

**LEICESTERSHIRE
ENTOMOLOGICAL SOCIETY**

**The status of Diptera
in VC55**

Conopidae

Ray Morris
ray@cactusbob.net



Conops quadrifasciatus (Barbara Cooper, NatureSpot)

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Introduction

The Conopidae (also called Thick-headed flies) may well be an overlooked group in Leicestershire & Rutland (VC55) as some resemble, at first glance, wasps but the presence of a pair of wings and a pair of halteres show that they are Diptera. The family has been known to naturalists for several hundred years with illustrations appearing in a range of early publications (Figure 1 & 2).

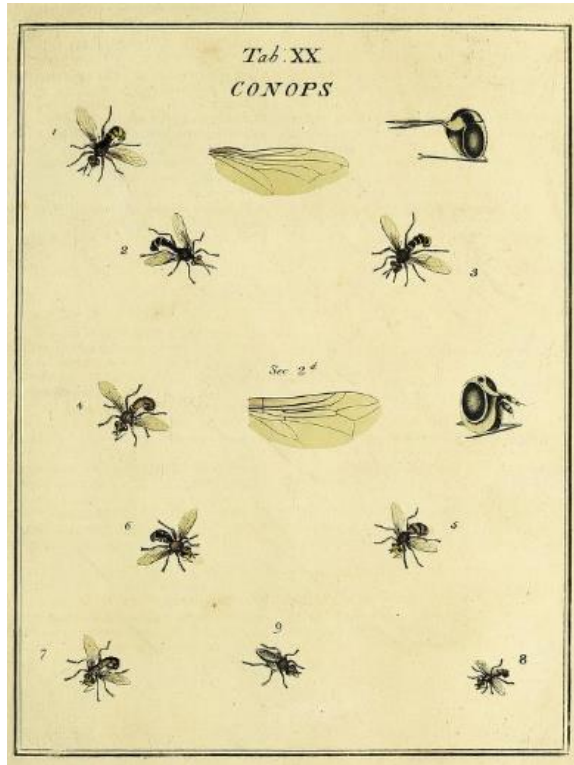


Figure 1: Harris et al 1782



Figure 2: *Conops flavipes* – Curtis 1823-1840

Interestingly these flies were regarded by some as being a pest especially to humans. For example Samouell (1841) recorded that “the *Conopidae* are as troublesome to man as other animals, dropping suddenly on such parts as are exposed or the least covered, and without a movement of their feet, to give notice, immediately plunge their jointed and lengthened rostrum into the skin, and unperceived sucking the blood, not causing that burning pain at the instant which is common to many of the dipterous insects”. In truth, the *Conopidae* are primarily parasites of Bumble Bees.

The earliest referral to the *Conopidae* in Leicestershire & Rutland found to date is the recording of “various species of *Conops* in the wood about Belvoir” In Crabbe’s review of the natural history of the Vale of Belvoir (Crabbe, 1795). Until the publication of the Victoria County History of Leicester (VCHL, 1907) the only VC55 referral to the *Conopidae* seems to have been the recording of *Conops flavipes* at Buddon Wood in August 1844 by Henry Walter Bates (Bates, 1844) when it was described as being common at flowering Ragwort (*Senecio jacobaea*). Incidentally, he commented in the article that “our neighbourhood, I think, is rich in Dipterous and Hymenopterous insects; but an insuperable bar is opposed to our attaining any knowledge of these creatures, from there being no complete work of specific reference in the English language”, a situation that really was not addressed until well into the 20th century!

Francis Walker, in the first of his three-volume *Insecta Britannica Diptera* series (Walker, 1851) listed nine species of *Conopidae* of which six he regarded as rare or very rare. John Curtis, President of the Entomological Society of London at that time,

commented that "little is known of the economy of this beautiful genus of flies" (referring to *Conops*) although he did mention the occurrence of two species but not, unfortunately from VC55! The behaviour of the conopid family was reported by Saunders (1856), drawing very much on continental papers, where the parasitizing of *Bombus* and other hymenopterous species was discussed; however, again no VC55 references.

The paucity of Conopidae records in the 19th century was emphasised when WA Vice listed only three species in the Leicester issue of the Victoria County History (Bouskell, 1907) with two of his specimens of *Sicus ferrugineus* being in the County collections at Barrow upon Soar. The Rutland version of the VCH had no mention of this family. In a review of the British Conopidae (Smith, 1959) four records were listed as having come from Leicestershire although, to date, the origin of these observations has not been tracked down. In recent years notes on the various conopid species have appeared in the Conopidae Recording Scheme Newsletter and the group's Facebook account but again not from VC55. The Surrey Wildlife Trust published an atlas of 21 species found in that county (Baldock & Early, 2015) but no other county listings have been located as yet.

Identification of Conopidae

Following on from the early publications mentioned above, Kenneth Smith produced the Royal Entomological Society key to British Conopidae (Smith, 1969). This was followed by short papers in the entomological literature enhancing the value of the keys e.g. Stuke & Clements (2008). In 2010 van Veen (2010) produced a key to the general of the Conopidae of north-west Europe which is useful for identification of the 24 British species. The Dipterists Forum periodically publishes updates to the nomenclature of the Diptera usually including pseudonyms. Referral to the Natural History Museum listing and that of the National Biodiversity Network Atlas can also give other synonyms all of which are useful when hunting for old records.

These flies fall into two subfamilies:

Conopinæ: highly distinctive wasp-mimics, usually black and yellow, ocelli absent; 10 British species with 4 in VC55

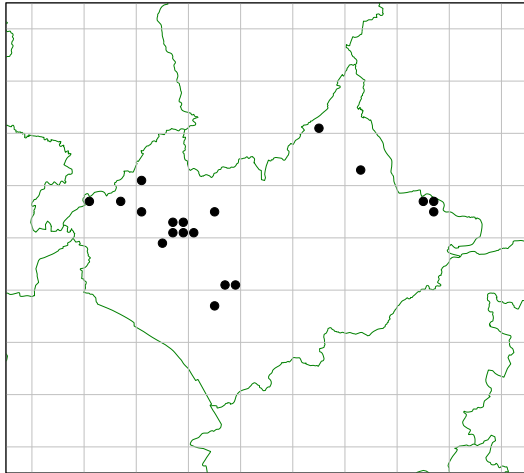
Myopinæ: more fly-like, generally brown or blackish with broad white cheeks; 14 British species with 6 in VC55

Maps are produced on MapMate using known data to the end of 2020.

The historical literature and local Newsletters have been visited while the databases of NatureSpot, Leicestershire & Rutland Environmental Records Centre and the National Biodiversity Network Atlas website have similarly been used to locate record data.

The images have been sourced, with permission, from the NatureSpot website.

Conopinae



Conops flavipes

VC55 records: 25

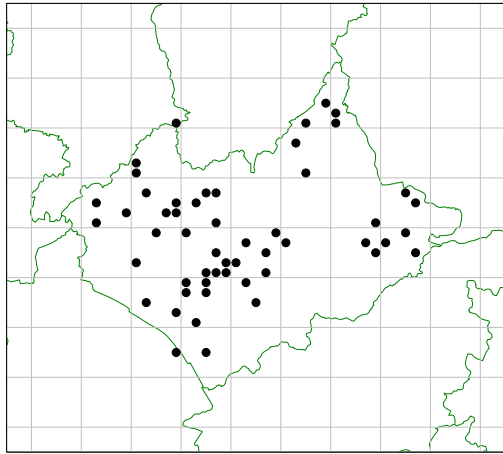
Flight period: July-August, very occasionally June and September.

National status: widespread but scattered in England & Wales

First recorded in 1844 from Bradgate Park by HW Bates (Bates, 1844) but not again until 1976 at Narborough Bog NR. Since then recorded intermittingly in succeeding years, usually as singletons.



Conops flavipes (Matthew Berriman, NatureSpot)



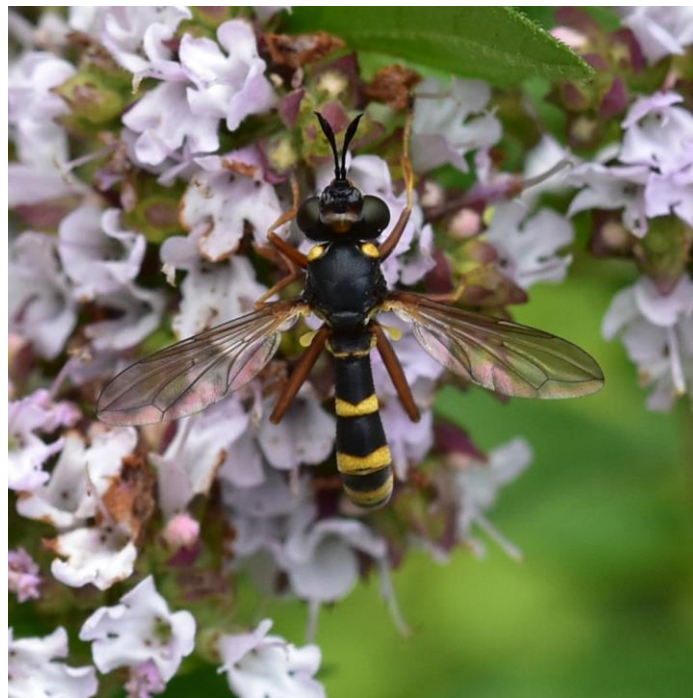
Conops quadrifasciatus

VC55 records: 94

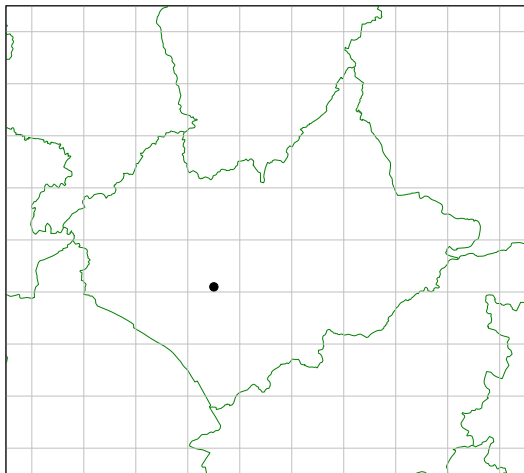
Flight period: July-August, very occasionally June and September and even as early as April (2012).

National status: widespread but not northern England

First recorded in 1939 from Barkestone (Smith, 1959) and regularly since 1989, 10 being seen at Cloud Wood NR 03/08/2019.



Conops quadrifasciatus (Andrew Dejardin, NatureSpot)

***Leopoldius signatus***

VC55 records: 1

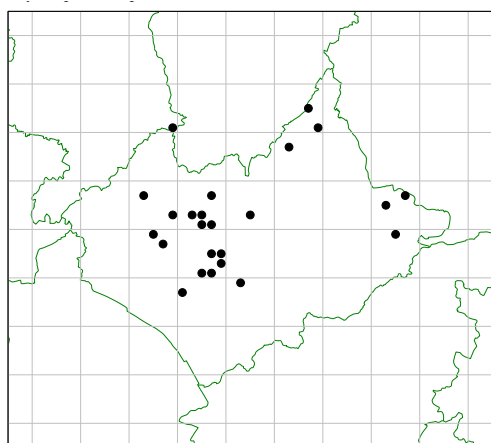
Flight period: September

National status: widespread in England and Wales but not common.

First recorded from Wood Close Plantation Braunstone, Leicester when David Gould found a female. This species has a soft not hard proboscis which is diagnostic.



Leopoldius signatus (David Gould, NatureSpot)



Physocephalus rufipes

VC55 records: 32

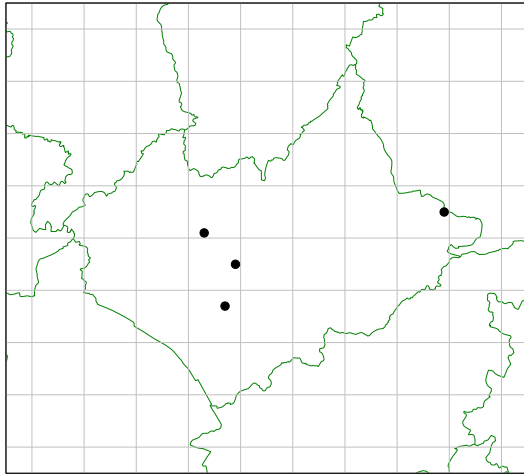
Flight period: May to September, mainly July & August

National status: common & widespread in England & Wales

First recorded from Queniborough in 1954 by TW Tailby and then a few times annually.



Physocephalus rufipes (Sue Timms, NatureSpot)

Myopinae***Myopa buccata***

VC55 records: 4

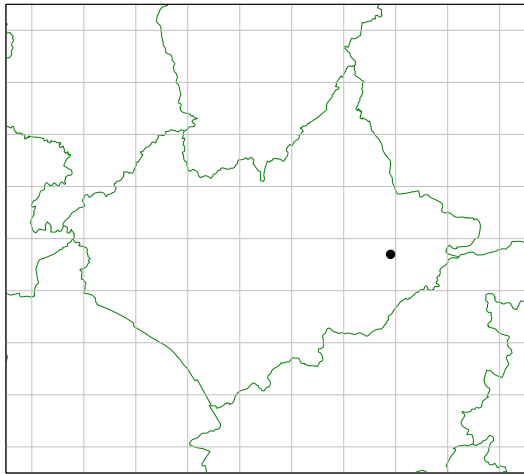
Flight period: insufficient data

National status: mainly Wales & Scotland, a few scattered in England.

Reported in the VCH for Leicester from Blaby, Leicester and Bradgate Park (pre 1907 no other details) presumably by WA Vice. Only one record since when photographed at Pickworth Great Wood 04/06/2019 by Steven Lewis.



Myopa buccata (Steven Lewis, NatureSpot)



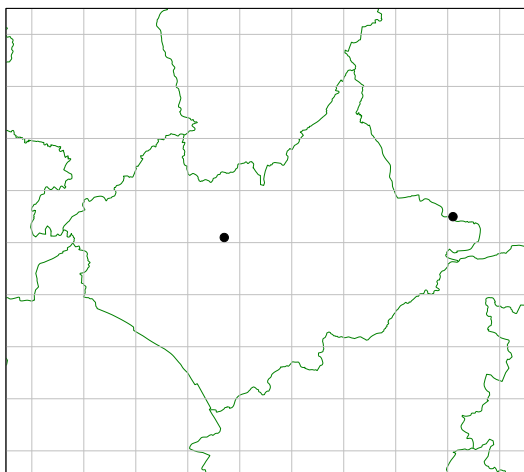
Myopa pellucida

VC55 records: 1

Flight period: insufficient data

National status: mainly Welsh Borders with a few scattered in England.

The sole record for this species came from the Egleton area of Rutland Water NR spotted by Brian Wetton on 22/04/2018.



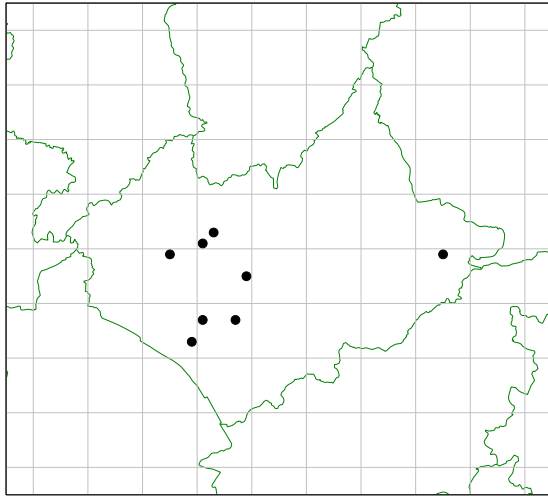
Myopa tessellatipennis

VC55 records: 2

Flight period: insufficient data

National status: scattered records in England & Wales.

First recorded as part of the Invertebrate Site Register survey of 1993 at Newell Wood, Pickworth. A specimen was tentatively identified from a Cropston garden by Kate Nightingale on 13/04/2019 but requires confirmation.

Myopa festacea

VC55 records: 8

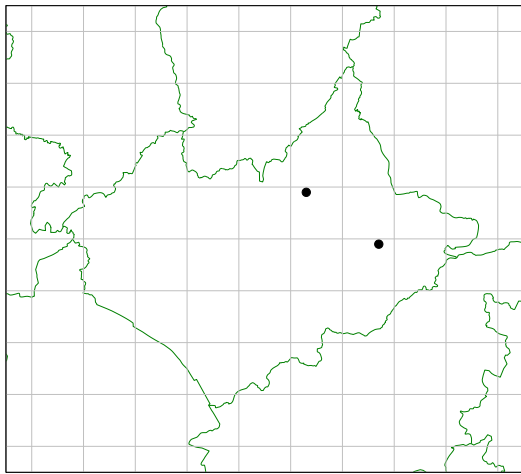
Flight period: May and June
occasionally July.

National status: scattered records in
England & Wales.

Noted in the VCH for Leicester from
Blaby. A record from Leicester (Smith
1959 ?the VCH one) has not been
located to date. The fly was not
recorded again until 2012 when seen at
Croft Hill by Mark Skevington on
06/05/2012 followed by occasional
sightings to date.



Myopa festacea (Mark Skevington, NatureSpot)



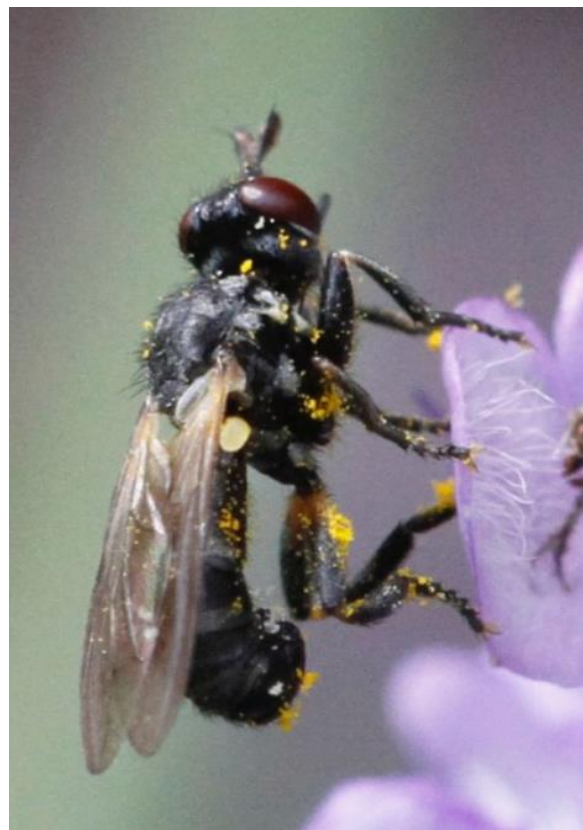
Thecophora atra

VC55 records: 2

Flight period: insufficient data

National status: mainly Wales & southern England – scattered elsewhere.

First seen at Asfordby in 2009 as part of commercial site survey and then again at All Saints Church, Oakham by Matthew Berriman on 17/06/2020.



Thecophora atra (Matthew Berriman, NatureSpot)

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Editor: Ray Morris (ray@cactusbob.net)