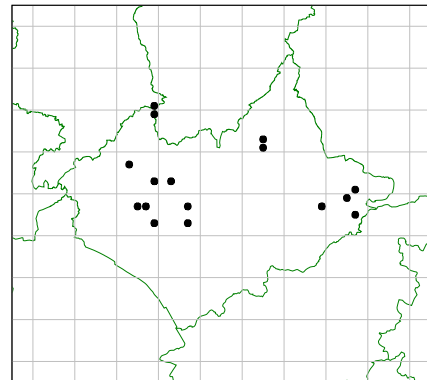


Figure A3: Empingham 2018 ♂
(Andrew Dejardin NatureSpot)

Dioctria baumhaueri Meigen

27 records Figure A4

First noted in VC55 in 1980 when seen in the extreme south near Stanford Reservoir then not again until seen in a Leicester garden by David Gould in 2009. Since 2011 the fly has been seen fairly regularly mostly to the west of the area. Commonly recorded in England but rarer elsewhere.

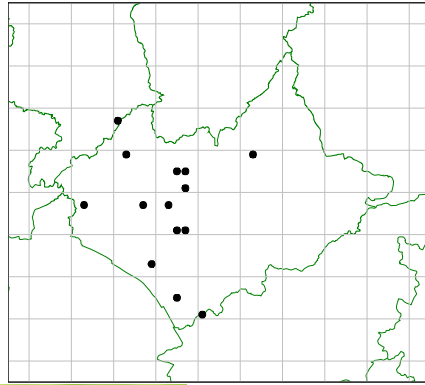


Figure A4: Spearwort Fields, 2017
(David Gould, NatureSpot)

Dioctria linearis Fabricius

36 records Figure A5

Predominantly found in England and eastern Wales. Recorded at Buddon Wood in 1983 by Derek Lott then regularly to date.

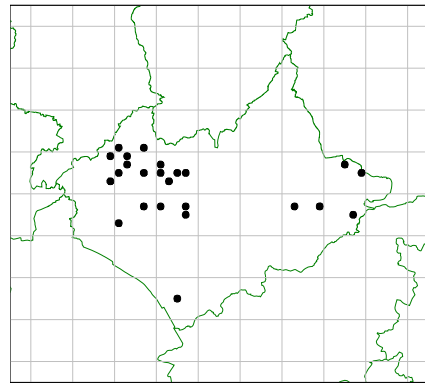


Figure A5: Martinshaw Wood, 2012
(Dave Nicholls, NatureSpot)

***Dioctria oelandica* L.** **Nationally scarce**
2 records Figure A6

A large attractive fly found across the country but rarer in the East Midlands to Tyneside. The species was noted at Quorn in 1925 by John Saunt of Coventry. Since has only been found once when noted at Charnwood Lodge NNR by Kate Nightingale in June 2016. Apparently a shy elusive species usually associated with oak trees. While regarded as being nationally scarce it may well be overlooked because of its behaviour.

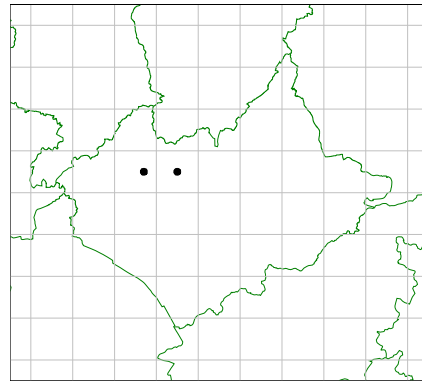


Figure A6: Charnwood Lodge, 2016
(Kate Nightingale, NatureSpot)

***Dioctria rufipes* De Geer**
85 records Figure A7

Usually easily recognised because the front and middle legs have almost all-orange femurs and tibia while the hind legs are mostly black. Unlike many of the family, tends to be found in grassy, rather than wooded, habitats. Widespread in England, scattered elsewhere. The NBN Atlas has a 1905 record from Leicester (no other details) while Edwin Lowe found it at Thurmaston (1908) and John Saunt at Quorn (1925). Fairly regularly seen these days.

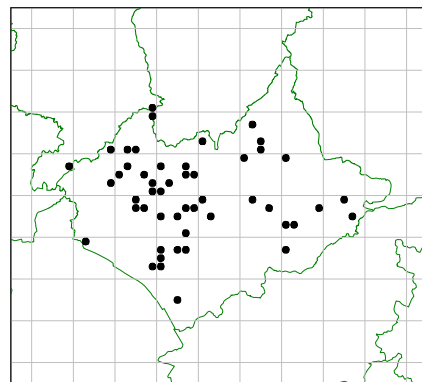
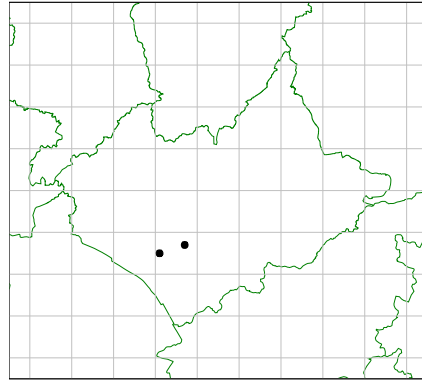


Figure A7: Croft Hill, 2011
(David Nicholls, NatureSpot)

***Dysmachus trigonus* Meigen**

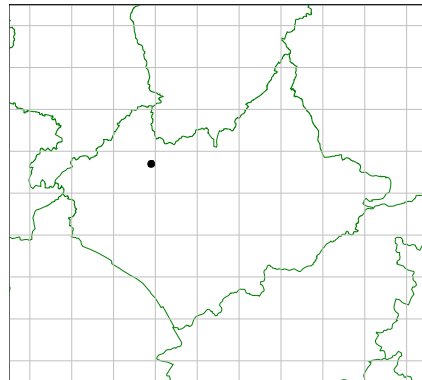
2 records

A widespread species in England tending to be coastal in Wales. Reputed to prefer sandy habitats. The species was reported from the Blaby area by WA Vice (VCH-L, 1907, but without details) but then not again until spotted by Steve Woodward & Helen Ikin at Croft Pastures NR in June 2014.

***Etolmus rufibarbis* Meigen** Nationally scarce

1 record

A species of southern and eastern England. The single record for VC55 came from Longcliffe near Loughborough when seen by PAH Muschamp in 1936 being listed in his paperwork deposited at the Barrow Collections. As the fly seems to prefer sandy situations it is possible that this record may be erroneous.

***Leptarthrus breviostris* Meigen**

2 records Figure A8

Scattered throughout Britain although it seems to be less frequent in the Midlands. Noted at New Lount LNR in June 2012 by David Nicholls (identified via *diptera.info*). The other sighting came from Rutland when found by Brian Wetton at Bloody Oaks Quarry NR in June 2017.

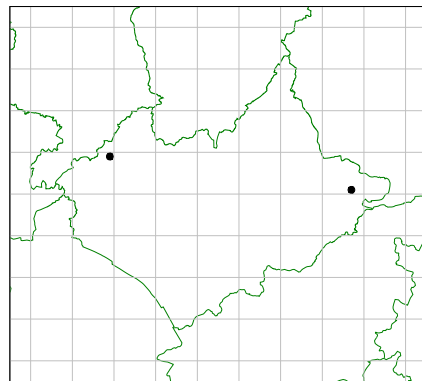


Figure A8: New Lount, 2012
(David Nicholls, NatureSpot)

Leptogaster cylindrica De Geer

64 records Figure A9

Common in England & Wales but sparse in Scotland. Found across VC55 noted by WA Vice in the Market Bosworth and Blaby districts (VCH-L, 1907). Not then recorded until 1987 (Hallaton Castle, John Mousley) and regularly since.

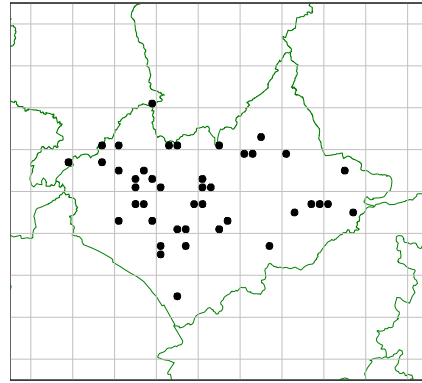
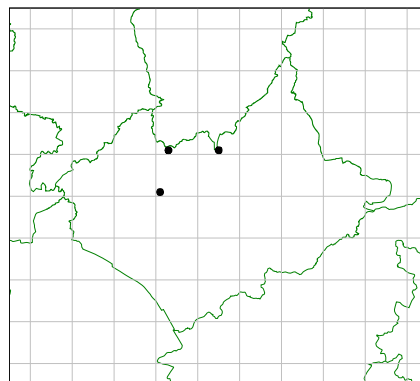


Figure A9: Huncote Embankment, 2012
(Mark Skevington, NatureSpot)

Leptogaster guttiventris Zetterstedt **?Local**
3 records

This species needs careful examination to separate it from *L. cylindrical* which has a continuous dark brown stripe along the middle of the tergites which is broken in the current species. Scattered throughout Britain. VC55 records came from Ulverscroft (1992) and Twenty Acre NR (1994) by Neil Frankum with Derek Lott noting the fly at Loughborough Big Meadow NR in 2006.



Machimus atricapillus Fallén

58 records Figure A10

Common in England & Wales but less so in Scotland. Females need to be carefully examined to separate from others of the genus (but see Smart, 2005). Fairly widespread in VC55 although not recoded locally until 1991 (Breedon Hill, Neil Frankum). Since 2005 seen regularly.

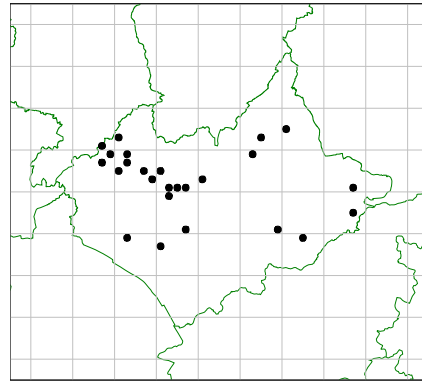


Figure A10: Bradgate Park, 2014
(C. Butterfield, NatureSpot)

Machimus cingulatus Fabricius

12 records Figure A11

Widespread in England & Wales, scarcer in Scotland. Usually local tending to be associated with sandy habitats. Our records come from the eastern part of Charnwood, particularly Bradgate Park having been noted in the VCH-L (1907) as having been seen there. Reported by TW Tailby in 1954 from the Leicester area with two specimens in the County collections (CRC 37/10/1C/5,6).

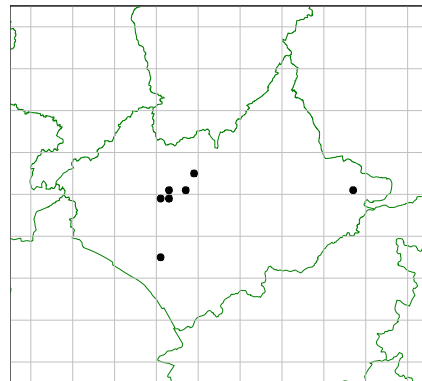


Figure A11: Croft Pastures, 2009
(David Gould, NatureSpot)

Neoitamus cyanurus Loew

18 records Figure A12

Tends to be found in older woodlands but widespread in Britain. Noted from Quorn in 1924 and again in 1927 by John Saunt. Next recorded from Gisbornes Gorse (Charnwood Lodge NNR) in 1977 and from the Ulverscroft area by Neil & Maggie Frankum in 1991. Since 2010 seen occasionally mostly in the Charnwood area. Noted from Clipsham Park Wood in 2020.

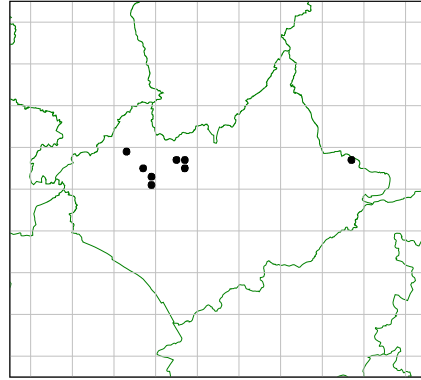


Figure A12: Charnwood Lodge NNR, 2015
(Kate Nightingale, NatureSpot)

Psilidae

Introduction

The Psilidae are characterised by the costal break being some distance from the wing base (Figure P1) which is also only shown by members of the Tephritidae. Unlike the tephritids, the wings of psilids are not so obviously marked. The flies are small to medium in size being generally dark or yellow bodied. The larvae are phytophagous with some being serious crop pests. The flies are mostly well-spread throughout Britain with 27 species currently being noted in the country. Usually found on low herbage or on bushes.

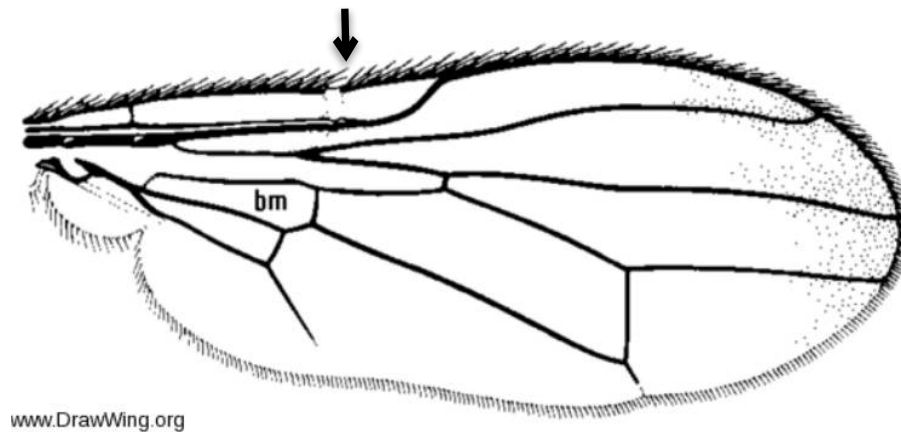


Figure P1: Example of psilid wing showing costal break position

The family is split into two sub-families. Members of the Psilinae (four British genera) are mainly slender in appearance ranging in size from 3-13mm. They usually have a triangular head, which when viewed in profile shows a receding face. In contrast the Chylzinae (one British genus) appear to be more stumpy. Their natural behaviour varies with some having larvae that mine leaves and stems whilst others are considerable agricultural pests.

Only 13 of the national species list have been recorded in Leicestershire & Rutland with most species having less than ten records locally. NatureSpot contributors have submitted images of only two species emphasising the relative difficulty in recognising the family and achieving reliable identifications. None of the locally recorded species were considered being scarce in Ismay (2016).

The key by Collin (1944) of British species is now out-of-date as it does not include updated taxonomic changes especially in relation to the genus *Loxocera*. However, if used with care, the down-loadable key to European species by Beuk (2022) allows recognition of all current British species.

Early records of psilids in VC55 seem to be limited to the records made by WA Vice with species being listed in the Victoria county History for Leicester (VCH-L, 1907). However, three species (all of the then-used *Loxocera* genus) had earlier been noted by Vice (Vice, 1900) giving actual dates from 1884-1893 although locations were simply mentioned as "Leicestershire". The VCH-L records have allowed, in some cases, a date to be allocated to a named site. Most of the records to 2020 have been as the result of contract work by experienced entomologists.

Beuk, P. (2022). https://www.online-keys.net/infusions/keys/keys_view.php?key_no=34

Collin, J.E (1944). The British species of Psilidae (Diptera). *Entomologist's Monthly Magazine*, **80**, 214-224.

Ismay, J. (2016). A provisional assessment of the status of Acalyptrates in the UK. *NECR 215*

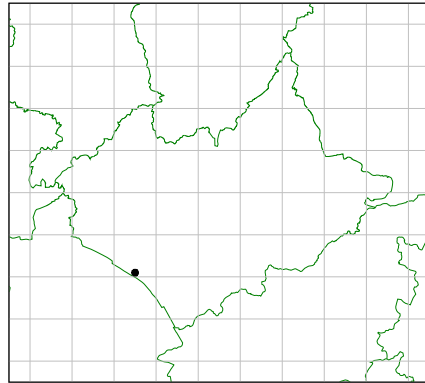
Vice, W.A. (1900). Notes on *Loxocera*. *Entomologist's Monthly Magazine*, **36**, 115-116.

Chamaepsila atra Meigen

1 record

Scattered throughout Britain tending to be found May-June.

The sole VC55 record came from Three Corner Spinney adjacent to the A5 Leicestershire-Warwickshire boundary when found by Steve Falk in July 1995. Reported as part of the Dipterists Forum Stilt & Stalk Flies recording scheme.

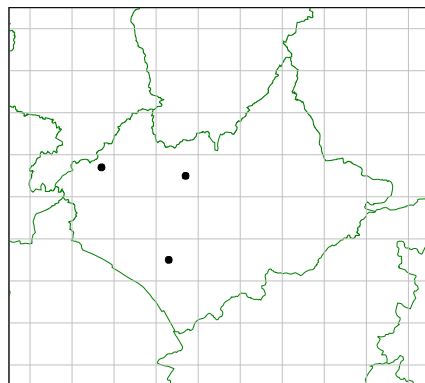


Chamaepsila nigricornis Meigen

3 records

Scattered throughout England & Wales and also in the Scottish Highlands.

The three local records came from scattered sites 1976-2018. Seen in May, August & September.

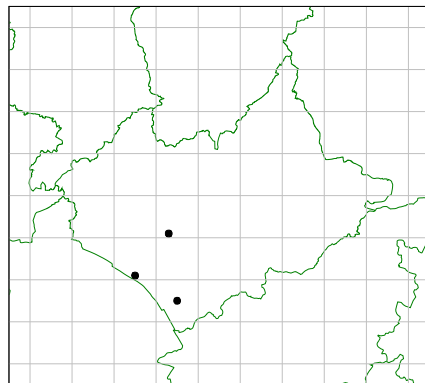


Chamaepsila obscuritarsis Loew

4 records

Scattered throughout England & Wales and also in the Scottish Highlands.

Local records seem to come from the south of Leicestershire 1987-2018. Seen during June.

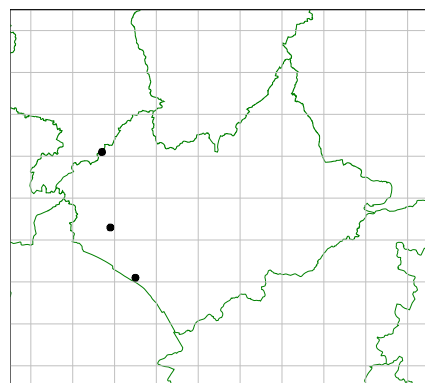


Chamaepsila pallida Fallén

3 records

Scattered throughout Britain.

Local records come from the west of Leicestershire April and July.

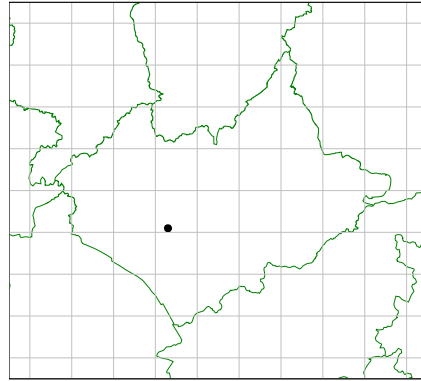


Chamaepsila persimilis Wakerley

1 record

Thinly scattered records mainly from England & Wales.

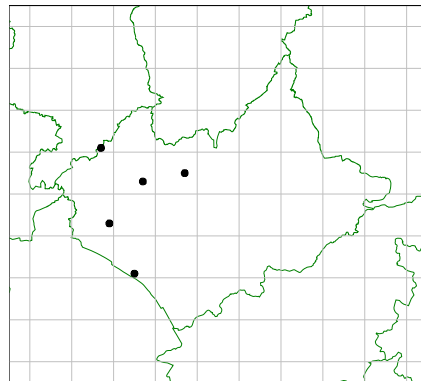
The sole local record was made in 1987 from the Enderby area as part of the Invertebrate Site Register recording effort,

***Chamaepsila rosae*** Fabricius

8 records

One of the most common psilids being found throughout Britain. The larvae of this species attacks the roots of carrots and parsnips to such an extent that the species is an agricultural pest.

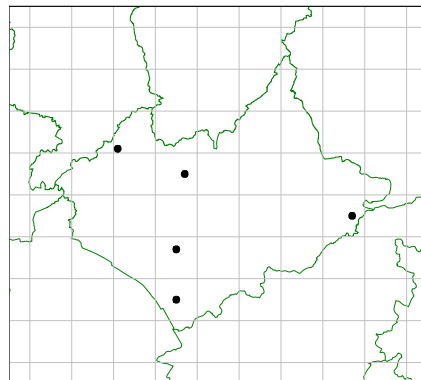
Much of the local records originate from Andy Godfrey's survey work in the Charnwood Forest area.

***Chyliza leptogaster*** Panzer

7 records

Fairly frequently encountered in England & Wales.

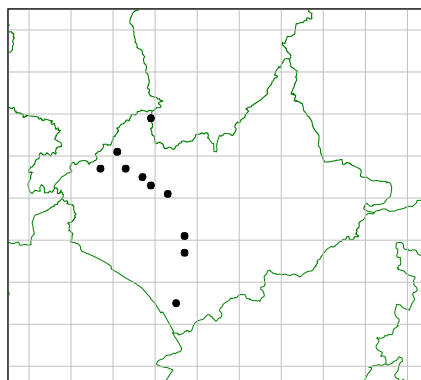
The few VC55 records come from experienced entomologists 1975-2020 May-June.

***Imantimyia albiseta*** Schrank

11 records

Predominantly found in England & Wales less so in Scotland,

Local records have a western distribution being first noted in 2000. Eight of the records came in the period 2015-2016 mainly June-August.

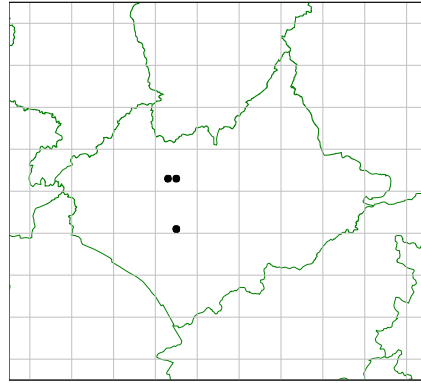


Imantomyia sylvatica Meigen

4 records

Scattered throughout Britain.

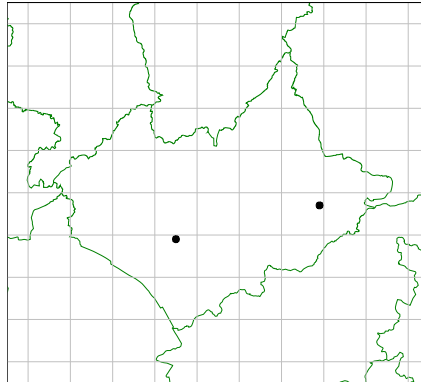
First noted by WA Vice in 1884 at Braunstone, and then in "Leicestershire" 1893. He also noted it at Swithland (VCH-L, 1907) but with no details. The only other record came in 1990 when seen by Alan Stubbs at Swithland Wood.

***Loxocera aristata*** Panzer

2 records

Scattered throughout England & Wales.

Recorded by WA Vice when seen at Narborough Bog in July 1985 (Vice 1900). The only other record came from the Gorse Close (Rutland Water) malaise trap September 2014 when two males were identified by Ray Morris.

***Psila fimetaria*** L.

23 records Figure P2

Found throughout Britain.

The commonest psilid recorded in VC55 although with no records from Rutland as yet. On the wing May-July, Many of the more recent records come from NatureSpot contributors. May-July.

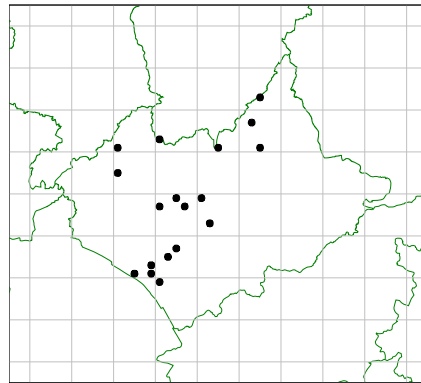


Figure P2: Leicester, Gilroes Cemetery 2012
(Dave Nicholls, NatureSpot)

Psila merdaria Collin

7 records Figure P3

Throughout England & Wales and the Scottish Highlands.

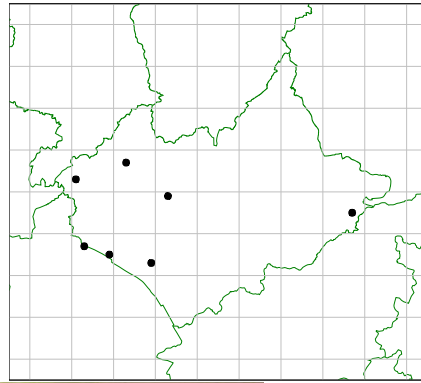
Examination of the antennae allows separation from *P fimetaria*. May-July.

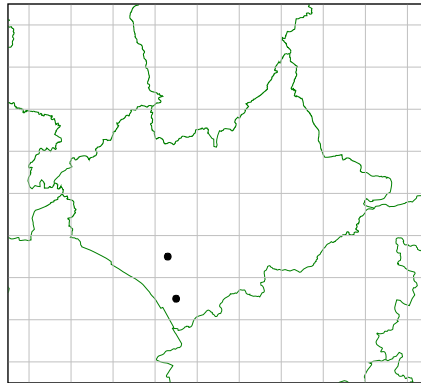
Figure P3: Ashby Canal, Wykin 2015 ♂
(Graham Calow, NatureSpot)

Psilosoma lefebvrei Zetterstedt

2 records

Scattered throughout Britain but not common.

First noted locally in September 1976 (DF recording scheme) and not again until 2018 at the Misterton Marshes complex found by David Gibbs.



Scatopsidae

Colloquially known as "Compost Flies" (they tend to be found around rotting plant material etc) the Scatopsidae are small mostly black (often shining) flies that have been neglected by entomologists because of difficulties in identification. The most commonly used identification aid is that of Freeman & Lane (1985) which does not include all the current 46 British species. To a certain extent further confirmation of identity can be achieved using Beuk (2022) although some species need to be checked against specific publications e.g. Rotheray & Horsfield (1997). As with so many of the fly species, examination of genital structures gives confidence for correct identification. These difficulties have meant that the family is under-recorded both nationally and locally with only four being reported in VC55 with only a single species having more than one record. As the data are so sparse, only summaries are presented here.

Coboldia fuscipes Melander – a single record came from Launde Big Wood NR in September 2006 when found by local mycologists Tom Herring and Richard Iliffe, possibly in association with fungi although this information has not been confirmed. The NBN Atlas has a number of scattered records for England and Wales.

***Efcookella albitarsis* (= *Cookella*)** Zetterstedt – a single record found by Andy Godfrey in 2011 during survey work at the Mountsorrel Quarry complex. Scattered throughout England & Wales.

Scatopse notata Linnaeus – the most numerous of the family in VC55 with three records! All records come from gardens (?associated with compost) during the Spring. The fly was first noted in March 1980 by Don Hall-Smith of Stoneygate, Leicester being identified by Jan Dawson. Annie Smith found it at her Clarendon Park (Leicester) garden in March 2017 (photo on cover) while Andy Dejardin recorded it at Empingham in April 2020. Scattered throughout Britain.

Thripomorpha* (= *Rhegmoclema*) *coxendix Verrall – again only a single local record also being found at the Mountsorrel Quarry complex during survey work by Andy Godfrey in 2012. Scattered in England & Wales.

Freeman, P. & Lane, R.P. (1985). Bibionid and Scatopsid flies. *Handbooks for the Identification of British Insects*, **9**(7). Royal Entomological Society.

Beuk, P (updated 2022). Key to European Scatopsidae.

www.online-keys.net/infusions/keys/keys_print.php?key_no=23.

Rotheray, G.E. & Horsfield, D. (1997). *Ectaetia christii* sp n, a A Scottish species similar to *Ectaetia clavipes* (Diptera, Scatopsidae). *Dipterists Digest*, **4**, 41-44.

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