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The Craneflies of Leicestershire and Rutland (VC55)

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Introduction

It is necessary to say at the outset that, since craneflies are not a scientific group, its meaning has changed over the years. It seems to be synonymous with *daddy long-legs*, meaning all long-legged two-winged flies. These, in the past, have included Winter Gnats (Trichoceridae) Fold-winged flies (Ptychopteridae) and Dixidae. The present meaning, used here, is restricted to the super-family Tipuloidea (Order Diptera) which, for the past 20 years (Starý 1992), has been composed of four families - Tipulidae, Pediciidae, Cylindrotomidae and Limoniidae.

I have tried to provide a firm basis for further work on craneflies in VC55, and to suggest what that work might be. There are voucher specimens for most, though not all, of the records and wherever there is only a single record, more records are needed to firmly establish that species on the county list.

Pioneering work in Europe

Before any meaningful lists of craneflies could be produced it was necessary to have fixed and unambiguous names for them. The genus-species naming system for doing this was first provided for the then-known craneflies by the 1758 volume of Linnaeus's *Systemae Naturae*, published in Sweden, so this date provides a starting-point. Linnaeus named 14 of the more conspicuous craneflies on the British Checklist. Johan Christian Fabricius was a student of Linnaeus and did more work than his mentor on insects. Linnaeus named 3,000 insects in total whereas Fabricius named 9,776 but only six of these are on the current British cranefly list. In 1775 Fabricius published *Systemae entomologiae* and this classification system, then based on insect mouthparts, was used from this time. Greatly modified and improved over the centuries, the diagnostic characters now used are much more broadly based.

The next significant advances in the study of flies (Dipterology) were carried out in Germany by Johannes Wilhelm Meigen. In 1804 he published two volumes of his *Klassifikation und Beschreibung der europäischen zweiflügeligen Insekten* and, then in 1818, the first volume of his *Systematische Beschreibung der bekannten Europäischen zweiflügeligen Insekten* [Systematic descriptions of the known European two-winged insects] was published. This included the genera *Ctenophora* (11 species), *Limnobia* (65 species), *Nephrotoma* (1 species), *Rhipidia* (1 species) and *Tipula* (44 species). He worked hard under sometimes difficult conditions and continued to publish these systematic descriptions, printed in gothic German script, until 1838 when the seventh volume was published. Meigen, who died in 1845, gave names to 77 British craneflies. The project was then carried forward until 1873 by Hermann Loew (1807-79). Loew had a world-wide perspective and did the first palaeo-entomological work on Baltic amber. He named 18 cranefly species on the current British list. Another important early European dipterist was R.J. (Ignaz Rudolf) Schiner in Austria and there were many other contributors. Schiner published *Catalogus systematicus dipterorum Europae* in 1864 and the *Fauna Austriaca die Fliegen* in 1862.

Identification and classification in Britain

British entomologists working in the first half of the 19th century included James Francis Stephens (1792-1852) who, in 1828, published his *Systematic Catalogue of British Insects* believed to be the first attempt at a list of British insects. The British Museum was opened in Montagu House, Great Russell Street in 1759 and Stephens was seconded from the Navy to work there in 1818. When we look in the recent Diptera checklist (Chandler, 1998) we find that 22 species named by Stephens are listed as *nomina nuda* i.e. they have not been validated by existing labelled specimens or by clear illustrations. Clearly there were once specimens that Stephens named but these have now disappeared.

In 1829 Alexander Henry Haliday (1807-70) with Francis Walker and John Curtis, produced the first edition of *A Guide to the Arrangement of British Insects*. As the title implies, the aim of this list was to enable British collectors to arrange the specimens in their cabinets in a systematic way. It contained all the orders of insects then known, with Haliday and Walker being responsible for the order Diptera (True Flies). The second edition was published in 1837. Haliday, who named four species on the current checklist, worked at Dublin University and his outlook was thoroughly European, travelling widely and living at times in Italy and Switzerland. He saw the Meigen

collection of flies in Paris during 1862. Macquart had bought the collection from Meigen for 1,200 francs in 1839. Halliday corresponded with Schiner and Loew and, importantly, suggested that the species concept be defined by type specimens held in museums this idea being adopted by Francis Walker at the British Museum. Halliday specialised in bees, wasps and ants (Hymenoptera) as well as the dipteran families Sphaeroceridae and Dolichopodidae. He was very friendly with Francis Walker and John Curtis collecting with them at various places in the UK.

Francis Walker (1809-73), who worked at the British Museum, published his encyclopaedic *Insecta Britannica* from 1851-56, which listed about 100 "craneflies" (*sensu* Tipuloidea). He named ten species on the current list. John Curtis (1791-1862) named three British cranefly species with a further five as *nomina nuda*. He was a naturalist and engraver, working under the patronage of J.C. Dale at the British Museum from 1813, and his volumes of beautiful engravings, entitled *British Entomology*, were published in the period 1824-1839 with a second edition in 1837 – volume 8 contained the Diptera.

The German texts were difficult to work with and, since travel was difficult, it is perhaps not surprising that many wrong interpretations of these descriptions were made by the early British workers. Referring to the German author Brauer (1880), George Henry Verrall (1848-1911; Figure 1) wrote:

I must, however, say that I have never studied an author's writing which was more difficult to understand, especially in the tables, [keys] than Brauer's, except perhaps those of Brauer and Bergenstamm together

Also, there were no keys in Meigen's volumes just a series of often repetitive descriptions with only a few etchings at the back of each volume.

It was not until Verrall produced more reliable lists of British flies that things began to be set on the right track. In 1881 he published his list of *A Hundred New British Flies* which included 28 craneflies (*sensu* Tipuloidea). He wrote:

It is very difficult to say what is meant by a "new British species" of Diptera in the present confused state of our lists, as many species which were well known to Curtis and Stephens were omitted by Walker, whilst many described by Walker were incorrectly named

To correct this confused state of affairs, Verrall published independently his first list of British Diptera in 1888. Prior to this, as a step on the way, he wrote the first *List of British Tipulidae ("Daddy-Longlegs") with Notes*, in a paper published by the Entomologist Monthly Magazine in 1886-88. 146 species were described in this early paper which included the first keys in English to identify genera and some species of British Craneflies. He wrote

I believe I have more or less satisfactorily disposed of all of Walker's doubtful species, which will be of very great use to future workers in this group; but they require closer study

In 1901 Verrall produced the second edition of his *List of British Diptera*, helped by a few other Diptera specialists, which included 173 craneflies (*sensu* Tipuloidea). In addition, he named six species. Thus, he provided the foundation for future work on Diptera, and especially on craneflies, in Britain.

It was not easy to accurately identify flies in those days. You can feel the pain of the Reverend William John Wingate when he wrote

Many a time I have pounced upon some descriptive list of local species in transactions and magazines, hoping to be able to identify some specimens I had taken, only to find that the learned phraseology, the want of analysis indicating the points of difference, and the unnecessary repetition of points of agreement, made it an almost hopeless task. Life is too short for this weary groping after the undefined, but a short life may be practically lengthened if one is able quickly to begin where a predecessor has left off.

Wingate's response to the pain was to publish in 1906 *A Preliminary List of Durham Diptera, with Analytical Tables*, better known as "Wingate's Durham Diptera". This was one of the first books

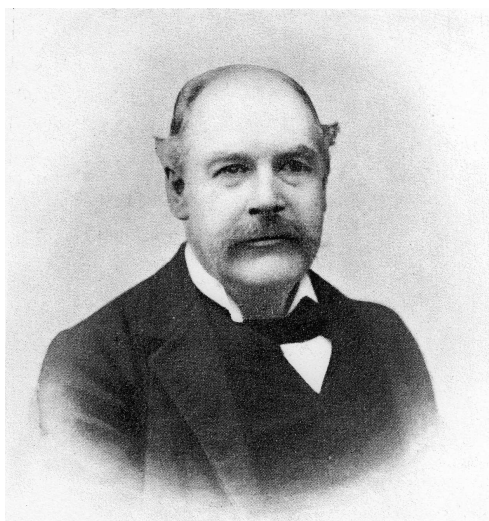
on Diptera in English to include keys. He acknowledged many European authors, especially Schiner who wrote keys in his *Fauna Austriaca* (1864). The Leicester entomologist P.A.H. Muschamp (see below) wrote in the 1930's

Wingate extracted from Schiner's Austrian Tables [keys] all that concerned the British Flies that he found in Verrall's catalogue, and this is used very generally today, for want of something better.

For better, or for worse, "Wingate's Durham Diptera", together with papers published in journals such as the *Entomologists Monthly Magazine* and the *Proceedings of the Entomological Society of London*, was the basis of progress in Dipterology in Britain for the next 30 years. Wingate corresponded with Verrall and acknowledged his '*splendid work on the British Syrphidae*' (1901) which contained descriptions and keys to identify species. Letters from Verrall must have served to encourage Wingate and other disciples who lived at some distance from the centre of things in London and south-east England.

Perhaps the next steps in the study of British craneflies were (a) the publication in *Transactions of the Entomological Society of the South of England* during 1932 of H. Audcent's *British Tipulinae (Diptera, Tipulidae)* followed by (b) *British short-palped craneflies: taxonomy of adults* by F.W. Edwards in *Transactions of the Society for British Entomology* (Edwards, 1938). Edwards was a tireless worker and a world expert on a number of families of Nematoceran Flies. He worked from 1901 in the Entomology Department at the British Museum and had named 31 species on the British cranefly list before his premature death from cancer in 1940. Then came the Second World War.

In 1945 the first edition of *A Check List of British Insects* edited by G.S. Kloet and W.D. Hincks (Koet & Hincks, 1945) was published by the Royal Entomological Society of London, and this, together with the series of RES keys, provided a catalyst for much work during the next 50 years. The RES Key to Craneflies, authored by R.L. Coe, was published as volume IX part 2 in 1951 (Coe, 1951) and Coe acknowledges his great debt to Edwards (*op cit*) At that time all "daddy long-legs" (Tipuloidea) were grouped as sub-families of the Tipulidae - Tipulinae, *Cylindrotominae* and *Limoniinae*. The present-day family Pediciidae (Hairy-eyed craneflies) was then a tribe of the Limoniinae - Pediciini. In 1951 the present family Limoniidae was subdivided into the tribes Limoniini, Hexatomini and Eriopterini. The tribe Hexatomini has now become the sub-families *Limnophilinae* and *Dactylolabinae*. The tribe Eriopterini has now become the sub-family *Chioneinae*. In 1992 the tribe Pediciini (hairy-eyed craneflies) was elevated to Family status by Jaroslav Starý in Olomouc, Czech Republic.



George Henry Verrall (1848-1911)



William Armston Vice MB, of Blaby

Figure 1:

Cranefly larvae

The focus of much of the work has been on adult craneflies, but these are only the reproductive and dispersal phase of the life cycle which includes egg, larval ('maggot' or 'grub') and pupal phases. Since they are not very mobile, the adults are usually captured near where they emerge from the pupa but, in order to fully understand the ecological requirements of each species, it is also necessary to understand the whole life cycle, especially the needs of the larval phase. In Europe, W. Hennig from Stuttgart, published *Die Larvenformen der Dipteren* in three parts (Hennig, 1948-52) and E.H. Savchenko, working at Kiev in the Ukraine, produced a key in 1955 to differentiate between the common tipulid larvae. In this country, Alan Brindle from Manchester Museum was the pioneer publishing a series of keys (Brindle, 1956a,b, 1960, 1967). Much interesting work still remains to be done regarding the explanations for the larval habitat preferences of species, and even now some cranefly larvae are unknown.

The British Cranefly Recording Scheme and the national distribution maps

Once the names of flies were settled, with efficient keys and a classification system about which to organise the knowledge, discussion of their habitats and county-wide distribution could begin to make progress. In 1973, the National Cranefly Recording Scheme was started by Alan Stubbs. Alan, who at that time worked for the Nature Conservancy, put the word about, through the British Entomological & Natural History Society (BENHS) and the Amateur Entomological Society (AES), gathering a group of about fifty interested members together. He arranged for the Biological Records Centre (BRC, set up in 1964) to produce Record Cards and to collate the records collected by members, as they were doing for the Butterfly Recording Scheme which started up in 1967.

A significant problem was the lack of easily available keys to identify craneflies since the 1951 RES key was well out of print by then. Alan offered photocopies to needy members and set about writing a new set of keys. In 1972 he began a series, *Introduction to Craneflies* in the Bulletin of the AES. The first Cranefly Recorders meeting was called for 24 March 1973 at the Natural History Museum, London, when 28 members assembled. At that meeting it was suggested that a society be formed and that a provisional atlas of distribution maps be produced for the Tipulinae. Later in 1973 Alan sent to members a *Checklist of British Craneflies*, further bibliographies and an *Atlas of drawings of genitalia of British Tipulinae*.

Much activity occurred in the period 1973-76 - field meetings took place, new species were added to the British list and many new records were collected. Six Newsletters were published and the membership continued to grow. When in 1976 the Hoverfly and the Larger Brachycera recording schemes were started, life became more complicated for Alan with his involvement in both of these new schemes. In order to co-ordinate the work of these schemes the Dipterists Forum was founded in 1994 (www.dipteristsforum.org.uk).

The *Provisional Atlas of Distribution of the long-palped craneflies (Diptera: Tipulinae)* was published by the BRC in 1992 (Stubbs, 1992) and that for the ptychopterid craneflies in 1993 (Stubbs *et al*, 1993). These were both authored by Alan Stubbs and the distribution dot maps were hand-crafted jobs, rather than produced by a computer program. Ten keys to identify craneflies were published by Alan between 1996 and 2001. The first workshop for the identification of craneflies was held at the BENHS Dinton Pastures site in November 1995 and others followed at the Field Studies Centre Preston Montford location in spring 1996 and again in 1998.

Recording in Leicestershire & Rutland

The Victoria County History (VCH) of Leicestershire (Vice, 1908) gives just nine species of craneflies while the companion VCH for Rutland (Douglas, 1908) only listed two species in the lists of Diptera. The Leicestershire species were *Pachyrhina crocata*, (now *Nephrotoma crocata*) *P. maculosa*, (now *Nephrotoma appendiculata*), *Tipula longicornis* Schummel, (now *T. unca*) from Buddon Wood, *T. lunata* Linn, *T. gigantea* Schummel, (now *T. maxima*) from

Bradgate Park, *T. oleracea*, *T. lutescens*, (now *T. fulvipennis*) *T. ochracea*, (now *T. lunata*) and *Dictenidia bimaculata*. The two Rutland species were *Tipula oleracea* and *T. gigantea* the records apparently originating from the two public schools in the county at Uppingham and Oakham. No dates were given in either list and apart from the two sites named above, only parishes were given as locations (although not even this for Rutland). The Rutland records were collated by Robert N. Douglas who was possibly a master at Uppingham School.

The Leicestershire records were due to the work of W.A. Vice (Figure 1) who was born in 1852 into an established Blaby family and, apart from the time he spent studying Medicine at Aberdeen University, lived all of his life in Blaby. He practiced as a dentist in Belvoir Street, Leicester and was a leading member of the Blaby Baptist Church for 60 years. He died in 1937 aged 84 years. He was a member of the Leicester Literary and Philosophical Society, which he joined in 1880, writing a number of short notes on Diptera. Vice was a serious entomologist and, like Wingate, communicated by letter with Verrall. He recorded many families of Diptera as the lists in the Leicestershire VCH shows. It is a great pity that his notebooks seem to have been lost.

Three letters from Verrall to Vice exist in the County Records Office (ref. 13D56/4) dated between 1885 and 1887 where they discuss species lists as well as specimens of hoverflies (Syrphidae) and Bibionidae. It is clear that they exchanged specimens as well as records and the letters make interesting reading. In addition to specimens exchanged, there are mutual offers of hospitality as well as discussion of diagnostic characters and problems of identification. Verrall had taken considerable time with this correspondence and listed all of the Bibionidae then on the British list. It is possibly due as much to the encouragement of his peers as to his taxonomic work, that Verrall was, in his obituary, awarded the accolade of the "Father of English Dipterists". He also took the opportunity in the 1887 letter, to grumble at Francis Walker, writing:

It [Bibio ferruginatus] is reputed as British in as much as Walker gave amongst his species B. ferruginatus; he however, no doubt, had only B. varipes before him.

and again

I don't know what Walker meant in putting this as the female B. lacteipennis, because I don't know what his male lacteipennis was; it is certainly not named correctly.

The next entomologist to leave his mark was Percy Alan H. Muschamp. Born in 1871, he was a language teacher who had moved to Leicester in 1921, was appointed Honorary Entomologist at the Leicester Museum in 1925 and, therefore, must have known of the work of Vice who died in 1937. Muschamp retired in 1956 due to failing health and died in 1958 aged 87. He corresponded with F.W. Edwards, a dipterist at the British Museum (Natural History) and was also a nephew of the dipterist E.A. Fonseca. Muschamp did very little work in VC55; he left a set of notebooks at the Museum but there are only ten crane-fly records to show for his 30 years tenancy. Nearly all of these records date from 1935-6. Other than parish, there are few details of sites and only five records have complete data. Muschamp retired from teaching in 1938 and it was his habit to go to Switzerland from May to September each year.

Following these records, there was a gap of about fifty years until 1989 when a burst of activity by Alan Stubbs and John Mousley, the latter on the staff at Leicester Museum, increased the VC55 list from about a dozen to some 120 species - the present list stands at 146 species. In 1998 the Leicestershire Museum Service commissioned a survey of springs and flushes in VC55 with the aim of locating and evaluating such sites. The author of the present report carried out this work using crane-flies as an indicator group. This, and other work subsequently carried out by the author has added knowledge of the group in VC55.

Leicestershire crane-flies - an annotated list of species

In this annotated checklist I have indicated the common species and where we have only a single, or a few records. Where the species has been recorded frequently I have given the earliest records that I can find. The records used include my own (1998-2011) and those originally stored at the Leicestershire Museum Records Service at Holly Hayes Environmental

Resources Centre, Birstall (now at County Hall, Glenfield). The checklist used is up-dated from the Royal Entomological Society's Handbook Volume 12 edited by PJ Chandler (1998).

M – Voucher specimen in the Leicestershire Museums collection at Barrow-on-Soar.

TIPULIDAE

Ctenophora pectinicornis Linnaeus, 1758

May-July

A very local and rarely seen species the larvae of which are wood-feeders.
Two records for VC55.

Burrough Hill, 27/05/2006 (AE Stubbs)
Ulverscroft NR 24/05/2010 (S Woodward)

Dictenidia bimaculata Linnaeus, 1761

April-July

A very local species with the larvae being dead wood-feeders.
Only four VC55 records.

Blaby (WA Vice, 1907)
Wardley Wood - larva in rotten ash - 29/04/1988 (DH Hall-Smith coll., det. HJ Mousley)
Donington Park, 16/06/1988 (DA Lott) (**M**)
Croxtan Park, 02/07/1994 (N Frankum)

Tanyptera nigricornis Meigen, 1818

May-June

This is a nationally rare species with the larvae being dead wood-feeders.
Single VC55 record.

Taken in a malaise trap at Wood Brook, Buck Hill, near. Nanpantan, 1980 (M Greenwood)

Prionocera subsericornis Zetterstedt, 1851

June-September

A nationally rare species of *Sphagnum* bogs.
In VC55 it has only been found at Groby Pool.

Groby Pool, 19/06/1989 (AE Stubbs)
Groby Pool Survey, 13/07/1989 (D Whiteley)
Groby Pool Survey, 19/08/1989 (HJ Mousley) (**M**)
Groby Pool, 31/05/2006 (AE Stubbs)

Prionocera turcica Fabricius, 1787

May-September

A very local species but common where found.
Larvae are moss-feeders.

Bradgate Park Pool, 28/08/1998 (J Kramer)
Watermead Park, 10/05/1999 (J Kramer)
Charnwood Lodge, 1999 (J Kramer)

Nephrotoma analis Schummel, 1833

June-July

Only once recorded from VC55.

Skeffington Wood, 23/07/1989 (AE Stubbs)

Nephrotoma appendiculata Pierre, 1919

May-June

A common species.

Longcliffe, Blaby (WA Vice, 1907)
Stockerston, Eye Brook 20/05/1989 (AE Stubbs)
Holwell Mouth, 26/05/1989 (AE Stubbs)
Burley Wood, 04/06/1989 (HJ Mousley)

Nephrotoma cornicina Linnaeus, 1758

July-September

Only recently recorded from VC55 with a single record so far.

Lucas Marsh, 30/07/2000 (J Kramer)

Nephrotoma crocata Linnaeus, 1758

May-June

This species lays eggs in sandy soils.
Only found twice in VC55.

Longcliffe 1908 (WA Vice, 1907)
Groby Pool, 10/06/1989 (D Whiteley)

Nephrotoma flavescens Linnaeus, 1758

June-July

A local species of grassland which occasionally turns up.

Hallaton Castle, 25/07/1989 (AE Stubbs)
Croxtton Park, 02/07/1994 (AE Stubbs)
Empingham Marshy Meadow, 17/07/1998 (J Kramer)

Nephrotoma flavipalpis Meigen, 1830

June-October

A local species.

Knipton Reservoir, 1979 (DG Gardner; id EG Hancock)
Noseley Copse, 08/08/1998 (J Kramer)
Holly Hayes, Birstall, 17/09/2003 (J Kramer)

Nephrotoma guestfalica Westhoff, 1879

June-August

A local species.

Scam Hazel Wood 13/07/1998 (J Kramer)
Charley Brook, 17/07/2000 (J Kramer)
Herbert's Meadow NR, 02/06/2006 (AE Stubbs)

Nephrotoma quadrifaria Meigen, 1804

June-August

A frequent species.
VC55 records are relatively recent.

Knipton Reservoir, 1979 (DG Gardner & EG Hancock)
Croxtton Park, 02/07/1994 (AE Stubbs)
Scam Hazel Wood, 1998 (J Kramer)

Nigrotipula nigra Linnaeus, 1758

June-August

The sole VC55 sighting comes from Narborough Bog when PAH Muschamp recorded it in his notebook as *Tipula nigra* adding that it was 'a freak'. The species is easy to recognise and it may be a true record from a time when the site was much wetter. However, there are no other details – no date and no recorder. It is not recorded in the Victoria County History (Vice, 1907).

Tipula fulvipennis De Geer, 1776

May-October

A frequent woodland species.

Blaby (WA Vice, 1907)
Burley Wood, 03/08/1989 (AE Stubbs)
Croxtton Kerrial, 1998 (J Kramer)
Shacklewell Spinney, 28/09/1998 (J Kramer)

Tipula luna Westhoff, 1879

April-July

A species frequently encountered in marshland.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Empingham Marshy Meadow, 1998 (AE Stubbs)
Grand Union Canal margin, 2/05/1998 (J Kramer)

Tipula maxima Poda, 1761

May-July

A very conspicuous and frequently recorded species. The larvae can be found in any marshy ground. Locally common.

Anstey Lane, Bradgate Park (WA Vice, 1907)
Braunston, 08/03/1933 (PAH Muschamp) (M)
Wymondham Rough, 24/06/1977 (H Weston-Bird(at light) (M)
Launde Abbey, 08/06/1979 (DH Hall-Smith; at MV light) (M)
Ulverscroft NR, 06/06/1987 (SJ Falk) (M)
Holwell Mouth, 26/05/1989 (AE Stubbs)
Burley Wood, 04/06/1989 (HJ Mousley)

Tipula vittata Meigen, 1804

April-May

A locally common woodland Spring species.

Swithland Wood, 29/05/1990 (AE Stubbs)
Buddon Wood, 29/05/1990 (AE Stubbs)
Noseley Copse, 6/05/1998 (J Kramer)
Poultney Wood, 8/05/1998 (J Kramer)

Tipula unca Wiedemann, 1817

May-July

Frequent.

Buddon Wood, (WA Vice, 1907)
Holwell Mouth, 26/05/1989 (AE Stubbs)
Burley Wood, 04/06/1989 (HJ Mousley)
Shacklewell Spinney, 1998 (J Kramer)
Barsby Brook, 08/07/1998 (J Kramer)

Tipula flavolineata Meigen, 1804

May-June

Woodland species.
Occasional.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Burley Wood, 04/06/1989 (HJ Mousley)
Charnwood Lodge, 01/06/1999 (J Kramer)

Tipula cava Riedel, 1913

June-August

The only VC55 record came from Charnwood Lodge, 12/07/1999 when it was found by J Kramer

Tipula fascipennis Meigen, 1818

May-August

Frequent.

Croxton Park, 02/07/1994 (AE Stubbs)
Ulverscroft Priors, 1998 (J Kramer)
Empingham Marshy Meadow, 1998 (J Kramer)

Tipula lunata Linnaeus, 1758

May-July

Common.

Blaby, (WA Vice, 1907)
Holwell Mouth, 26/05/1989 (AE Stubbs)
Empingham Marshy Meadow, 1998 (AE Stubbs)

Tipula selene Meigen, 1830

Late May-June

Rare.
Only one VC55 record which is the most northerly record for this species in Britain.

Burley Wood Pond margin. 25/05/1999 (J Kramer)

Tipula vernalis Meigen, 1804

May-July

A frequent and widespread grassland species.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Empingham Marshy Meadow, 1998 (AE Stubbs)
Bradgate Park, 1998 (J Kramer)

Tipula luteipennis Meigen, 1830

August-October

Local autumnal species.

Empingham Marshy Meadow, 28/09/1998 (J Kramer)
Empingham Marshy Meadow, 1998 (AE Stubbs)
Grace Dieu Wood, 05/10/2010 (J Kramer)

Tipula irrorata Macquart, 1826

May-July

Woodland species.
Single VC55 record.

Croxton Park, 02/07/1994 (AE Stubbs)

Tipula submarmorata Schummel, 1833

April-May

Occasional spring species of woodland.

Poultney Wood, 08/05/1998 (J Kramer)
Great Merrible Wood, 04/05/1999 (J Kramer)

Tipula varipennis Meigen, 1818

April-June

Common species in spring.

Lucas's Marsh, 04/05/1998 (J Kramer)
Ulverscroft Priory wet pasture, 08/05/1998 (J Kramer)
Skeffington, 18/05/1998 (J Kramer)
Herbert's Meadow NR, 02/06/2006 (AE Stubbs)

Tipula confusa van der Wulp, 1883

August-October

Larvae are moss feeders. Autumnal species found in gardens.

Ulverscroft NR, 09/09/1998 (J Kramer)
Ashtree Road, Oadby, 03/10/1998 (J Kramer)

Tipula pagana Meigen, 1818

September-November

Larvae are moss feeders. Commonly found in gardens in autumn.

Elmsleigh Ave, Leicester, 08/10/1979 (DH Hall-Smith)
Stoneygate, Leicester, 1979 (DG Gardner & EG Hancock)
Barsby Ditch, 19/10/98 (J Kramer)
Noseley Spinney, 19/10/98 (J Kramer)

Tipula rufina Meigen, 1818

March-November

Larvae are moss feeders; found in gardens.
One VC55 record but probably more frequent.

Garden, Houghton-on-the-Hill, 2008 (F Clark; coll)

Tipula signata Staeger, 1840

September - October

Local autumnal species of woodland.
One VC55 record.

Grace Dieu Wood 05/10/2010 (J Kramer)

Tipula staegeri Nielsen, 1922

Sept-October

Local autumnal species of woodland.

Scam Hazel Wood, 21/10/1998 (J Kramer)
Grace Dieu Wood, 11/10/2010 (J Kramer)

Tipula variicornis Schummel, 1833

May-June

Occasional.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Burley Wood, 04/06/1989 (HJ Mousley)
Ulverscroft NR, 02/06/2006 (AE Stubbs)

Tipula oleracea Linnaeus, 1758

April-November

Common.

Blaby, (WA Vice, 1908)
Knipton Reservoir, 1979 (DG Gardner & EG Hancock)
Stockerston, (Eye Brook) 20/05/1989 (AE Stubbs)
Burley Wood, 04/06/1989 (HJ Mousley)
Saltby Swallet, 28/04/1998 (J Kramer)

Tipula paludosa Meigen, 1830

August-October

Common autumnal species.

Burley Wood, 03/08/1989 (AE Stubbs)
Croxtan Kerrial, 04/06/1998 (J Kramer)
Groby, 21/08/1998 (J Kramer)

Tipula scripta Meigen, 1830

May-Sept

A widespread species of woodland.

Burley Wood, 04/06/1989 (HJ Mousley)
Burley Wood, 03/08/1989 (AE Stubbs)

Tipula couckeii Tonnoir, 1921

May-August

Local.

Stockerston (Eye Brook), 20/05/1989 (AE Stubbs)
Stockerston (R Eye), 23/07/1989 (AE Stubbs)
Hallaton Castle, 25/07/1989 (AE Stubbs)
Lockington Marsh, 20/06/2003 (J Kramer)

Tipula lateralis Meigen, 1804

April-September

Common by stream margins everywhere.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Hallaton Castle, 25/07/1989 (AE Stubbs)
Poultney Wood, 08/05/1998 (J Kramer)

Tipula montium Egger, 1863

May-August

Only one VC55 record.

Stockerston (R Eye), 23/07/1989 (AE Stubbs)

Tipula pruinosa Wiedemann, 1817

May-August

Local being associated with wet grassland.

Croxtan Park, 02/07/1994 (AE Stubbs)
Bitteswell Pasture, 31/05/1999 (J Kramer)
Empingham Marshy Meadow, 17/07/1998 (J Kramer)

CYLINDROTOMIDAE

Cylindrotoma distinctissima Meigen, 1818

May-September

Local.

Burley Wood, 04/06/1989 (HJ Mousley)
 Linford Brook margin, 22/05/1998 (J Kramer)
 Narborough Bog, 21/05/1999 (J Kramer)
 Thornborough Spinney, 21/05/2010 (J Kramer)

PEDICIIDAE

Dicranota bimaculata Schummel, 1829

April-October

A local species with aquatic larvae in streams.

Holwell Mouth, 26/05/1989 (AE Stubbs)
 Ulverscroft Priory, 1998 (J Kramer)
 Launde Park Wood, 07/04/2000 (J Kramer)

Dicranota claripennis Verrall, 1888

May-October

A species with aquatic larvae.
 Only one VC55 record.

Grace Dieu Wood, 11/10/2010 (J Kramer)

Dicranota subtilis Loew, 1871

May-October

A local species having aquatic larvae in streams.
 Only one VC55 record.

Holwell Mouth, 26/05/1989 (AE Stubbs)

Dicranota pavidata Haliday, 1833

May-October

An occasional species occurring near stream margins
 and having aquatic larvae.

Holwell Mouth, 26/05/1989 (AE Stubbs)
 Swithland Wood, 25/09/1998 (J Kramer)

Pedicia littoralis Meigen, 1804

May-September

A local species of stream margins and having aquatic
 larvae.

Skeffington Wood, 23/07/1989 (AE Stubbs)
 Ulverscroft Priory pasture, stream margin, 05/06/1998 (J
 Kramer)
 Swithland Wood, 30/05/2006 (AE Stubbs)

Pedicia rivosa Linnaeus, 1758

April-September

A conspicuous marshland species with aquatic
 larvae.
 Local, but not uncommon.

Ulverscroft Marshy Meadow, 25/07/1965 (P Candlish)
 Holwell Mouth, 26/05/1989 (AE Stubbs)
 Hallaton Castle, 25/07/1989 (AE Stubbs)
 Croxton Park, 02/07/1994 (AE Stubbs)
 Grace Dieu Wood, fen area, 19/08/2009 (R Morris)

Tricyphona immaculata Meigen, 1804

April-November

A common species of marshland.

Knipton Reservoir, 1979 (DG Gardner & EG Hancock)
 Holwell Mouth, 26/05/1989 (AE Stubbs)
 Burley Wood, 04/06/1989 (HJ Mousley)

Ula mollissima Haliday, 1833

May-October

An occasional species with the larvae feeding in fungi.

Swithland Wood, 29/05/1990 (AE Stubbs)
Swithland Wood, 22/07/1998 (J Kramer)
Grace Dieu Wood, 2011 (J Kramer)

Ula sylvatica Meigen, 1818

April-November

Larvae feed in fungi.
Single VC55 record.

Swithland Wood, 30/05/2006 (AE Stubbs)

LIMONIIDAE - CHIONEINAE

Cheilotrichia cinerascens Meigen, 1804

May-October

Common woodland species.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Burley Wood, 04/06/1989 (HJ Mousley)
Skeffington Wood, 07/10/1998 (J Kramer)

Crypteria limnophiloides Bergroth, 1913

August-October

A rare woodland species.
Only one VC55 record.

Charnwood Lodge NR, 08/09/1999 (J Kramer)

Ellipteroides lateralis Macquart, 1835

June-July

A local species.

Skeffington Wood, 23/07/1989 (AE Stubbs)
Noseley Copse, 08/07/1998 (J Kramer)

Erioconopa trivialis Meigen, 1818

April-October

A frequent species of marsh and woodland.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Burley Wood, 04/06/1989 (HJ Mousley)
Hallaton Brook, 07/10/1998 (J Kramer)

Erioptera divisa Walker, 1848

June-August

Croxton Park, 02/07/1994 (AE Stubbs)
Scam Hazel Wood, 27/07/1998 (J Kramer)
Croxton Kerrial Spring, 29/07/1998 (J Kramer)

Erioptera flavata Westhoff, 1882

June-August

A local species of marshland.

Empingham Marshy Meadow, 17/07/1998 (AE Stubbs)

Erioptera fuscipennis Meigen, 1818

May-September

A local species of marshland.

Burley Wood, 04/06/1989 (HJ Mousley)
Hallaton Brook margin, 15/07/1998 (J Kramer)
Bradgate Park Pool, 22/07/1998 (J Kramer)

Erioptera fusculentata Edwards, 1938

June-August

A local species of marshland.

Skeffington Wood, 23/07/1989 (AE Stubbs)
Hallaton Castle, 25/07/1989 (AE Stubbs)
Croxtan Park, 02/07/1994 (AE Stubbs)

Erioptera griseipennis Meigen, 1838

May-July

Local but not uncommon.

Stockerston (R. Eye) 20/05/1989 (AE Stubbs)
Bradgate Park, 09/05/2000 (J Kramer)
Grace Dieu Wood, 20/05/2011 (J Kramer)

Erioptera lutea Meigen, 1804

May-October

A very common species.

Stockerston (Eye Brook) 20/05/1989 (AE Stubbs)
Holwell Mouth, 26/05/1989 (AE Stubbs)
Burley Wood, 04/06/1989 (HJ Mousley)
Empingham Marshy Meadow, 28/09/1998 (J Kramer)

Erioptera squalida Loew, 1871

June

A local species of marshland.

Lockington Marsh 20/06/1991 (AE Stubbs)
Scam Hazel Wood, 23/09/1998 (J Kramer)
Charnwood Lodge NR, 08/09/1999 (J Kramer)
Lockington Marsh 20/06/2003 (J Kramer)

Erioptera verralli Edwards, 1921

May-June

Rare at stream margins.
Single VC55 record.

Launde Park Wood, 08/05/2000 (J Kramer)

Gnophomyia viridipennis Gimmerthal, 1847

May-July

A very local species where the larvae feed under the bark of dead Black Poplar.

Empingham Marshy Meadow, 03/06/1998 (J Kramer)
Empingham Marshy Meadow, 1998 (AE Stubbs)

Gonempeda flava Schummel, 1829

June-July

Local.

Croxtan Park, 02/07/1994 (AE Stubbs)
Scam Hazel Wood, 13/07/1998 (JKramer)
Launde Park Wood, 19/07/2000 (J Kramer)
Bradgate Park, 01/06/2006 (AE Stubbs)

Gonomyia recta Tonnoir, 1920

June-July

Local.

Croxtan Park, 02/07/1994 (AE Stubbs)
Launde Park Wood, 19/07/2000 (J Kramer)
Lucas Marsh, 30/07/2000 (J Kramer)

Gonomyia simplex Tonnoir, 1920

May-July

Holwell Mouth, 26/05/1989 (AE Stubbs)
Bradgate Park Pool, 22/07/1998 (J Kramer)

Ilisia maculata Meigen, 1804

May-October

Local.

Burley Wood, 03/08/1989 (AE Stubbs)
Empingham Marshy Meadow, 11/06/1999 (J Kramer)
Croxtton Kerrial, 04/09/1998 (J Kramer)

Ilisiaoccoecata Edwards, 1936

May-September

Local.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Burley Wood, 04/06/1989 (HJ Mousley)
Scam Hazel Wood, 27/07/1998 (J Kramer)
Empingham Marshy Meadow, 11/06/1999 (J Kramer)

Molophilus appendiculatus Staeger, 1840

May-September

A common species of marshland.

Burley Wood, 03/08/1989 (AE Stubbs)
Scam Hazel Wood, 27/07/1998 (J Kramer)
Noseley Copse, 07/09/1998 (J Kramer)

Molophilus bifidus Goetghebuer, 1920

May-August

Rarely recorded.

Croxtton Park, 02/07/1994 (AE Stubbs)
Charley Wood, 17/07/2000 (J Kramer)
Lucas Marsh, 30/07/2000 (J Kramer)

Molophilus bihamatus de Meijere, 1918

May-July

Rare.

Swithland Wood, 30/05/2006 (AE Stubbs)
Bradgate Park, 01/06/2006 (AE Stubbs)

Molophilus cinereifrons de Meijere, 1920

May-September

Skeffington Wood, 23/07/1989 (AE Stubbs)
Noseley Copse, 08/07/1998 (J Kramer)
Launde Big Wood, 19/07/2000 (J Kramer)

Molophilus corniger de Meijere, 1920

July-August

Noseley Copse, 08/07/1998 (J Kramer)

Molophilus curvatus Tonnoir, 1920

May-June

The only county record.

Holwell Mouth, 26/05/1989 (AE Stubbs)

Molophilus flavus Goetghebuer, 1920

Local species which is rarely recorded.
Single VC55 record.

Grace Dieu Wood, 20/05/2011 (J Kramer)

Molophilus griseus Meigen, 1804

May-September

Common.

Croxton Park, 02/07/1994 (AE Stubbs)
Poultney Wood, 28/04/1999 (J Kramer)
Charnwood Lodge NR, 27/05/1999 (J Kramer)

Molophilus medius de Meijere, 1918

May-September

Common

Holwell Mouth, 26/05/1989 (AE Stubbs)
Croxton Park, 02/07/1994 (AE Stubbs)
Scam Hazel Wood, 27/07/1998 (J Kramer)

Molophilus niger Goetghebuer, 1920

April-May

Very local being found by stream margins.
Only two VC55 records.

Stockerston (Eye Brook) 20/05/1989 (AE Stubbs)
Bradgate Park, 09/05/2000 (J Kramer)

Molophilus obscurus Meigen, 1818

May-September

A common species of marshland.

Buddon Wood, 29/05/1990 (AE Stubbs)
Croxton Park, 02/07/1994 (AE Stubbs)

Molophilus ochraceus Meigen, 1818

June-July

Scam Hazel Wood, 22/06/1998 (J Kramer)
Swithland Wood, 25/09/1998 (J Kramer)
Launde Big Wood, 19/07/2000 (J Kramer)

Molophilus pleuralis de Meijere, 1920

May-September

The only VC55 record.

Rotherby Church Meadow, 19/05/1999 (J Kramer)

Molophilus serpentiger Edwards, 1938

May-September

Common.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Empingham Marshy Meadow, 1998 (AE Stubbs)
Great Merrible Wood, 04/05/1999 (J Kramer)

Molophilus undulatus Tonnoir, 1920

August

A single VC55 record.

Launde Park Wood, 19/07/2000 (J Kramer)

Ormosia albitibia Edwards, 1921

August-September

Holwell Mouth, 26/05/1989 (AE Stubbs)

Ormosia depilata Edwards, 1938

May-June

Empingham Marshy Meadow, 1998 (AE Stubbs)
Empingham Marshy Meadow, 28/09/1998 (J Kramer)

Ormosia hederæ Curtis, 1831

May-October

Common.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Empingham Marshy Meadow, 1998 (AE Stubbs)
Linford Meadow, 28/04/1999 (J Kramer)

Ormosia lineata Meigen 1804

April-May

A common species.

Swithland Wood, 29/05/1990 (AE Stubbs)
Empingham Marshy Meadow, 1998 (AE Stubbs)
North Kilworth Canal, 31/03/1999 (J Kramer)

Ormosia nodulosa Macquart, 1826

May-September

Common.

Narborough Bog, September 1936 (PAH Muschamp)
Burley Wood, 04/06/1989 (HJ Mousley)

Ormosia pseudosimilis Lundström, 1912

June-August

Associated with acid soil.
Single VC55 record.

Charnwood Lodge, 01/06/1999 (J Kramer)

Rhypholophus bifurcatus Goetghebuer, 1920

August-October

An autumnal species.

Scam Hazel Wood, 23/09/1998 (J Kramer)
Skeffington Wood, 07/10/1998 (J Kramer)
Grace Dieu Wood, 11/10/2010 (J Kramer)

Rhypholophus haemorrhoidalis Zetterstedt, 1838

August-September

An autumnal species.

Swithland Wood, 25/09/1998 (J Kramer)
Skeffington Wood, 07/10/1998 (J Kramer)
Noseley Spinney, 19/10/1998 (J Kramer)

Rhypholophus varius Meigen, 1818

August-September

An autumnal species.

Scam Hazel Wood, 23/09/1998 (J Kramer)
Swithland Wood, 25/09/1998 (J Kramer)

Symplecta stictica Meigen, 1818

April-September

A locally common species.

Lockington Marsh, 20/06/1991 (AE Stubbs)
Saddington Reservoir margin, 25/04/1999 (J Kramer)
Ulverscroft Priory Pasture, 05/06/1998 (J Kramer)

Symplecta hybrida Meigen, 1804

March-September

Common.

Croxton Park, 02/07/1994 (AE Stubbs)
Great Bowden Borrowpit, 31/03/1999 (J Kramer)
Watermead Park, 19/05/1999 (J Kramer)

Tasiocera murina Meigen, 1818

May-July

A minute (about 3mm) black species which is probably quite common but overlooked.

Holwell Mouth, 26/05/1989 (AE Stubbs)

Trimicra pilipes Fabricius, 1787

May-September

An elusive species of draw-down zone of pond and lake margins.
Single VC55 record.

Lockington Marsh 20/06/1991 (AE Stubbs)

LIMONIIDAE - LIMNOPHILINAE

Austrolimnophila ochracea Meigen, 1804

May-August

Larvae are wood-feeders. Often abundant.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Burley Wood, 04/06/1989 (HJ Mousley)
Burley Wood, 03/08/1989 (AE Stubbs)

Dicranophragma adjunctum Walker, 1848

May-October

A locally common species of marshland.

Croxton Park, 02/07/1994 (AE Stubbs)
The Wailes, Frisby-on-the-Wreake, 19/05/1999 (J Kramer)
Empingham Marshy Meadow, 11/06/1999 (J Kramer)

Dicranophragma nemorale Meigen, 1818

May-August

A common species of woodland.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Burley Wood, 04/06/1989 (HJ Mousley)
Burley Wood, 03/08/1989 (AE Stubbs)

Eloeophila maculata Meigen, 1804

May-September

A common species of marshy ground.

Stockerston (Eye Brook) 20/05/1989 (AE Stubbs)
Holwell Mouth, 26/05/1989 (AE Stubbs)
Burley Wood, 04/06/1989 (HJ Mousley)
Skeffington Wood, 07/10/1998 (J Kramer)

Eloeophila submarmorata Verrall, 1887

April-August

A common species of marshy ground.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Frisby Marsh, 19/05/1999 (J Kramer)
Grace Dieu Wood, 20/05/2011 (J Kramer)

Eloeophila verralli Bergroth, 1912

May-June

A rare species of stream margins.
One VC55 record.

Linford Brook, 12/05/1999 (J Kramer)

Epiphragma ocellare Linnaeus 1761

May-June

Larvae are wood-feeders. A common species of woodland.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Groby Pool Survey, 13/07/1989 (D Whiteley)
Great Merrible Wood, 04/05/1999 (J Kramer)

Euphyllidorea aperta Verrall, 1887

May-July

One VC55 record.

Swithland Wood, 17/06/1998 (J Kramer)

Euphyllidorea dispar Meigen, 1818

May-June

A woodland species.

Groby Pool Survey, 13/07/1989 (D Whiteley)
Swithland Wood, 17/06/1998 (J Kramer)
Charnwood Lodge, 05/05/1999 (J Kramer)
Swithland Wood, 30/05/2006 (AE Stubbs)

Euphyllidorea lineola Meigen, 1804

May-September

Local and uncommon.

Hallaton Castle, 25/07/1989 (AE Stubbs)
Skeffington Wood, 25/07/1989 (AE Stubbs)
The Wailes, Frisby-on-the-Wreake, 19/05/1999 (J Kramer)
Croxton Kerrial, 04/09/1998 (J Kramer)

Limnophila schranki Oosterbroek, 1992

April-May

A local but uncommon species.

Poultney Wood Field, 28/04/1999 (J Kramer)
Linford Brook, 12/05/1999 (J Kramer)
Ulverscroft Priory Pasture, 12/05/1999 (J Kramer)
Bradgate Park, 09/05/2000 (J Kramer)

Neolimnomyia batava Edwards, 1938

June-July

The only VC55 record.

Croxton Park, 02/07/1994 (AE Stubbs)

Neolimnomyia filata Walker, 1856

May-July

A frequently encountered species.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Empingham Marshy Meadow, 1998 (AE Stubbs)
The Wailes, Frisby-on-the-Wreake, 19/05/1999 (J Kramer)
Empingham Marshy Meadow, 11/06/1999 (J Kramer)

Paradelphomyia dalei Edwards, 1939

August

A nationally rare species usually associated with wet woodland.
Only two VC55 records.

Groby Pool, 19/06/1989 (AE Stubbs)
Skeffington Wood, 23/07/1989 (AE Stubbs)

Paradelphomyia fuscula Loew, 1873

July-September

The only VC55 record.

Shacklewell Spinney, 10/06/1998 (J Kramer)

Paradelphomyia nielseni Kuntze, 1919

August-September

A rare species.
Only two VC55 records both from 1998.

Poultney Wood, 09/09/1998 (J Kramer)
Scam Hazel Wood, 23/09/1998 (J Kramer)

Paradelphomyia senilis Haliday, 1833

May-September

A common species of damp woodland.

Burley Wood, 04/06/1989 (HJ Mousley)
Burley Wood, 03/08/1989 (AE Stubbs)
Scam Hazel Wood, 23/09/1998 (J Kramer)

Phylidorea fulvonervosa Schummel, 1829

May-August

A common species of marshland.

Burley Wood, 04/06/1989 (HJ Mousley)

Phylidorea ferruginea Meigen, 1818

April-September

A common marshland species.

Knipton Reservoir, 1979 (DG Gardner & EG Hancock)
Croxtton Park, 02/07/1994 (AE Stubbs)

Pilaria discicollis Meigen, 1818

June-August

A common marshland species.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Burley Wood, 04/06/1989 (HJ Mousley)
Stockerston (R. Eye) 23/07/1989 (AE Stubbs)
Bradgate Park Pool, 22/07/1998 (J Kramer)

Pilaria fuscipennis Meigen, 1818

June-July

Burley Wood, 04/06/1989 (HJ Mousley)
Burley Wood, 03/08/1989 (AE Stubbs)

Pilaria scutellata Staeger, 1840

June-July

The only VC55 record.

Empingham Marshy Meadow, 1998 (AE Stubbs)

Pseudolimnophila lucorum Meigen, 1818

May-July

A species associated with marshland.

Burley Wood, 04/06/1989 (HJ Mousley)
Swithland Wood, 17/06/1998 (J Kramer)
Bitteswell Pasture, 31/05/1999 (J Kramer)

Pseudolimnophila sepium Verrall, 1886

May-August

A marshland species.

Croxtton Park, 02/07/1994 (AE Stubbs)
Swithland Wood, 17/06/1998 (J Kramer)
Croxtton Kerrial, 04/09/1998 (J Kramer)

Achyrolimonia decemmaculata Loew, 1873

May-September

A woodland species.
Single VC55 record.

Charnwood Lodge NNR, 31/05/2006 (AE Stubbs)

Antocha vitripennis Meigen, 1830 June-September

A species found by running water.
Single VC 55 record.

Bradgate Park, 01/06/2006 (AE Stubbs)

Atypophthalmus inustus Meigen, 1818 July

A local species of woodland.

Skeffington Wood, 23/07/1989 (AE Stubbs)
Shacklewell Spinney, 10/06/1998 (J Kramer)
Launde Park Wood, 19/07/2000 (J Kramer)

Dicranomyia autumnalis Staeger, 1840 May-November

A common species.

Croxton Kerrial, 04/09/1998 (J Kramer)

Dicranomyia chorea Meigen, 1818 March-November

Common everywhere. Often seen dancing in a
swarm, in a sun-spot.

Bradgate, May 1935 (PAH Muschamp)
Scam Hazel Wood, 23/04/1998 (J Kramer)
Empingham Marshy Meadow, 1998 (AE Stubbs)

Dicranomyia didyma Meigen, 1804 June-September

By waterfalls. The insect lays its eggs in wet moss.

Bradgate Park, 9/05/2000 (J Kramer)
Bradgate Park, 01/06/2006 (AE Stubbs)

Dicranomyia lucida de Meijere, 1918 June-August

An uncommon species.

Skeffington Wood, 23/07/1989 (AE Stubbs)
Croxton Park, 02/07/1994 (AE Stubbs)
Swithland Wood, 17/07/1998 (J Kramer)

Dicranomyia mitis Meigen, 1830 May-September

Not common.

Burley Wood, 04/06/1989 (HJ Mousley)
Croxton Kerrial, 29/05/1998 (J Kramer)
Ulverscroft Priory Pasture, 27/05/1999 (J Kramer)

Dicranomyia modesta Meigen, 1818 May-October

Common everywhere.

Burley Wood, 04/06/1989 (HJ Mousley)
Burley Wood, 03/08/1989 (AE Stubbs)
Scam Hazel Wood, 23/09/1998 (J Kramer)
Skeffington Wood, 07/10/1998 (J Kramer)

Dicranomyia sericata Meigen, 1830 May-June

A grassland species.
Only one VC55 record.

Brown's Hill Quarry NR, Holwell, 28/05/2006 (AE Stubbs)

Dicranomyia morio Fabricius, 1787

April-September

A species of marshland.

Stockerston (Eye Brook) 20/05/1989 (AE Stubbs)
Burley Wood, 03/08/1989 (AE Stubbs)
Croxton Kerrial, 04/09/1998 (J Kramer)

Dicranomyia fusca Meigen, 1804

June-August

A frequently encountered species of wet woodland.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Burley Wood, 04/06/1989 (HJ Mousley)
Burley Wood, 03/08/1989 (AE Stubbs)
Swithland Wood, 25/09/1998 (J Kramer)

Helius flavus Walker, 1856

June-July

Common in wet woodland.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Croxton Park, 02/07/1994 (AE Stubbs)
Empingham Marshy Meadow, 11/06/1999 (J Kramer)

Helius longirostris Meigen, 1818

June-August

By ponds.

Grobby Pool, 19/06/1989 (AE Stubbs)
Croxton Park, 02/07/1994 (AE Stubbs)

Helius pallirostris Edwards, 1921

May-June

By ponds.
The only VC55 record.

Lockington Marsh 20/06/2003 (J Kramer)

Limonia flavipes Fabricius, 1787

May-July

A woodland species that is not uncommon.

Narborough, September 1935 (M) (PAH Muschamp)
Shacklewell Hollow. 15/05/1998 (J Kramer)
Linford Meadow. 22/05/1998 (J Kramer)

Limonia macrostigma Schummel, 1829

May-October

Common in wet woodland.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Croxton Park, 02/07/1994 (AE Stubbs)
Scam Hazel Wood, 23/09/1998 (J Kramer)

Limonia nigropunctata Schummel, 1829 **masoni** Edwards, 1921

May-August

A local species.

Lockington Marsh 20/06/1991 (AE Stubbs)
Scam Hazel Wood. 27/05/1998 (J Kramer)
Holwell Mouth NR, 28/05/2006 (AE Stubbs)

Limonia nubeculosa Meigen, 1804

January-November

Often abundant wherever there is rotting wood on which the larvae feed.

Narborough, September 1935 (M) (PAH Muschamp)
Holwell Mouth, 26/05/1989 (AE Stubbs)
Burley Wood, 03/08/1989 (AE Stubbs)
Poultney Wood, 08/05/1998 (J Kramer)

Limonia phragmitidis Schrank, 1781

May-July

A widespread species which is often frequent in shaded grassy places.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Burley Wood, 04/06/1989 (HJ Mousley)
Hallaton Brook, 25/05/1999 (J Kramer)

Limonia trivittata Schummel, 1829

June-August

A local species of woodland.

Skeffington Wood, 23/07/1989 (AE Stubbs)
Lockington Marsh, 20/06/1991 (AE Stubbs)
Scam Hazel Wood, 27/07/1998 (J Kramer)

Lipsothrix nervosa Edwards, 1938

June-July

A rare species with the larvae feeding in wet wood of tree branches in streams.
Only one VC55 record.

Groby Pool, 31/05/2006 (AE Stubbs)

Lipsothrix remota Walker, 1848

May-July

A local but not uncommon species. The larvae feed in wet wood of tree branches in streams.

Holwell Mouth, 26/05/1989 (AE Stubbs)
Burley Wood, 04/06/1989 (HJ Mousley)
Croxtan Park, 02/07/1994 (AE Stubbs)

Metalimnobia bifasciata Schrank, 1781

July-November

A local species of woodland species, the larvae feeding in fungi.

Launde Big Wood, 19/07/2000 (J Kramer)
Thornborough Spinney, 21/05/2010 (J Kramer)

Neolimonia dumetorum Meigen, 1804

June-September

A frequent woodland species associated with rotting logs.

Burley Wood, 04/06/1989 (HJ Mousley)
Skeffington Wood, 15/07/1998 (J Kramer)
Launde Park Wood, 19/07/2000 (J Kramer)

Rhipidia maculata Meigen, 1818

May-October

A common woodland species with the larvae being wood-feeders.

Narborough Bog, September 1935 (M) (PAH Muschamp)
Holwell Mouth, 26/05/1989 (AE Stubbs)
Burley Wood, 04/06/1989 (HJ Mousley)
Burley Wood, 03/08/1989 (AE Stubbs)

Rhipidia uniseriata Schiner, 1864

April-July

A rare woodland species.
Recorded only three times (all in 1998) from VC55.

Swithland Wood, 17/06/1998 (J Kramer)
Scam Hazel Wood, 22/06/1998 (J Kramer)
Noseley Copse, 08/07/1998 (J Kramer)

Thaumastoptera calceata Mik, 1866

May-July

A local species found in marshland.
Occasionally found in VC55.

Empingham Marshy Meadow, 1998 (AE Stubbs)
Ullesthorpe Marsh, 31/05/1999 (J Kramer)
Burrough Hill, 28/05/2006 (AE Stubbs)
Holwell Mineral Line, 28/05/2006 (AE Stubbs)

Factors affecting cranefly occurrence

One of the aims of insect ecology is to understand as fully as possible the habitat requirements of the species studied. Why do they live here and not there?

VC55 has a relatively uniform environment as regards the biotopes found but without mountains and large areas of moorland or bog, no coastline and no limestone valley with calcareous seepages. As may be expected, with a lower range of biotopes, there is less in the way of species diversity. As a result of glaciation and the local Mesozoic geology, the soils over most of the area of VC55 are heavy clays. One exception to this is the Charnwood Forest area with its igneous and metamorphic rocks which out-crop in Bradgate Park and Beacon Hill. Where there are heavy clay soils there are marshes, wet pasture and wet woodland. However, it is often difficult to study marshland, woodland or stream species as units in isolation. Wet pastures may grade into marshland, or into lake, pond or canal margins and marshland species are found in wet woodland. Flowing water habitats, such as rivers, brooks and streams, flow through woodland and pasture and occasionally form flood meadows. This means that any species list from a site is a mixture of species from different biotopes. Nature is complicated and it is, therefore, usually impossible to sort out in any detail the factors that limit distribution simply by looking at distribution maps.

Most of the species that have been recorded in VC55 are, not surprisingly, those to be found in the most common biotopes - marshland and wet woodland. About forty species may be found in a marshland community. These include the genera *Tipula* amongst which is the conspicuous *Tipula maxima* as well as, *Erioptera*, *Euphyllidorea*, *Phyllidorea*, *Ilysia*, *Molophilus* and *Thaumastoptera*. Alan Stubbs recorded *Trimicra pilipes* from the edge of a flood slack (1991) but, since this habitat is vulnerable, it remains to be seen whether it has survived the recent drought summers.

About the same number of species are to be found at a good woodland site. Many of these, as larvae, feed on wood in various stages of decomposition and of differing water contents. These include *Dictenidia bimaculata*, *Ctenophora pectinicornis*, *Limonia nubeculosa* and *Rhipidia uniseriata*. The larvae of other species thrive in the rich humus on the forest floor. *Nephrotoma guestfallica*, *Tipula selene*, *Euphyllidorea dispar* are some of these. Plenty of interesting work remains to be done on the food and other habitat requirements of cranefly larvae. The wet woodland community includes the genus *Paradelphomyia* with more work needing to be done to identify with confidence that the species is present. The Tipulidae, Cylindrotomidae and Limoniidae, except the Limnophilinae, are primary consumers, feeding on living or decomposing vegetation, while the Pediciidae and Limnophilinae have predatory larvae.

The Charnwood Forest area in the north of VC55 is an area where igneous rock produces a thin acid soil and a few unpolluted streams such as Linford Brook. This gives a different mix of cranefly species. At the stream margins can be found *Pedicia littoralis*, *Eloeophila verralli* and *Molophilus niger*. *Sphagnum* moss occurs very locally in the area and *Prionocera turcica* has been recorded at a few sites here. There is just one location for the much rarer *P. subserricornis* first taken near Groby by Derek Whiteley in 1989 and on subsequent occasions by Alan Stubbs. Derek Whiteley also recorded *Nephrotoma crocata* nearby (June 1989). Other local Charnwood species include *Tipula flavolineata*, *Crypteria limnophiloides*, *Ormosia pseudosimilis*, and *Euphyllidorea lineola*. *Tipula staegeri* and *Tipula signata* occur in the Charnwood woodlands in the autumn. In this region good indicators are as follows:

- old wet pasture - *Tipula pruinosa*; *Erioptera squalida*
- marshland - *Tipula luna*, *Tipula maxima*
- old woodland - *Dictenidia bimaculata*, *Ctenophora pectinicornis*
- wet woodland - *Rhipidia uniseriata*, *Atypophthalmus inustus*

Another local species which should be mentioned, with just one record, is *Limonia nigropunctata* ssp *masoni*, which, turned up in a spring-fed spinney in the north west of the county.

Marshland species

Prionocera subsericornis - in acid soils
Prionocera turcica - in acid soils
Tipula luna
Tipula maxima
Tipula flavolineata
Tipula vernalis
Tipula luteipennis
Tipula oleracea
Tipula paludosa
Tipula couckeii
Tipula lateralis
Tipula pruinosa
Pedicia rivosa
Tricyphona immaculata

Erioptera flavata
Erioptera fuscipennis
Erioptera fuscilentata
Erioptera lutea
Erioptera squalida
Ilisia maculata
Ilisiaoccoecata
Ormosia nodulosa
Trimicra pillipes
Helius flavus
Helius longirostris
Helius pallirostris
Thaumastoptera calceata

Woodland species

Ctenophora pectinicornis
Dictenidia bimaculata
Tanyptera nigricornis
Tipula fulvipennis
Tipula signata
Tipula staegeri
Tipula submarmorata
Ula mollissima - larvae in Fungi
Ula sylvatica - larvae in Fungi
Cheilotrichia cinerascens
Metalimnobia bifasciata - larvae in Fungi
Atypophthalmus inustus

Rhypholophus bifurcatus
Rhyphol. haemorrhoidalis
Rhypholophus varius
Epiphragma ocellare
Limonia flavipes
Limonia macrostigma
Limonia nubeculosa
Limonia trivittata
Neolimonia dumetorum
Rhipidia maculata
Rhipidia uniseriata

Grassland species

Nephrotoma flavescens
Tipula vernalis
Tipula luteipennis
Tipula oleracea

Tipula paludosa
Tipula varipennis
Tipula couckeii
Tipula pruinosa

Species of flowing water

Tipula larvae are occasionally found in samples from streams, but these probably occur in the substrate from which they have been dislodged.

<i>Dicranota bimaculata</i>	<i>Eloeophila verralli</i>
<i>Dicranota clariipennis</i>	<i>Lipsothrix nervosa</i> - in wet tree branches forming natural dams.
<i>Dicranota subtilis</i>	<i>Lipsothrix remota</i> - in wet tree branches forming natural dams.
<i>Dicranota pavida</i>	<i>Tipula lateralis</i> - common by streams; larvae are not swimmers and may live in the mud at stream margins.
<i>Pedicia littoralis</i>	
<i>Pedicia rivosa</i>	

These lists obviously raise the question 'Why?' For instance, why should *Tipula pruinosa* be found in wet grassland and *Tipula submarmorata* be found in woodland? Often the answers to these questions are unknown and may relate to the specialised diet of the larvae. Sometimes it may be the larval oxygen requirements and how this is related to their activity and respiratory rate. Another aim is to understand how the resources in that biotope are shared or partitioned amongst the species that are established there, each in their own habitats. Much of this remains to be understood.

There remains plenty of work to be done within VC55. There are a few other biotopes to explore such as the disused sand/gravel quarries. Also only a single record has been made of some of the rarer species and so further confirmatory records would be reassuring. There are undoubtedly more British species to be discovered in Leicestershire and I have included the current Leicestershire Checklist to encourage its rapid enlargement!

A check-list of Leicestershire craneflies (146 species)

TIPULIDAE

Ctenophora pectinicornis
Dicthenidia bimaculata
Tanyptera nigricornis
Prionocera subsericornis
Prionocera turcica
Nephrotoma analis
Nephrotoma appendiculata
Nephrotoma cornicina
Nephrotoma crocata
Nephrotoma flavescens
Nephrotoma flavipalpis
Nephrotoma guestfalica
Nephrotoma quadrifaria
Tipula fulvipennis

Tipula luna
Tipula maxima
Tipula vittata
Tipula unca
Tipula flavolineata
Tipula cava
Tipula fascipennis
Tipula lunata
Tipula selene
Tipula vernalis
Tipula luteipennis
Tipula irrorata
Tipula submarmorata
Tipula varipennis

Tipula confusa
Tipula pagana
Tipula rufina
Tipula signata
Tipula staegeri
Tipula variicornis
Tipula oleracea
Tipula paludosa
Tipula scripta
Tipula couckeii
Tipula lateralis
Tipula montium
Tipula pruinosa

CYLINDROTOMIDAE

Cylindrotoma distinctissima

PEDICIIDAE

Dicranota bimaculata
Dicranota claripennis
Dicranota subtilis

Dicranota pavidata
Pedicia littoralis
Pedicia rivosa

Tricyphona immaculata
Ula mollissima
Ula sylvatica

LIMONIIDAE - CHIONEINAE

Cheilotrichia cinerascens
Crypteria limnophiloides
Ellipteroides lateralis
Erioconopa trivialis
Erioptera divisa
Erioptera flavata
Erioptera fuscipennis
Erioptera fusculentata
Erioptera griseipennis
Erioptera lutea
Erioptera squalida
Erioptera verralli
Gnophomyia viridipennis
Gonempeda flava
Gonomyia recta

Gonomyia simplex
Ilisia maculata
Ilisia occoecata
Molophilus appendiculatus
Molophilus bifidus
Molophilus bihamatus
Molophilus cinereifrons
Molophilus corniger
Molophilus flavus
Molophilus griseus
Molophilus medius
Molophilus niger
Molophilus obscurus
Molophilus ochraceus
Molophilus pleuralis

Molophilus serpentiger
Molophilus undulatus
Ormosia albitibia
Ormosia depilata
Ormosia hederata
Ormosia lineata
Ormosia nodulosa
Ormosia pseudosimilis
Rhypholophus bifurcatus
Rhyphol. haemorrhoidalis
Rhypholophus varius
Symplecta stictica
Symplecta hybrida
Tasiocera murina
Trimicra pilipes

LIMONIIDAE - LIMNOPHILINAE

Austrolimnophila ochracea
Dicranophragma adjunctum
Dicranophragma nemorale
Eloeophila maculata
Eloeophila submarmorata
Eloeophila verralli
Epiphragma ocellare
Euphylidorea aperta

Euphylidorea dispar
Euphylidorea lineola
Limnophila schranki
Neolimnomyia batava
Neolimnomyia filata
Paradelphomyia fuscata
Paradelphomyia nielseni
Paradelphomyia senilis

Phylidorea ferruginea
Phylidorea fulvonervosa
Pilaria discicollis
Pilaria fuscipennis
Pilaria scutellata
Pseudolimnophila lucorum
Pseudolimnophila sepium

LIMONIIDAE - LIMONIINAE

Achylolimonia decemmaculata
Atypophthalmus inustus
Dicranomyia autumnalis
Dicranomyia chorea
Dicranomyia didyma
Dicranomyia lucida
Dicranomyia mifis
Dicranomyia modesta
Dicranomyia sericata

Dicranomyia morio
Dicranomyia fusca
Helius flavus
Helius longirostris
Helius pallirostris
Limonia flavipes
Limonia macrostigma
Limonia nigropunctata masoni
Limonia nubeculosa

Limonia phragmitidis
Limonia trivittata
Lipsothrix nervosa
Lipsothrix remota
Metalimnobia bifasciata
Neolimonia dumetorum
Rhipidia maculata
Rhipidia uniseriata
Thaumastoptera calceata

Examples of crane fly sites

There are species lists for very many VC55 sites and the few shown below are incomplete examples. Anyone wishing to do more work can consult the author to obtain any previous records from other sites.

CHARNWOOD LODGE NR (SK4515)

Birch woodland, mixed woodland, stream and lake margin, *Sphagnum* moss,

TIPULIDAE

Prionocera turcica
Nephrotoma appendiculata
Tipula fulvipennis
Tipula flavolineata
Tipula cava
Tipula vernalis
Tipula pagana
Tipula staegeri
Tipula oleracea
Tipula paludosa
Tipula lateralis

PEDICIIDAE

Tricyphona immaculate

LIMONIIDAE

Austrolimnophila ochracea
Cheilotrichia cinerascens
Crypteria limnophiloides
Dicranomyia chorea
Dicranomyia modesta
Erioconopa trivialis
Erioptera fusculentata
Erioptera lutea
Erioptera squalida
Euphyllidorea dispar
Euphyllidorea lineola
Helius flavus

Limonia nubeculosa
Limonia phragmitidis
Molophilus griseus
Molophilus obscurus
Ormosia hederæ
Ormosia pseudosimilis
Paradelphomyia senilis
Phyllidorea ferruginea
Phyllidorea fulvonervosa
Rhipidia maculata
Rhypholophus varius
Symplecta hybrida
Symplecta stictica

GREAT MERRIBLE WOOD NR (SP8396)

Deciduous woodland

TIPULIDAE

Nephrotoma appendiculata
Nephrotoma quadrifaria
Tipula submarmorata
Tipula variipennis
Tipula oleracea
Tipula scripta

PEDICIIDAE

Tricyphona immaculate

LIMONIIDAE

Cheilotrichia cinerascens
Gonomyia recta
Ilisia maculata
Molophilus cinereifrons
Molophilus serpentiger
Ormosia hederæ
Ormosia nodulosa
Symplecta stictica
Austrolimnophila ochracea

Epiphragma ocellare
Neolimnomyia nemoralis
Atypophthalmus inustus
Dicranomyia chorea
Limonia macrostigma
Limonia nubeculosa
Limonia phragmitidis
Limonia trivittata
Neolimonia dumetorum
Rhipidia maculata

GRACE DIEU WOOD (SK4217)

Lake, Brook, Fen, Wet Woodland, Marsh

TIPULIDAE

Nephrotoma appendiculata
Nephrotoma quadrifaria
Tipula fulvipennis
Tipula luna
Tipula maxima
Tipula vittata
Tipula unca
Tipula lunata
Tipula vernalis
Tipula luteipennis
Tipula submarmorata
Tipula variipennis
Tipula pagana
Tipula staegeri
Tipula signata
Tipula oleracea
Tipula paludosa
Tipula scripta
Tipula lateralis

PEDICIIDAE

Dicranota bimaculata
Dicranota claripennis
Dicranota pavida
Pedicia rivosa

Tricyphona immaculata
Ula mollissima
Ula sylvatica

LIMONIIDAE

CHEILONEINAE
Cheilotrichia cinerascens
Erioconopa trivialis
Erioptera griseipennis
Erioptera lutea
Ilisia maculata
Molophilus appendiculatus
Molophilus bifidus
Molophilus flavus
Molophilus medius
Molophilus obscurus
Molophilus serpentiger
Ormosia depilata
Ormosia lineata
Ormosia nodulosa
Rhypholophus bifurcatus
Tasiocera murina

LIMNOPHILINAE

Austrolimnophila ochracea
Dicranophragma adjunctum

Dicranophragma nemorale
Eloeophila submarmorata
Epiphragma ocellare
Euphyllidorea aperta
Neolimnomyia filata
Paradelphomyia senilis
Phyllidorea ferruginea
Phyllidorea fulvonervosa
Pilaria discicollis
Pseudolimnophila sepium

LIMONIINAE

Dicranomyia chorea
Dicranomyia modesta
Dicranomyia morio
Dicranomyia fusca
Helius flavus
Limonia flavipes
Limonia macrostigma
Limonia nubeculosa
Limonia phragmitidis
Limonia trivittata
Lipsothrix remota
Neolimonia dumetorum
Rhipidia maculata

HERBERT'S MEADOW NR (SK4913)

Ancient grassland

TIPULIDAE

Nephrotoma appendiculata
Tipula unca
Tipula fascipennis
Tipula vernalis
Tipula oleracea

PEDICIIDAE

Tricyphona immaculata

LIMONIIDAE

Erioptera lutea
Molophilus obscurus
Neolimnomyia nemoralis
Phylidorea fulvonervosa
Rhipidia maculata

LEA MEADOWS NR (SK506115)

Old wet pasture

TIPULIDAE

Nephrotoma appendiculata
Tipula luna
Tipula vernalis
Tipula varipennis
Tipula oleracea
Tipula lateralis

PEDICIIDAE

Tricyphona immaculata

LIMONIIDAE

Erioconopa trivialis
Erioptera lutea
Neolimnomyia adjuncta
Phylidorea ferruginea
Pilaria discicollis

SWITHLAND WOOD – Compartment 4. SK537124

Wet deciduous woodland with small spring.

TIPULIDAE

Tipula fulvipennis
Tipula luna
Tipula vittata
Tipula pudosa

PEDICIIDAE

Dicranota pavidata
Tricyphona immaculata
Ula mollissima

LIMONIIDAECHIONEINAE

Erioptera lutea
Ilysia maculata
Ilysia occoecata
Molophilus appendiculatus

Molophilus medius
Mol.ophilus ochraceus
Molophilus serpentina
Ormosia nodulosa
Rhypholophus bifurcatus
Rhypholophus haemorrhoidalis
Rhypholophus varius

LIMNOPHILINAE

Austrolimnophila ochracea
Eloeophila maculata
Eloeophila submarmorata
Epiphragma ocellare
Euphylidorea aperta
Paradelphomyia senilis
Pilaria fuscipennis

Pseudolimnophila lucorum
Pseudolimnophila sepium

LIMONIINAE

Dicranomyia chorea
Dicranomyia lucida
Dicranomyia modesta
Dicranomyia fusca
Limonia flavipes
Limonia macrostigma
Limonia nubeculosa
Limonia phragmitidis
Limonia trivittata
Neolimonia dumetorum
Rhipidia maculata
Rhipidia uniseriata

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