

# LEICESTERSHIRE & RUTLAND ENTOMOLOGICAL SOCIETY

## The status of Diptera in VC55

### Sciaridae, Keroplatidae, Lonchaeidae & Opomyzidae

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*Sciara* spp., Charnwood  
Lodge NNR 2015  
(Kate Nightingale  
NatureSpot)



*Macrocera phalerata* Sappcote 2013  
(Graham Calow, NatureSpot)



*Lonchaea tarsata* Sappcote 2017 ♂  
(Graham Calow, NatureSpot)

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This LESOPS continues the series of status reports of the Diptera of Leicestershire & Rutland (VC55) up to 2020. Records have been recovered from a range of sources and distributions shown using MapMate® where data allows this to be useful. Many images have come from NatureSpot contributors and used with permission.

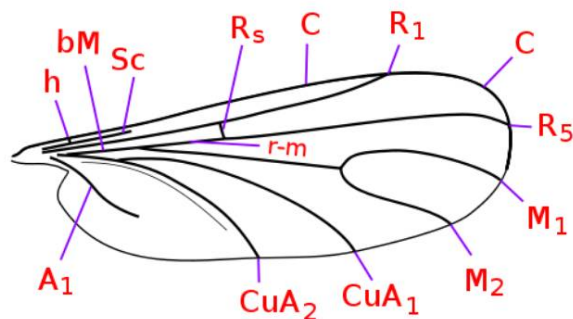
## Sciaridae

### Introduction

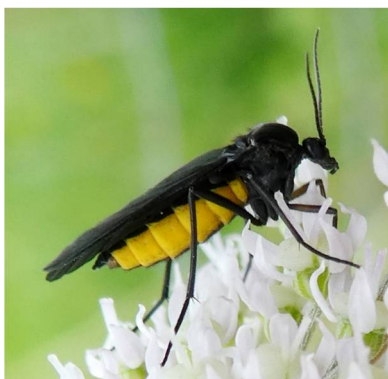
These (mostly) small black flies – also known as Black Fungus Gnats – were originally included in the Mycetophilidae (Hutson *et al*, 1980) but have now assumed its own family status. They are cosmopolitan (except in polar regions) and are amongst the most globally numerous of the fly families. The background to the origins of the Sciaridae recording, along with an excellent description of how the family achieved its own status, can be found in Menzel *et al* (2006) which is still the most recent description of these insects in Britain. Some species show larval activity which impinges on agriculture; in particular mushroom growers are plagued necessitating chemical control of the pest species. In the current study, all records are based on identification of adults without any consideration of species behaviour.

### Morphology

The Sciaridae are slender-bodied, usually winged insects although some may be wingless e.g. *Epidaphus* species. The antennae are 8-16 segmented and threadlike with no embellishments. The eyes are joined by a “bridge” where eyes meet at the base of the antennae. The wings have a distinctive forked M vein and there are no obvious cells (Figure 1). At rest the flies look delicate and exhibit a humped appearance with the thorax overhanging the head (Figure 2).



**Figure 1: Typical venation of sciarid wing (ex DrawWing)**



**Figure 2: Profile of a sciarid (Kate Nightingale, NatureSpot)**

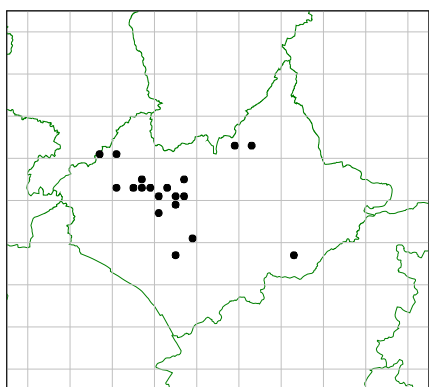
## Sciaridae in Britain

The Sciaridae is a large family with 267 British species (as of July 2022, Dipterists' Forum) with just 39 noted in Leicestershire & Rutland so far. No modern keys are available for the enthusiast to use for identification of species; Freeman (1983) produced the first useful key although now grossly out-of-date having noted only 93 species (with no mention of any from Leicestershire & Rutland). Indeed the majority of VC55 species presented in this LESOPS originate from survey work carried out in 2003 at four sites as part of a national survey exercise to establish an indication of the distribution of the family in Britain (Menzel *et al*, 2006). This work was to form the basis of an updated *Handbook* (Menzel *et al*, 2014) but to date this has not materialised (*pers. comm.* Peter Chandler 2023).

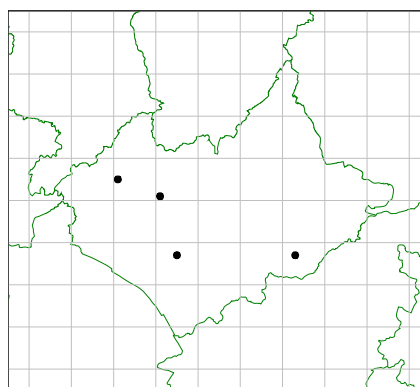
Whilst more recent recording effort has added to the understanding of the national distribution of sciarids in Britain, for many species the numbers of records are still low. There certainly is a need for greater interest in the family and the issuing of a new identification key would facilitate this!

## Annotated list of VC55 Sciaridae

Identification of adults to the species level is based primarily upon males which need to be cleared with NaOH or KOH and mounted on slides. As there is currently no way for a non-expert to identify most specimens even to genus, local records must be treated with caution unless identification has been conducted by an experienced dipterist. Figure 3 shows the distribution of all Sciaridae records to 2020 to indicate the general distribution of the family in Leicestershire & Rutland.



**Figure 3: Occurrence of the Sciaridae family in Leicestershire & Rutland**



**Figure 4: Locations of sites monitored by Menzel *et al* (2006)**

Figure 4 shows the four local locations monitored by Frank Menzel and Jane E. Smith in 2003 (Menzel *et al*, 2006) with Table 1 showing the number of species identified for each site.

**Table 1: Number of each species recorded at the 2003 survey sites**

Site	Number of species	Site	Number of species
Bolt Wood, Stockerston	10	Kelham Bridge NR	9
Lea Meadows NR	20	Narborough Bog NR	10

*It has been usual to consult the NBN Atlas for a general indication of British species distribution but in this case it is apparent that the present data at the site cannot be accepted as reliable. Some species appear to have few records on the NBN Atlas whereas referral to area recording efforts e.g. Essex and north-west England, indicate that some may be more common than indicated on the national database. Accordingly it is not possible, at this time, to assess local records in terms of the national*

data. However, the work of Menzel *et al* (2006) perhaps gives the best information about the species found in VC55.

***Austrosciara hyalipennis*** Meigen (= *Ctenosciara hyalipennis*) (6 records) – Menzel *et al* (2006) consider this species to be very common in a wide range of habitats. Recorded from Lea Meadows NR, Narborough Bog NR and Bolt Wood, Stockerston in the 2003 survey with earlier records coming from malaise trapping at Great Merrible Wood NR in 1985.

***Bradysia brevispina*** Tuomikoski (1 record) – regarded as common in a range of habitats (Menzel *et al* 2006) with the only VC55 record coming from Lea Meadows NR in the 2003 survey.

***Bradysia flavipila*** Tuomikoski (1 record) – a male was seen at Narborough Bog NR in the 2003 survey.

***Bradysia fungicola*** Winnertz (3 records) – Recorded from Lea Meadows and Narborough Bog NRs and Bolt Wood, Stockerston in the 2003 survey.

***Bradysia pectoralis*** Staeger (3 records) – the 2003 survey found this at both Lea Meadows NR and Bolt Wood, Stockerston

***Bradysia polonica*** Lengensdorf (1 record) – a single male noted from Narborough Bog NR in the 2003 survey.

***Bradysia scabricornis*** Tuomikoski (1 record) – the only VC55 record was a single male during the 2003 survey at Bolt Wood, Stockerston.

***Bradysia trivittata*** Staeger (1 record) – a male was taken at Kelham Bridge NR in 2003.

***Bradysia vagans*** Winnertz (2 records) – two females taken at Kelham Bridage NR and a single male at Lea Meadows NR in 2003.

***Corynoptera compressa*** Walker (2 records) – recorded in two samples from malaise trapping at Great Merrible Wood NR in 1985.

***Corynoptera curvispinosa*** Freeman (1 record) – the single VC55 record came during malaise trapping at Great Merrible Wood NR.

***Corynoptera fatigans*** Johannsen (2 records) – seen at Lea Meadows NR in 2003.

***Corynoptera inundata*** Fritz (3 records) – seen at Lea Meadows and Narborough Bog NRs in 2003.

***Corynoptera irmgardis*** Lengensdorf (3 records) – the 2003 survey found this fly at three of the four sites the exception being Kelham Bridge NR.

***Corynoptera luteofusca*** Bukowski & Lengensdorf (1 record) – the sole record came in 2003 from Bolt Wood, Stockerston.

***Corynoptera parvula*** Winnertz (1 record) – only found at Kelham Bridge NR in 2003.

***Corynoptera saccata*** Tuomikoski (1 record) – 1 male found in 2003 at Narborough Bog NR.

***Corynoptera saetistyla*** Mohrig & Krivosheina (1 record) – 3 males at Lea Meadows NR in 2003.

***Corynoptera tetrachaeta*** Tuomikoski (1 record) – 4 males at Lea Meadows NR in 2003.

***Corynoptera trepida*** Winnertz (2 records) – noted in 2003 at Lea Meadows NR (2 males) and at Bolt Wood, Stockerstone (5 males 4 females).

***Corynoptera triacantha*** Tuomikoski (2 records) – noted in 2003 from Bolt Wood, Stockerstone (1 male 1 female) and Kelham Bridge NR (2 males) having been noted by its former name of *C. fritzi*.

***Corynoptera uncata*** Menzel & Smith (1 record) – only noted when 2 males were taken at Kelham Bridge NR in 2003.

***Cratyna colei*** Freeman (1 record) – 6 males and 1 female were found at Lea Meadows NR in 2003.

***Cratyna nobilis*** Winnertz (1 record) – 3 males at Lea Meadows NR in 2003.

***Cratyna vagabunda*** Winnertz (2 records) – 2 males found at Lea Meadows as part of the 2003 survey with a previous record from the same site about three weeks prior to the main survey.

***Epidapus schillei*** Börner (1 record) – a single male at Lea Meadows NR in 2003.

***Hemineurina inflata*** Winnertz (3 records) – seen on two occasions in 2003 at Lea Meadows with 3 males and 2 females. A further record of a female came from Narborough Bog NR.

***Leptosciarella melanoma*** Mohrig & Menzel (1 record) - a single male from Lea Meadows NR in 2003.

***Leptosciarella parcepilosa*** Strobl (1 record) – 1 female from Kelham Bridge NR 2003.

***Leptosciarella viatica*** Winnertz (2 records) – recorded in two malaise trap samples in March 1985 at Great Merrible Wood NR.

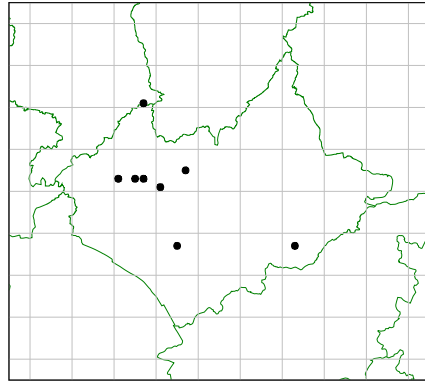
***Lycoriella sativae*** Johannsen (1 record) – 1 males at Kelham Bridge NR 2003.

***Phytosciara flavipes*** Meigen (4 records) – first noted from a Great Merrible Wood NR malaise trap (1985) and then from Bolt Wood, Stockerston in 2003 (1 female). The visit by members of the Dipterists' Forum in 2015 resulted in the species being noted at Grimston (possibly Old Dalby Wood) and Dimminsedale NR.

***Scatopsciara atomaria*** Zetterstedt (1 record) – 1 female from Kelham Bridge NR 2003,

***Scatopsciara edwardsi*** Freeman (1 record) – taken in a malaise trap sample at Great Merrible Wood NR in 1985,

***Schwenckfeldina carbonaria*** Meigen (15 records) – noted in 2003 from all four survey sites. Found by Andy Godfrey from seven parts of the Bardonia Hill area in September 2008 and again by the same recorder during 2011-2012 survey work at the Mountsorrel Quarry complex.



***Sciara hebes*** Loew (2 records) – noted at Lea Meadows by Jane E, Smith on two dates in the 2003 survey.

***Sciara hemerobioides*** Scopoli (1 record) – not recorded at any of the 2003 survey sites. Located during the visit by Dipterists' Forum members to Dimmingsdale NR in 2015. Other records have come from contributors to NatureSpot. However, as there is no indication of who identified the flies these latter records must be treated with caution and are, for the time being, not included in this report.

***Xylosciara heptacantha*** Tuomikoski (2 records) – single males were found during the 2003 survey at Narborough Bog and Lea Meadows NRs.

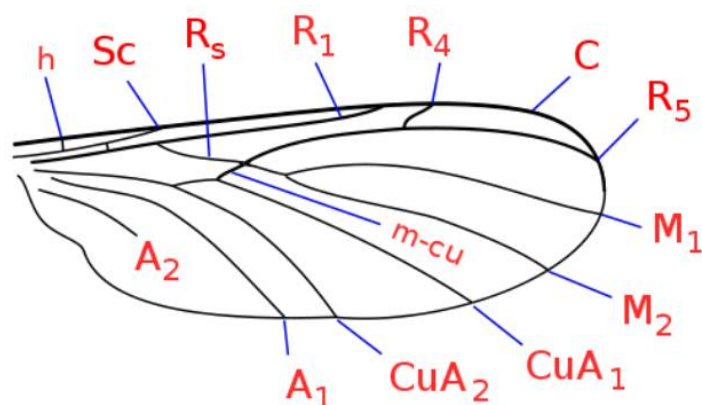
***Zygoneura sciarina*** Meigen (2 records) – noted from a Great Merrible Wood NR malaise trap sample in 1985 and also at Dimmingsdale NR during the 2015 visit by Dipterists' Forum members.

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## Keroplastidae

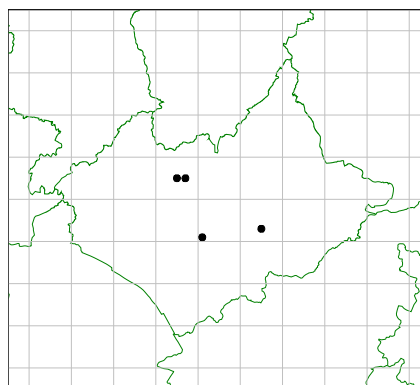
Originally included with other “fungus gnats” but since has acquired family status. The wing is characterised by the crossvein r-m being a radio-medial fusion which is characteristic of this family (m-cu in diagram). In line with other fungus gnats these flies are associated with fungi but the larvae have also been shown to be predaceous. The family has been noted across England & Wales (but less so in the Midlands) and occurs in northern Scotland. Locally, the family is probably under-recorded. The identification of the family was covered by Hutson *et al* (1980) which was then “cleaned up” by Mike Hackston (Hackston, 2020, 2021).



**Figure 1: Typical venation of keroplastid wing (ex DrawWing)**

Currently, 51 species have been reported for Britain but only eight have been noted from VC55.

***Keroplatus testaceus*** Dalman (6 records) – scattered in England & Wales. First noted in VC55 when national dipterist Alan Stubbs came across it at Skeffington Wood in 1989 (Chandler, 1993) with a further specimen collected at the Attenborough Arboretum by Graham Burton in 2002 (Kramer, 2003). Seen at four sites within Buddon Wood during survey work by Andy Godfrey in 2011 & 2012.

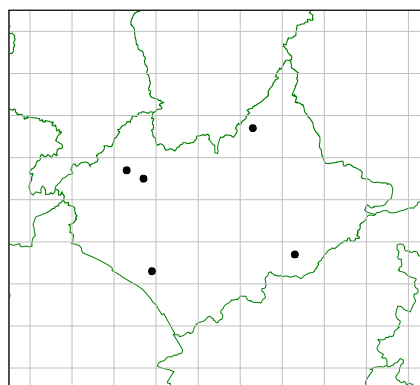


***Macrocera angulata*** Meigen (1 record) – scattered in much of England & Wales but less so in Scotland. The only local record came from Charnwood Lodge NNR when spotted during a visit by members of the Dipterists' Forum in 2015.

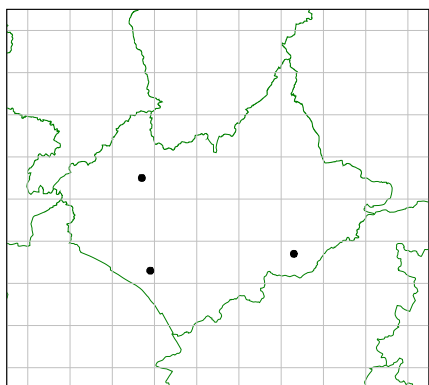
***Macrocera centralis*** Meigen (1 record) – scattered in England & Scotland with an apparently higher occurrence in SE Wales. The only local record came from Charnwood Lodge NNR when spotted during a visit by members of the Dipterists' Forum in 2015.

**Macrocera phalerata** Meigen (6 records) – scattered in England & Wales. Taken at a malaise trap at Great Merrible Wood NR in 1985 but not again until 2011 when found at the Grace Dieu complex by Steve Woodward (identification by Peter Chandler). Further records came from Sapcote (2013, 2014), Charnwood Lodge NNR (2015) and Long Clawson (2017).

(Figure on cover)



**Macrocera vittata** Meigen (4 records) – scattered across England & Wales and in the Highlands of Scotland. Found in a malaise trap sample from Great Merrible Wood NR in 1985. Further records came from Sapcote (2014) and Charnwood Lodge NNR (2015, 2017).



Charnwood Lodge NNR, 2017 *in cop*  
(Annie Smith, NatureSpot)

**Macrorrhyncha flava** Winnertz (1 record) – scattered in England & Wales with the sole VC55 record coming from Dimminsdale NR when sighted by members of the Dipterists' Forum in 2015.

**Orfelia fasciata** Meigen (1 record) – scattered in England & Wales with the sole VC55 record coming from Dimminsdale NR when sighted by members of the Dipterists' Forum in 2015.

**Orfelia nemoralis** Meigen (1 record) – scattered in England & Wales, few Scottish records. Found at a marsh adjacent to the Misterton SSSI during survey work by David Gibbs in 2018.

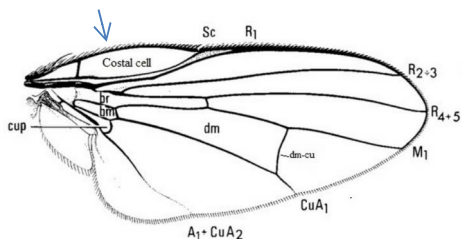
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## Lonchaeidae

These small black flies need careful examination to establish species identity. The family can be recognised by the obvious bulging of the costal cell (figure) while the females have elongated ovipositors. The larvae tend to feed on decaying matter although they may be predaceous. Some may be agricultural pests. The first usable identification keys came in 1953 (Collin, 1953) but has since been replaced by McGowan & Rotheray (2008). The Dipterists' Forum has a Lonchaeidae Study Group while a broader consideration of the family can be found at online at the Lonchaeid Online site including draft keys to the European species. Currently (DF, July 2022) the family has 37 species with only six being noted locally.



***Dasiops mucronatus*** Morge (1 record) – scattered in England & Wales. Found by David Gibbs near to the R. Swift during his 2018 survey work at the Misterton SSSI complex.

***Lonchaea peregrina*** Becker (1 record) - scattered in England & Wales. Noted by Jonathan Cole at Ketton Quarry NR in 2006.

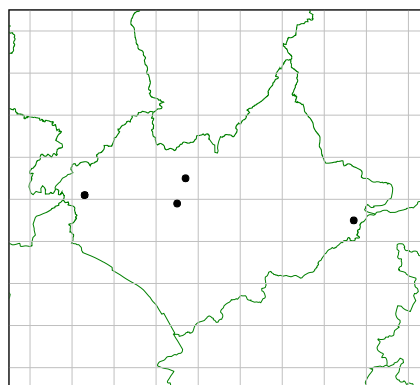
***Lonchaea sylvatica*** Beling (1 record) – scattered records but seeming to be well recorded in the West Midlands. Andy Godfrey noted this species during his survey of the Mountsorrel Quarry complex in 2011.

***Lonchaea tarsata*** Fallén (1 record) – scattered in England with the West Midlands accounting for most of the records on the NBN Atlas. Graham Calow took the fly in his Sapcote garden in 2017 with identity established by Tony Irwin of Norwich Museum (figure on cover).

***Protearomyia nigra*** Meigen (2 records) – scattered across middle England and into Wales. Noted by Andy Godfrey during both his 2011 and 2012 surveys at the Mountsorrel Quarry complex.

***Silba fumosa*** Egger (4 records) – well recorded across England with scattered records in Wales & Scotland.

Local records are well scattered with first records coming from Ketton Quarry NR and Measham brickworks in 2006 (Jonathan Cole, Andy Godfrey) then again at the Mountsorrel Quarry complex in 2012 (Andy Godfrey) and Anstey in 2019 (Darwyn Sumner).



## References

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## Opomyzidae

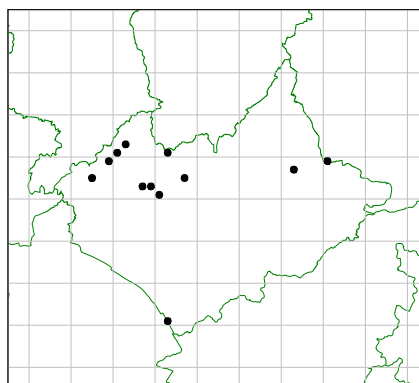
[The status of the Opomyzidae in VC55 was meant to have been included in LESOPS 45 but was inadvertently overlooked.]

Early attempts at considering the taxonomy of the Opomyzidae came from continental authors. It was not until later that some order was brought to this family in Britain (Collin, 1945). However, the information presented was quite sparse until 1993 when a more realistic approach to the identification of the British Opomyzidae was produced (Drake, 1993). To encourage recording of the family a modified key to the family was produced as part of a Dipterists' Forum workshop in 2020 on the Picture-winged flies (which included the Opomyzidae) by David Clements and made available to members of the DF.

When considering the Opomyzidae of Leicestershire & Rutland, care has to be taken with identification as often the only reliable way to successfully identify a species is by examination of the male genitalia. Even so, it is possible in several cases to use wing patterns for identification but it would be wise to confirm (if male) by further detailed examination if possible. Recently some local records have been recorded as *Geomyza combinata* agg (a term originating from Linnaeus). Martin Drake had addressed this "aggregate" in an earlier paper (Drake, 1992). The DF does not include the aggregate in its current listing (July 2022).

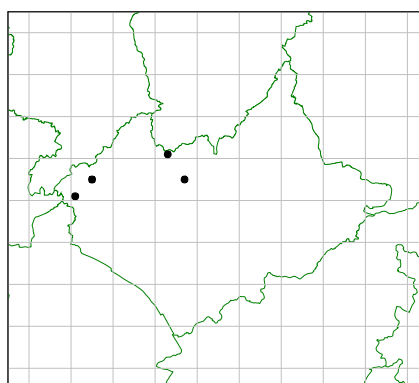
***Geomyza balachowskyi*** Mesnil (19 records) – across England & Wales scattered in Scotland.

All local records were made by verified entomologists during survey work. First noted by Derek Lott (with identifications by Martin Drake) in 2006 at several sites in the Charnwood area. Andy Godfrey recorded the fly at several sites (Bardon Hill, Mountsorrel Quarry complex and Shawell) while visiting entomologists from Caledonian Conservation Ltd found it at several sites in NW Leicestershire during a 2019 survey.



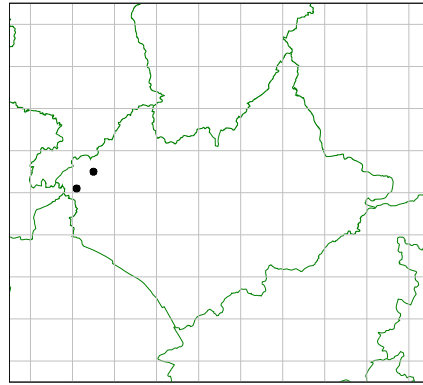
***Geomyza hackmani*** Nartshuk (6 records) – scattered across England scarce elsewhere.

All local records came from experienced dipterists during survey work. First noted at Loughborough Big Meadow NR by Derek Lott (identification by Martin Drake) in 2006. Found at the Mountsorrel Quarry complex when being surveyed by Andy Godfrey in 2013 and then in 2019 from the Packington area (NW Leicestershire) by the visiting Caledonian Conservation group.



***Geomyza subnigra*** Drake (3 records) – scattered in England & Wales.

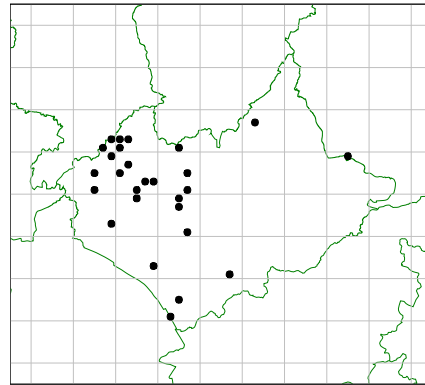
The only records for this species came from the survey work carried out by Caledonian Conservation Ltd during their visit to the Packington area in 2019.



***Geomyza tripunctata*** Fallén (66 records) – numerous throughout Britain. A common species in VC55 with a noticeable wing pattern. Tends to be found in grassy areas including cereal fields. The few records from the eastern part of Leicestershire & Rutland most likely reflects under-recording. Some records verified by national experts.



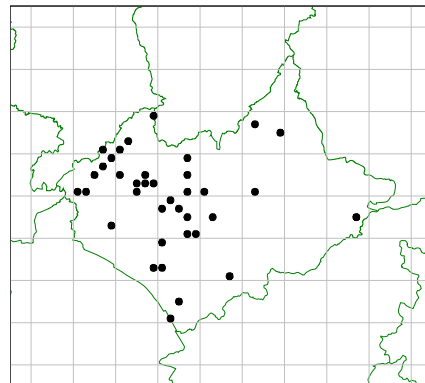
Sapcote 2016 (Graham Calow, NatureSpot)



***Opomyza florum*** Fabricius (74 records) – common in England less so elsewhere. The orange coloration aids in identifying this species. Similar distribution as the previous species. Seen regularly since 2006.



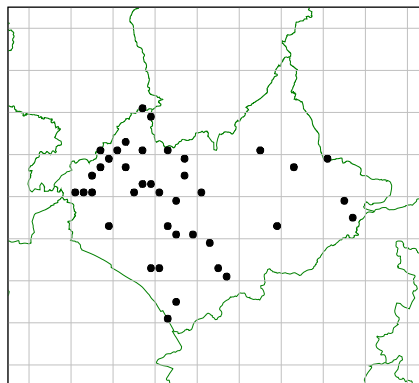
Long Clawson 2015 (Barbara Cooper, NatureSpot)



***Opomyza germinationis*** Linnaeus (86 records) – common throughout Britain. Needs careful checking to separate from other similarly-coloured opomyzids. First noted by Peter Kirby in 1999 in an old orchard near Edith Weston (Rutland). Since noted on a regular basis.

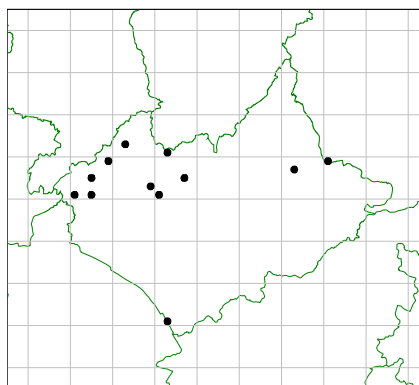


Melton CP 2015 (Paul Ruddoch, NatureSpot)



***Opomyza petrei*** Mesnil (25 records) – throughout England & Wales less so in Scotland. Similar to *O. germinationis* so needs careful examination to identify correctly.

Seen at widespread sites in VC55 in 2006 by Derek Lott (identification by Martin Drake) and at several other sites by Andy Godfrey (2011–2016). The Caledonian Conservation group noted it at several sites in NW Leicestershire during their 2019 visit.



***Opomyza punctata*** Haliday (0 records) – nationally records scattered in England with a few in Wales. No VC55 record has been located to date but the species was mentioned by Martin Drake (Drake 1993) in his review of the British Opomyzidae as having been recorded from Leicestershire.

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