

**LEICESTERSHIRE & RUTLAND  
ENTOMOLOGICAL SOCIETY**

**The status of Diptera in  
VC55**

**Sarcophagidae,  
Lonchaeidae &  
Chamaemyiida**

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This LESOPS continues the review of the Diptera found in Leicestershire & Rutland up to 2020 with the aim of encouraging recording of the less commonly examined fly communities of our area.

## SARCOPHAGIDAE

### Introduction

The Sarcophagidae or "Flesh-flies" have been much neglected by both British and European entomologists primarily due to species often resembling each other and the general absence of usable keys for identification. Originally included in the Callophoridae family (van Emden, 1954) it has since been raised to its own family status with the wing venation (Figure 1) being characteristic. In addition, the detailed examination of the male genital structures can result in definitive species identification although the same approach for females is much more difficult.

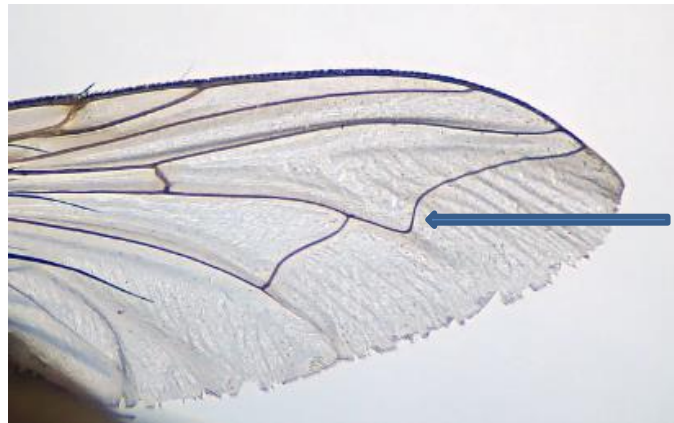


Figure 1. Sarcophagidae wing venation

Although flies in this subfamily vary greatly in size, they are externally uniform in appearance. In contrast, the male genitalia, especially the phallus, are highly distinctive at the species level and have long been used in species recognition although such studies do inhibit the amateur dipterist from pursuing the family further. Adult flies can vary in size (3-22mm) usually having a stout appearance and being very bristly. The coloration can vary from grey to black (but never metallic) with the abdomen having markings as does the thorax. Larval behaviour is variable with some being predatory while others are true sarcophages feeding on a range of (often animal) organic debris (including corpses); a few show parasitoid tendencies.

Adult flies have always been a challenge to identify with an emphasis on genitalia examination rather than morphological characters. Accordingly the identification of members of the Sarcophagidae has tended to be limited to professional entomologists with access to the means to do the identifications. In 2020 the UK Sarcophagidae Recording Scheme was set up (Whitmore *et al*, 2020a) with a new key to identification of both sexes (Whitmore *et al*, 2020b). Whitmore *et al* (2020c) also added a new species for Britain (*Sarcophaga bulgarica*) which had not been previously included.

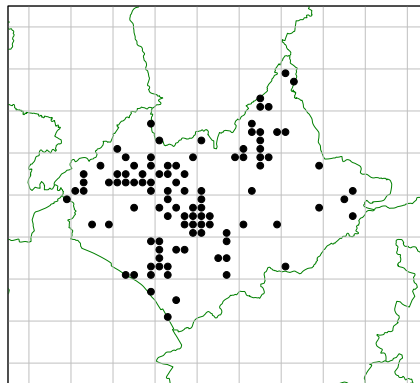
Table 1 summarises the species of Sarcophagidae currently known from Britain with an indication (\*) of those which have been noted in VC55 to 2020. Currently the Dipterists Forum

lists 63 species but it is likely that further species will be recorded in Britain when it will be necessary to refer to European keys to assist identification.

**Table 1: The Sarcophagidae**

Family	Sub-family	Genus (number of species)*
Sarcophagidae	Miltogramminae (kleptoparasites of solitary wasps and bees)	<i>Amobia</i> * (1); <i>Macronychia</i> (5), <i>Metopia</i> (5), <i>Miltogramma</i> (2), <i>Pebalia</i> (2), <i>Pterella</i> (1), <i>Senotainia</i> (1), <i>Taxigramma</i> (1)
	Paravactonychiinae (variable larval and adult habits)	<i>Agria</i> (2), <i>Angiometopa</i> (1), <i>Brachicoma</i> * (1), <i>Nyctia</i> * (1), <i>Sarcophila</i> (1)
	Sarcophaginae (variable larval and adult habits)	<i>Blaesoxipha</i> * (3), <i>Ravinia</i> (1), <i>Sarcophaga</i> * (35)

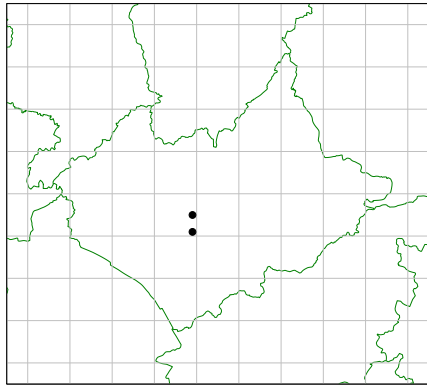
For the purposes of this LESOPS only 21 species have been reliably recorded locally to 2020. However, the occurrence of this fly family in VC55 can be easily shown by noting the distribution of all VC55 Sarcophagidae records (Figure 2). The local database to 2020 holds 261 records for the family of which 177 are simply recorded as *Sarcophaga* or Sarcophagidae.



**Figure 2. Presence of Sarcophagidae in VC55 to 2020**

## Annotated species

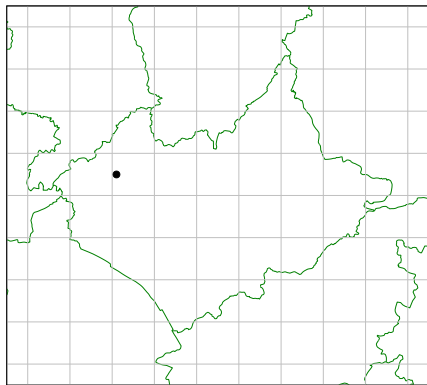
Due to the under-studied status of the family, there seems to be little in the way of details of individual species behaviour in the entomological press. Similarly, distribution comments must be taken with a pinch of salt perhaps reflecting the limited interest in the family at this time.



***Amobia signata*** Robineau-Devoidy (2 records)

A kleptoparasite where the larvae are found in bee nests where they feed on food intended for the hymenopteran larvae, Scattered across England & Wales

The two VC55 records came from NatureSpot recorders – Abbey Park, Leicester by David Nicholls (2011; with identification by Stephane Lebrun) and at Knighton (Leicester) in 2015 by Alan Cann.



***Blaesoxipha rossica*** Villeneuve (2 records)

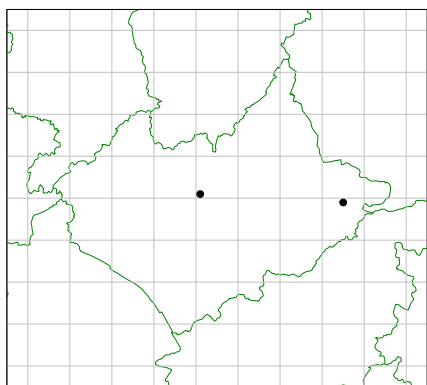
Few British records.

The only sightings of this species came from the Swannington area near Coalville when seen at two localities by Andy Jukes during survey work in 2019.

***Brachicoma devia*** Fallén (2 records)

Larvae are parasitic on bumblebees. Found across England & Wales but scattered elsewhere.

Only recorded twice from VC55. Noted in the Watermead area near Syston in 2011 (Richard Wright). A putative specimen was photographed in the Empingham garden of Andrew Dejardin in 2019 having been identified by referral to iRecord an online identification site using a photograph. The veracity of this record is uncertain at this time.

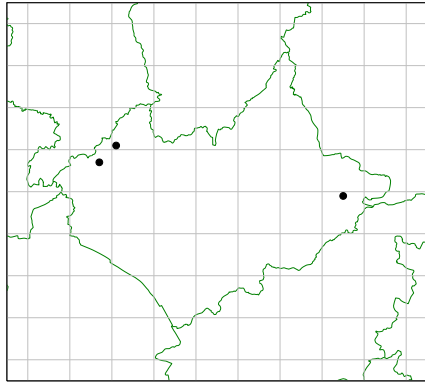


Empingham, 2019  
Andrew Dejardin, NatureSpot id iRecord

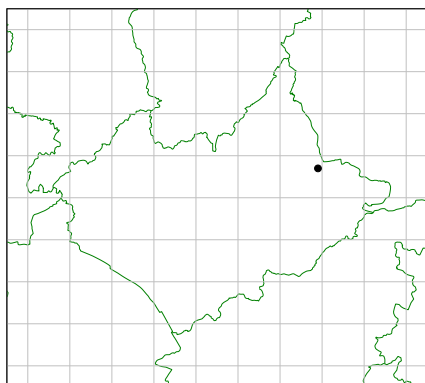
***Nyctia halterata*** Panzer (5 records)

The most easily recognised of the flesh flies with the shiny black body and wings being highly distinctive. The larvae are reported to be parasites of some weevil species. Nationally it seems the fly predominantly occurs in England with a few instances in Wales but not elsewhere.

Despite its ease of recognition there are few VC55 records. It has been noted at Cloud Wood NR on three occasions (2015, 2019, 2020) and at a disused aquatic plant nursery at Ashby de la Zouch in 2018. Seen at Empingham also in 2018.



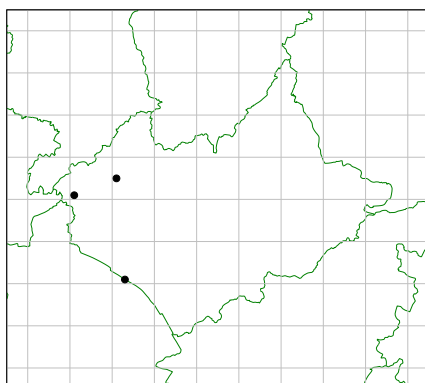
Cloud Wood NR, 2020  
Richard Pegler, NatureSpot



***Sarcophaga anaces*** Walker (1 record)

Nearly all British records come from England. Larva is an endoparasite of some snails.

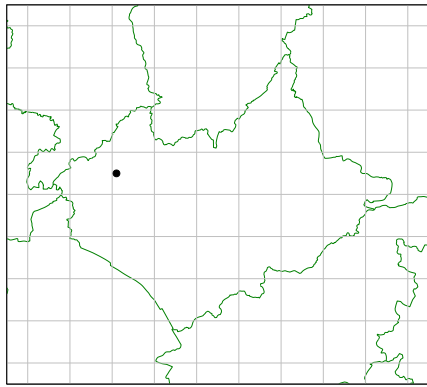
Locally noted only at Thisteton Quarry in 1985 by national expert Stephen Falk.



***Sarcophaga aratrix*** Pandellé (4 records)

Scattered throughout England & Wales. Larvae apparently parasite beetles and lepidoptera.

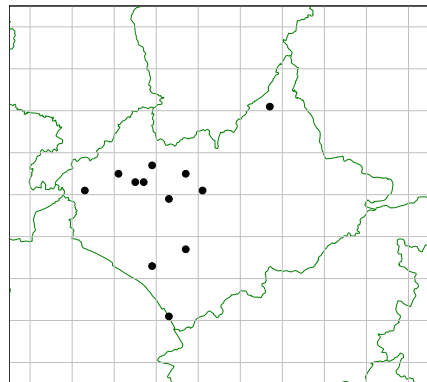
The local records all come from west Leicestershire. First noted from the Burbage area in 1996 by Stephen Falk who later noted it at Appleby Magna in 2016. Andy Jukes noted the fly at two locations near Swannington 2019.



***Sarcophaga caerulescens*** Zetterstedt (2 records)

Rather scarce being scattered across England & Wales. The larva has been reported to parasitise the Black Arches moth.

Andy Jukes noted the fly at two locations near Swannington 2019.



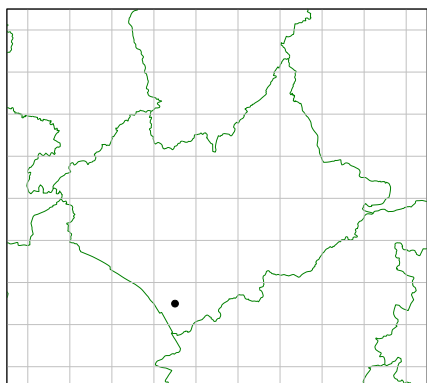
***Sarcophaga carnaria*** Linnaeus (14 records)

One of the more commonly recorded of the family in England & Wales, less so elsewhere and also one of the larger species.

Noted by Vice at several sites according to the VCH-L (1907) and also noted in the VCH-R but with no details. Most VC55 records have come from surveys conducted by experienced entomologists almost entirely from western Leicestershire. A specimen from Sheet Hedges Wood was confirmed as this species by male genital examination (figure below).



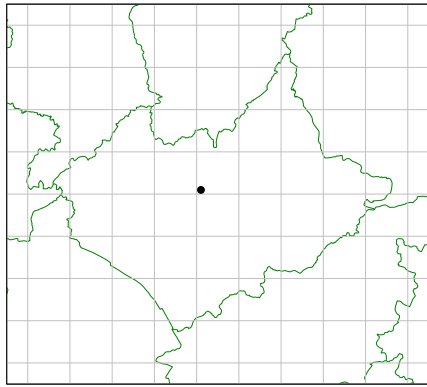
Sheet Hedges Wood, 2020  
(David Nichols, NatureSpot)



***Sarcophaga crassimargo*** Pandellé (2 records)

Most British records come from England with scattered records from elsewhere.

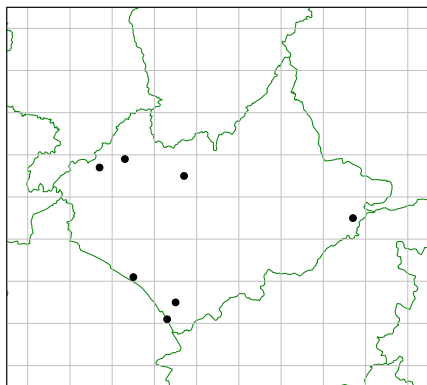
The only local sightings of this fly came from surveying efforts in the Misterton-Lutterworth area by David Gibbs in 2019.



***Sarcophaga depressifrons*** Zetterstedt (1 record)

British records are mainly scattered across England.

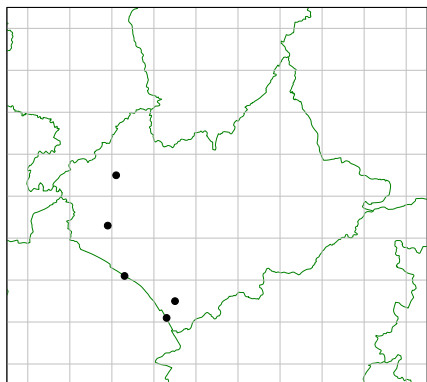
The single VC55 record came from Richard Wright during an ecological survey of a proposed business park near Syston in 2011.



***Sarcophaga dissimilis*** Meigen (8 records)

Nearly all records come from England.

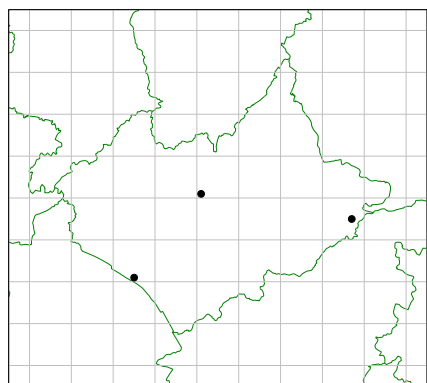
Most local sightings came as part of survey works carried out by experienced entomologists. Steven Falk found the fly at two sites off the A5 near Hinckley (1985, 1986) both of which are just located on county border with Warwickshire. Further seen by Jonathan Cole (Ketton Quarry NR, 2006) who also confirmed the fly at Grace Dieu (collected by Steve Woodward in 2011), Shawell Quarry (Richard Wright, 2018) and in the Swanningon area (2019, Andy Jukes).



***Sarcophaga haemorrhhoa*** Meigen (6 records)

Found throughout England into Wales but scarcer elsewhere.

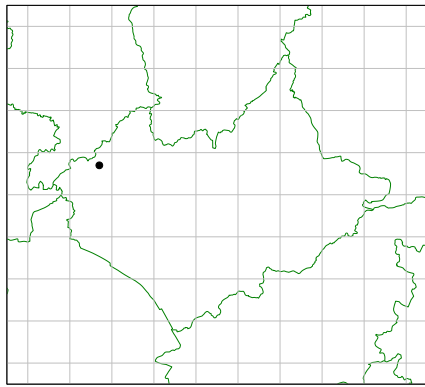
As with many other records for this family, local sightings came during survey work. First noted just off the A5 in 1996 near Burbage by Steve Falk, Market Bosworth (2011) and Shawell Quarry (2018) both by Richard Wright, near Lutterworth (2018, David Gibbs) and near Swanningon (2019, Andy Jukes).



***Sarcophaga incisilobata*** Pandellé (3 records)

Scattered throughout England & Wales.

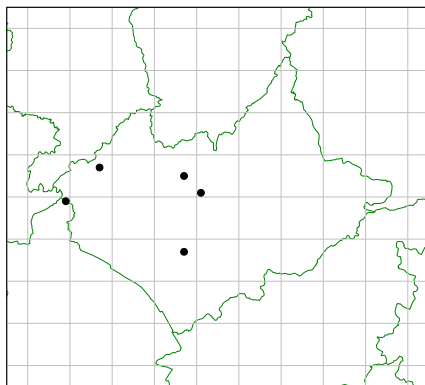
The three records for VC55 come from across the area. Two came from Steven Falk (Ketton Quarry NR 1985; near Burbage 1995) with the most recent being from the Syston area in 2011 by Richard Wright.



***Sarcophaga melanura*** Meigen (1 record)

Similar national distribution as the previous species.

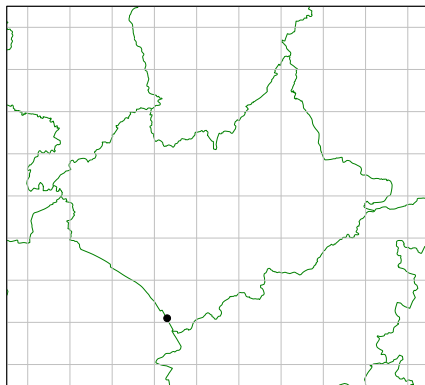
Recorded just the once in VC55 when Andy Godfrey found it during a survey of a disused aquatic plant nursery near Ashby de la Zouch in 2018.



***Sarcophaga nigriventris*** Meigen (6 records)

Well scattered across England & Wales, scarcer elsewhere.

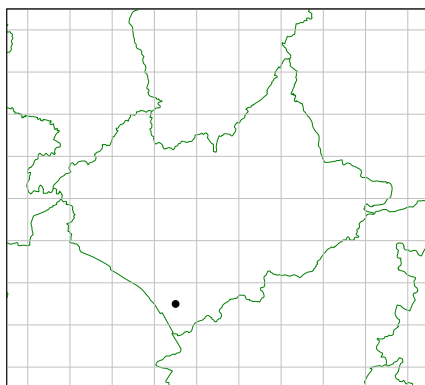
Noted by Vice in the Blaby area in 1901 with a specimen in the County Collections (CRC 44/6/1B/3). Not noted again until seen at two locations in the Syston area by Richard Wright (2011). Andy Godfrey found examples during surveys at the Mountsorrel Quarry complex (2012) and at a disused aquatic plant nursery at Ashby de la Zouch (2018) while Steven Falk noted it at the county's western boundary near No Man's Heath in 2016.



***Sarcophaga pumila*** Meigen (1 record)

Scattered across England & Wales.

The sole VC55 record came from Shawell Quarry during a 2018 survey by Richard Wright.

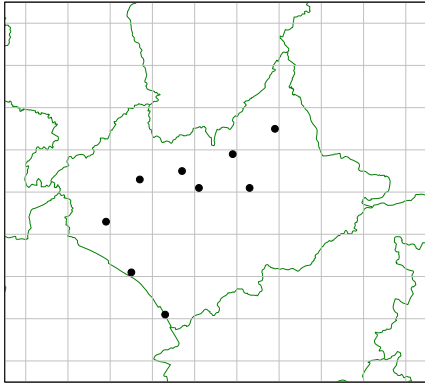


***Sarcophaga sexpunctata*** Fabricius (1 record)

Few British records of this fly mostly from England.

The sole local record came during a hedge survey in the Lutterworth area in 2018 by David Gibbs.

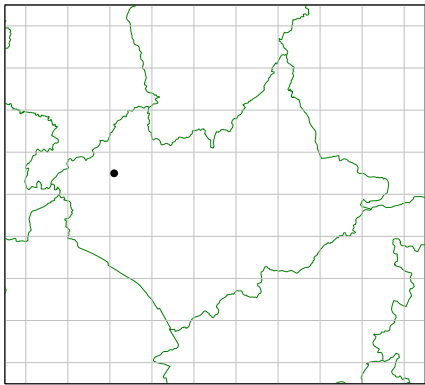




***Sarcophaga subvicina*** Rohdendorf (10 records)

Commonly recorded across England & Wales but less so in other areas.

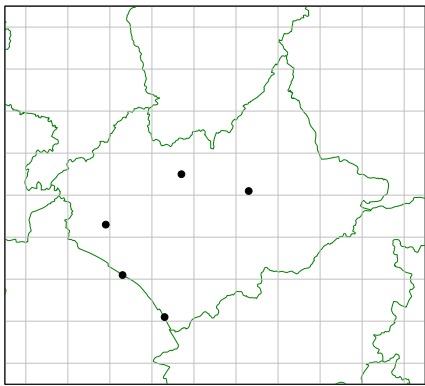
All VC55 records came from dedicated surveys by experienced entomologists. First noted near Burbage in 1996 (Steven Falk) and then during a research project on the natural history of reed treatment plants at Thorpe Satchville WRW (Ian Merrill). Noted in 2011 near Market Bosworth by Richard Wright who also found it at Shawell Quarry in 2018. Andy Godfrey noted it in the Mountsorrel Quarry complex in 2012.



***Sarcophaga teretirostris*** Pandellé (2 records)

Scattered across England & Wale but not often elsewhere.

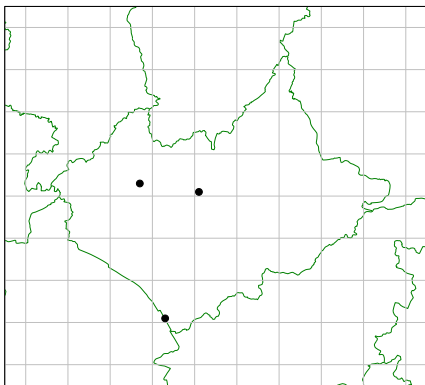
The only local records came during survey work in the Swannington area by Andy Jukes in 2019.



***Sarcophaga vagans*** Meigen (5 records)

Widely recorded across England & Wales with occasional Scottish sightings.

Noted by Steven Falk near Burbage in 1996 and then at Thorpe Satchville WRW by Ian Merrill in 2006. Seen by Richard Wright at Market Bosworth (2011) and Shawell Quarry (2018) while Andy Godfrey had the fly during the Mountsorrel Quarry complex survey of 2012.



***Sarcophaga variegata*** Scopoli (4 records)

Widely found across England & Wales but rarely noted elsewhere.

Local sightings came from Bardon Hill (Andy Godfrey, 2008) whilst Richard Wright found it at two sites near Syston (2011) and again at Shawell Quarry (2018).

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# LONCHAEIDAE

## Introduction

This family (also known as Lance Flies) is composed of small flies (up to 6mm) with stout hairy bodies with many being shiny black in colour including leg femora and tibia. Their overall appearance enables ready recognition as a family. Species have varying numbers of yellow tarsomeres and some have silvery faces. Adult wing venation shows vein Sc separate from vein R<sub>1</sub> (Figure 1) and halteres are black. Larvae are usually found in rotting wood with some species showing preferences as to tree species used.

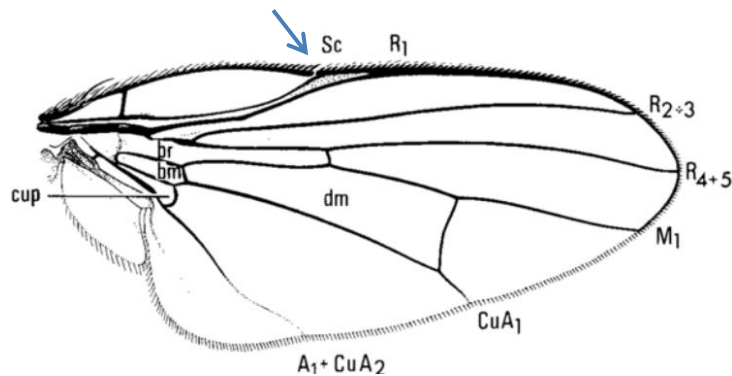


Figure 1. Lonchaeidae wing venation (DrawWing)

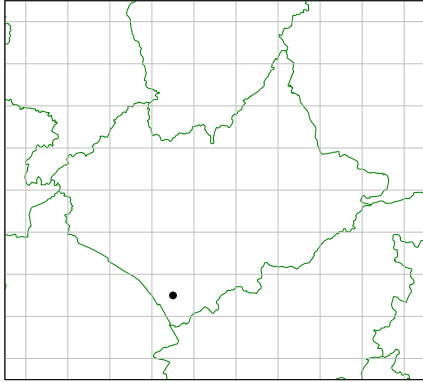
Adult behaviour is little understood but seems that many species tend to frequent tree tops and even show males occasionally swarming. Very much a summer species with males emerging before the females.

Members of this family can be challenging to identify (categorised at level 3-4 by the Dipterists Forum) as requiring examination by experts) with a Study Group having been instigated by the DF which also refers to Lonchaeidae Online ([Lonchaeidae Online \(myspecies.info\)](http://LonchaeidaeOnline.myspecies.info)) as a help with identification

Currently the only usable key to British species is McGowan & Rotheray (2008) which includes quite detailed descriptions of the fly, larvae and habits considering 46 species known at that time. Currently the British list stands at 51 and others will be expected as interest in the family increases. There are usable European keys which may aid in the recognition of these potential additions.

## Annotated species listing

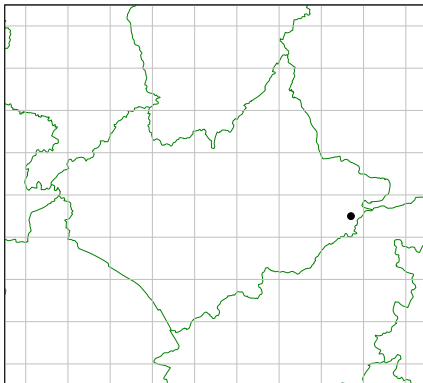
Currently there are 51 species recognised in Britain with just six noted from Leicestershire & Rutland. With a single exception, all records for VC55 have originated from expert entomologists with only eleven records for the family to 2020; many of the local species have only a single record. The County Collections has seven examples of *Lonchaea chorea* from the start of the twentieth century but all originated from Ashurstwood in East Sussex.



***Dasiops mucronatus*** Morge (1 record)

Records are scattered across Britain. Thought to be a fly of open spaces with larvae developing in roots and stems of herbaceous plants.

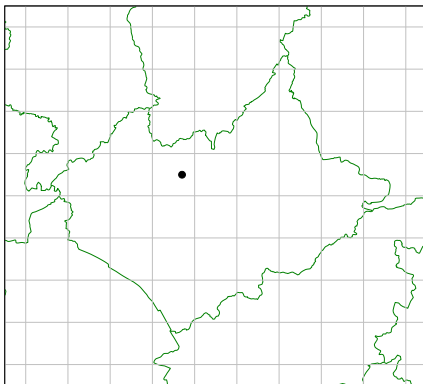
The single local record came during the 2018 survey work by David Gibbs near the R Swift at Misterton.



***Lonchaea peregrina*** Becker (1 record)

Very few national records all from England. Often associated with Poplars.

Jonathan Cole found this fly at Ketton Quarry NR in 2006.



***Lonchaea sylvatica*** Beling (1 record)

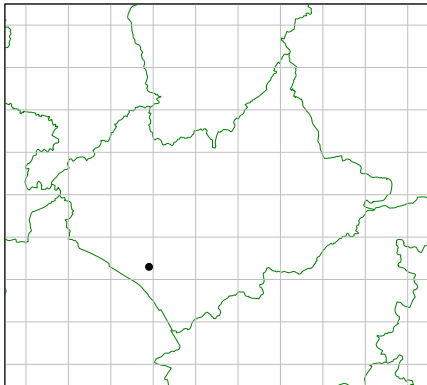
Most records come from England with occasional sightings in Wales and Scotland. Larvae utilise a range of trees.

Noted by Andy Godfrey during his survey work in the Mountsorrel Quarry complex in 2011.

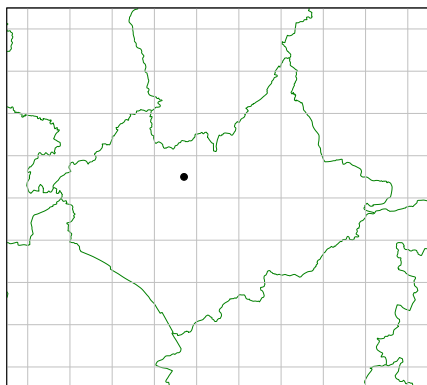
***Lonchaea tarsata*** Fallén (1 record)

Very little is known about the habits of this species. Relatively few national records which came from scattered sites across the country.

Found by NatureSpot contributor Graham Calow in his Sapcote garden in 2017 with identification being achieved by referral to national expert Tony Irwin of Norwich Museum.



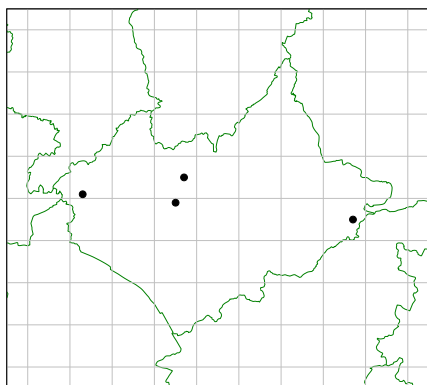
**Sapcote 2017 ♂,  
Graham Calow, NatureSpot (id Tony Irwin)**



***Protearomyia nigra*** Meigen (2 records)

Scattered records from England & Wales. Larval ecology suggests an association with thistles, Wild Angelica and mulleins amongst others.

The VC55 records came from the Mountsorrel Quarry complex surveys by Andy Godfrey with the fly being noted in 2011 and 2012.



***Silba fumosa*** Egger (5 records)

Widely found across England with occasional sightings in Wales and Scotland. Larvae have been found in rotting debris but it has been postulated that they are not true saprophytes.

Noted at sites across VC55. Seen at Ketton Quarry NR (2006, Jonathan Cole), at a Measham brickworks (2006, Andy Godfrey), during the 2012 survey at the Mountsorrel Quarry complex (Andy Godfrey) and at an Anstey garden in 2019 by Darwyn Sumner,

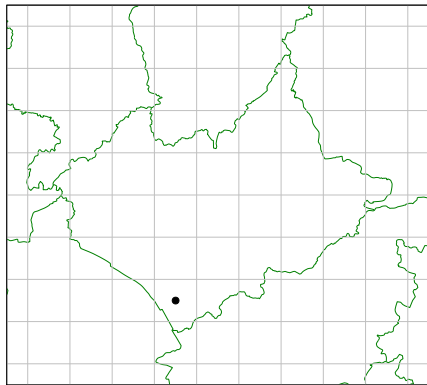
## Reference

MacGowan, I. & Rotheray, G. (2008). British Lonchaeidae: Diptera, Cyclorrhapha, Acalyptatae. *Handbooks for the Identification of British Insects*, **10**(15).

## CHAMAEMYIIDAE

One of the smallest families of flies globally with around two hundred species currently described probably because of the difficulty of identification. Often referred to as “silverflies” due to many species having silvery wings and body, these insects are known to have predatory larvae that feed on aphids and their relatives. The flies are minute being up to 5mm. A guide to their general morphology can be found in Gaimari (2021) which, although considering African species, includes descriptions of the genera that can be found in Britain. A brief consideration of larval habits can be found in McLean (1992) with a more detailed study by Satar *et al* (2015) reported on the potential value of the flies for controlling aphid pests.

The current species list for Britain numbers 32 with the most recent added by McLean (1998). Only one species has been noted in VC55.



### ***Chamaemyia aridella*** Fallén (2 records)

Well scattered across Britain.

Survey work in 2018 in the Misterton area by David Gibbs showed the presence of this fly at two locations near to each other.

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