Cranefly News

Dipterists Forum Cranefly Recording Scheme
For Superfamily Tipuloidea & Families Ptychopteridae & Trichoceridae

Newsletter No 31 **Spring 2016**

Editor: John Kramer
Sub-editor: John Dobson

Dicranophragma separatum (M. Ackland)

Notices

Draft Cranefly Keys - 2016

There will be a new and revised issue of the draft cranefly keys for 2016. They will take account of the revisions to the British Checklist (Stary & Stubbs, 2015) species new to Britain and additional amendments. While retaining the macro diagnostic features, some microscopic confirmatory characters have been added to help in identification. An example is given at the end of this newsletter.

As usual, if you want copies please let the editor know, and all feedback would be useful.

John Kramer

Field Work

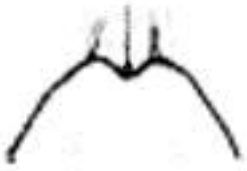
Gillfield Wood

Another day-long visit was made to Gillfield Wood, Sheffield (SK30.78, VC 57) with the Sorby Naturalists on 27 Sept 2015. Organised by Derek Bateson, eight people attended and with contributions by Derek Whiteley, Chris Measures and Kevin Walker, we succeeded in adding twelve cranefly species to the list for Gillfield Wood, making a total of 58 craneflies for the site.

By wading in Totley Brook (not Loxley Brook, an error in Issue 30) and sweeping the marginal vegetation 6 species were netted from the family Pediciidae (Hairy-eyed craneflies), 5 of which have aquatic larvae. The habitat of the larvae of *Lipsothrix remota* (found here in Gillfield Wood) is in the dams of wet twigs that you can see in the photo of a small section of the brook. Autumn woodland species found included *Tipula luteipennis*, *T. confusa* and *T. staegeri*, *Erioconopa diuturna*, *Rhypholophus bifurcata* and *R. varia*.

Tipula holoptera in Scotland.

While checking the identification of a male specimen from Seil Island, off the west coast of Scotland which looked like *Tipula* (*Savchenkia*) *pagana*, I examined sternite 8 and found it to be the close relative and look-alike *T.* (*S.*) *holoptera.*



***Tipula holoptera* – sternite 8.** (Note that the median brush of fine hairs is missing in the photographed specimen).

Females of *T. pagana* are brachypterous, with short wings, while female *T. holoptera* have the wings fully-formed and functional.

I believe that this is the only record of the species in Scotland and the most northern record to date.

(*continued*)

Contents

The details are as follows: The record is for Seil Island, NM785200, collected and determined as *Tipula* (*Savchenkia*) *limbata* by Peter Skidmore, 17/10/2001. Re-determined as *T. holoptera* by JK, 28/10/2015. The specimen is curated at the NMW, Cardiff and is on loan to the author.

Thanks to Adrian Plant for permission to examine the specimen, and to Geoff Hancock and Ashleigh Whiffin for confirming the status of *T. holoptera* in Scotland.

John Kramer

Reference

Skidmore, P. (2008). *A review of the Diptera of the Western Isles of Scotland*. Dipterists Digest, Scottish Islands edition. **15**(2), 124. (Specimen recorded as *T. limbata*).

Craneflies in Northamptonshire in 2015

This is a round-up of the highlights of 2015, although not all specimens have yet been identified.

The two MV moth traps at Pitsford Water Nature Reserve (SP787699) produced a number of craneflies in the by-catch. Not all were retained by the trappers but of those that were, the following table summarises the findings. The results for 2013 and 2014 were presented in Cranefly News 29 (Spring, 2015).

The Northants and Peterborough Diptera Group met most Sunday mornings from the end of April to early September. Amongst the cranefly records the following stood out. At Irthlingborough Lakes and Meadows Nature Reserve (SP9570) on 5th July many *Nigrotipula nigra* (Linnaeus, 1758) were swept in the damp meadows. This is a relatively newly acquired reserve and consists of several flooded gravel pits with winter-flooded meadows alongside. The two meadows where the craneflies were found have been recently cleared of encroaching scrub to open them up for wildfowl grazing. There are many damp areas, pools and ditches on the site and we will be making further visits in the future.

At High Wood and Meadows Nature Reserve (SP5954), near Daventry, on 26th April Brian Harding found *Erioptera verralli* Edwards, 1921. This is a new record for the group and a scarce species in the East Midlands. So far all the other species reported this year have been common ones for our area. However, the county has not been well recorded so even records of common species are filling gaps in our knowledge of the county's diptera.

My thanks go to The Wildlife Trust for Beds., Cambs. and Northants. for permission to sample their reserves and to the members of the Northants. and Peterborough Diptera Group for their records.

John Showers

Table showing numbers of cranefly species recorded at each MV trap (water's edge & woodland clearing) **in 2015.**

Species (Tipulidae)	**MV 1** Water's Edge	**MV 2** W/land Clearing	**Species** (Limoniidae)	**MV 1** Water's Edge	**MV 2** W/land Clearing
Nephrotoma appendiculata	1	0	*Dicranomyia modesta*	1	0
Nephrotoma flavescens	4	1	*Erioptera* sp.	4	1
Nephrotoma quadrifaria	0	1	*Molophilus ochraceus*	0	2
Tipula lateralis	4	2	*Ormosia nodulosa*	4	1
Tipula obsoleta	1	1	*Phylidorea ferruginea*	1	0
Tipula oleracea	2	0	*Rhipidia maculata*	2	1
Tipula paludosa	3	1	*Symplecta hybrida*	3	0
Tipula pierrei	1	0			
Tipula scripta	2	0			
Tipula submarmorata	0	2			
Tipula vernalis	0	1			

Recent Articles published during 2015

Dipterists Digest 2015, Vol.22, No.1.

Hancock, G. (2015). Apparent bivoltine pattern of *Molophilus pusillus* Edwards, and some other cranefly emergence patterns in Scotland, 2009. (Diptera: Tipulidae, Limoniidae). Dipterist Digest (22)1, 29-32.

The data for this paper were gathered from a Malaise trap on the east side of Loch Lomond. Bar charts are presented (no. of Individuals vs. week no.) for four species. *Molophilus pusillus* shows a very distinct bivoltine pattern, with peaks in May and early October. Since numbers are usually not recorded, it is very difficult to investigate patterns of emergence on a national scale. Geoff's paper invites further work on this topic so that national patterns can be established.

[The national database supports the bivoltine nature of the *M. pusillus* life-cycle, although this is modified by local factors. Six other species of *Molophilus* have a pattern of spring and autumn emergence, the strongest of which is *M. pleuralis*. [Ed.]

Kramer, J. A Review of the genus *Paradelphomyia* Alexander (Diptera, Limnoniidae) in Britain. 43-57.

This is a distinctive genus, although many of the species have proved difficult to separate. Ejaculatory apodemes are illustrated and criteria for

the identification of all of the British species are evaluated.

Chandler, P. J. Diptera recording at Bushy Park, Middlesex. 69-110.

A total of 1037 Diptera species have been recorded in Bushy Park and this includes a good list of 54 Craneflies, including *Gnophomyia viridipennis* and *Rhipidia ctenophora*.

Stary, J. and Stubbs, A. E. (2015). Five species under *Dicranomyia* (*Dicranomyia*) *mitis* (Meigen 1830) (Diptera, Limoniidae). Zootaxa 3964(3). 321-334.

Dicranomyia affinis (Schummel), *D. imbecilla* (Lackschewitz), *D. lutea* Meigen, *D. mitis* Meigen, and *D. quadra* Meigen are species in the *mitis* group described in the past by the authorities shown. Unfortunately the holotypes have been destroyed or damaged beyond use and this group of species has caused problems for a long time.

F. W. Edwards noted the range of variation in his 1938 paper (see Cranefly News 20, Spring 2010). In addition to *D. mitis* Meigen 1830, he described two other different forms of this species. These were, var *lutea* Lackschewitz 1928 and var *affinis* Schummel 1829. The problem is that the male genitalia of these forms, now proposed as species, are very similar, and hence they were grouped as varieties of a single species by Edwards, and other workers. Alan Stubbs, in his draft key to the Limoniinae, (DF Bulletin, 1998) proposed that these be again raised to species level, using the characteristics of the pleura, claws and rostral spines to separate them. In addition he noted two other forms which he called provisionally; Species A and Species B.

Jaroslav Stary has done an excellent job in redescribing the males and females of these five species. His meticulous work has shown that the names *D. imbecilla* (Lackschewitz) and *D. quadra* Meigen, as described by the original authors, provide a good fit with the Species A (*quadra*) and Species B (*imbecilla*) as described by Alan Stubbs. Alan has also added notes on the ecology of the different species. This important and well-illustrated paper will provide a good basis for further work in Britain. [See Appendix for a key to these new species.]

John Kramer

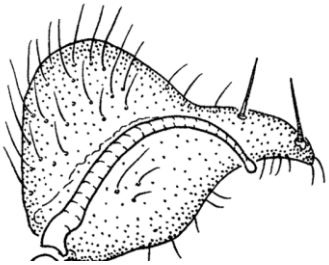
Species Look-alikes

Dicranomyia didyma v. *D. consimilis*

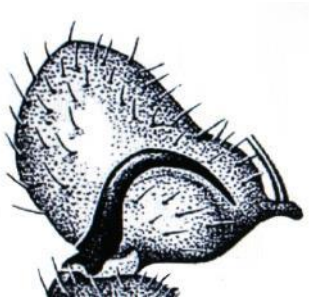
These two species have a similar appearance, the wings having a row of 4 dark spots along the costal edge (see Limoniinae key) and they could be easily confused.

D. didyma is a common but local species of waterfalls, laying its eggs in the adjacent wet moss.

D. consimilis is a rare northern species. The 2016 edition of the key has been amended accordingly.



Style of *Dicranomyia consimilis*
Illustration from Savchenko and Krivolutskaya, 1976.



Style of *Dicranomyia didyma*
Illustration from Podenas, Geiger, Haenni & Gonseth, 2006.

John Kramer

In the footsteps of Harry Britten:

Cotterill Clough revisited

Leafing through the pages of Kidd and Brindle's 1959 *Diptera of Lancashire and Cheshire*, one is struck by the frequency of certain place names (which are listed only for finds of the rarer species). Many of these fruitful sites now seem to have been engulfed in the growth of the Greater Manchester conurbation or refer to a rather large area such as the Delamere Forest (SJ57).

One conspicuous exception is Cotterill Clough, which can be located on the 1:25000 OS map at SJ8083. This narrow steep-sided valley has been carved by a small stream out of the sandstone of the Bollin Valley, which falls from a height of 56m at Castle Mill farm to 36m at the Castle Mill bridge. It has been a nature reserve since 1934, and was designated as an SSSI in 1950, but has only narrowly escaped obliteration by the second runway of Manchester Airport. As it is, the upper reaches of the Clough have been cut off by an embankment bearing the A538 to nearby Wilmslow.

Now in the care of the Cheshire Wildlife Trust, the Clough in spring presents a sea of ramsons covering the flat ground in the wider sections and extending up the steep slopes. The mixed deciduous trees rise tall and straight to an immense height, but allow a fair amount of dappled sunlight through. There is a promising amount of "coarse woody debris" in and around the stream with its stretches of sandy sediment. The level wooded ground at the top of the northern slope is rather overrun by bracken and bramble, but there are some damper pools and flushes up there.

(*continued*)

In the brief periods of calm between aircraft arrivals and departures, it is possible to imagine that the Clough is much as it was in the heyday of Harry Britten (senior), assistant keeper of entomology at Manchester Museum from 1919 to 1938. His initials HB appear many times on virtually every page of Kidd and Brindle.

I have recently started transcribing the set of record cards maintained by him for his own and others' records in Lancashire and Cheshire. I have just completed the craneflies (including Trichoceridae and Ptychopteridae) amounting to a total of 2206 records, of which 55% are credited to Britten himself.

Harry Britten in about 1923

I have been able to determine that 83 species were recorded in Cotterill Clough between 1923 and 1957, all but three by Harry Britten. His final cranefly record from there was on 6 June 1950, when he found *Nephrotoma crocata*, only 4 years before his death at the age of 84.

Other rare or scarce species recorded were *Ormosia aciculata*, *Hoplolabis vicina*, *Molophilus niger*, *Paradelphomyia nielseni*, *Tricyphona unicolor*, *Tipula peliostigma*, *Trichocera rufulenta* and *T. rufescens*.

So it was with some high hopes that I set out on my first diptera survey in Cotterill Clough on 30 April this year, followed by two further visits on 3 August and 19 October.

The finds on the first visit were not spectacular, but I did get a personal first of *Ormosia lineata*, previously recorded by Britten on 5 May 1942. The August visit produced *Atypophthalmus inustus*, which was found on 1 July 1939 by F. W. Edwards – the only cranefly record from the site ascribed to the leading British cranefly expert of the time. This species was then considered very rare but by 1998 it was "proving widespread in low numbers" (Alan Stubbs, draft key to Limoniinae).

On that visit I also found what I identified as *Paradelphomyia dalei*, following consultations with John Kramer, who kindly supplied an advance copy of his article on this genus in Dipterists Digest (Vol 22, No 1): it seems not to have been previously recorded in Cheshire or Lancashire. Eight days later, I also found this species in the Delamere Forest. Ironically *P. dalei* was first described by Edwards in 1939 from a specimen taken in Dorset just a few weeks after the *Atypophthalmus* specimen.

In all I have found 39 species at the site, 11 of which are not in the historic (pre-1970) records. This seems a very good result, particularly when considering the large number of visits over which Harry Britten's records extend – 14 in 1942 alone.

His policy seems to have been to record species only once or twice for a given site through the whole 30 years of collecting. Even *Limonia nubeculosa* was recorded only twice, once by Britten and once by Leonard Kidd. There is then a gap of over 40 years in the records until Steve McWilliam visited the Clough in August in each of 2000 and 2001, adding a further two species to the site list, which therefore now stands at 96. Another three of the new species were not known to Kidd and Brindle from Cheshire: *Molophilus pusillus*, *Erioconopa diuturna* and *Ula mollissima*. (The last of these was not distinguished from *U. sylvatica* by British recorders before the 1970s, according to the Stubbs key).

Another of the additions to the site list is *Erioconopa trivialis* and It is curious that a species as common as this has not been recorded previously. It was certainly widespread in Lancashire and Cheshire, with 18 records in the Harry Britten dataset from a range of locations – for comparison the count for *Limonia nubeculosa* is only 37, even though it was listed by Kidd and Brindle as very common. (The respective nationwide counts on NBN are 3211 and 7158 at the time of writing.).

One can only hope that further collection of data will yield more clues about whether there have indeed been significant real changes to the cranefly fauna of Cotterill Clough in the last fifty years and about the causes of any such changes.

Cotterill Clough in early March 2015

I would like to thank Sue Tatman of Cheshire Wildlife Trust for permission to survey the site, Dmitri Logunov of Manchester Museum for access to the Harry Britten record cards, Eric Fletcher of the Cheshire Local Records Centre for their cranefly data, and lastly John Kramer as noted above for his help with *Paradelphomyia*.

Phil Brighton

The Photographic Work of Michael Ackland

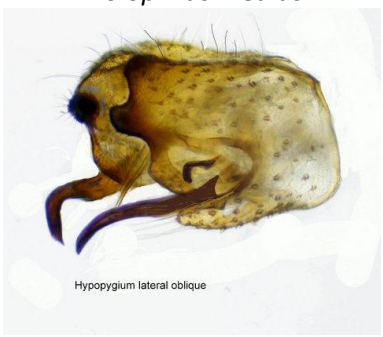
Many of you will have read the very useful articles on photomicroscopy by Michael Ackland in the recent editions of the Bulletin. The first one was in Bulletin 78 of Autumn 2014 where he described the equipment and methods he used. In Bulletin 80 of Autumn 2015 he described how to make and use glycerine jelly to hold specimens firmly in position while taking a series of photographs.

Michael is a specialist in the Anthomyiidae but in this latter article he used some excellent photos of the genitalia of the limoniid cranefly *Erioptera lutea* as illustrations. He has also produced photographs of a number of other craneflies which set a high standard and will be of interest to readers. All of the specimens are well cleared while retaining their structure, and they are well presented. I have included some examples below.

Molophilus bifidus

Molophilus medius

Erioptera lutea



Molophilus ochrescens

Erioptera fuscipennis

Dicranophragma separatum

Craneflies in the Cambrians

As part of a PhD project, William Styles of Aberystwyth University Institute of Biological, Environmental and Rural Sciences (IBERS),has been carrying out a study of cranefly populations in the Cambrian Mountains, North Wales. This is an important survey and we look forward to reading the full results in due course.

William writes: 'These surveys form part of a larger body of work all designed to understand the effect of two key environmental drivers, livestock grazing intensity and pollution from nitrogen deposition, on the ecology and ecosystem processes of the sensitive upland ecosystem.

The researchers from this project selected craneflies as target organisms, as many higher-order trophic level species rely on this key invertebrate group as a food source. Thus certain species within the Tipuloidea super-family could be considered as keystones in the upland ecosystem. The surveys were conducted in blanket bog, heath and acid grassland habitats, using emergence traps, inverted baskets with sticky internal panels to capture individuals.

Whilst significant numbers of small bodied species such as *Molophilous ater* were recorded, populations of long-palped craneflies (*Tipula* spp.) were very sparse. This is clearly a worrying sign for ecosystem health and functionality as one species alone within this group (*Tipula subnodicornis*) is understood to account for approximately 75% of annual aboveground invertebrate biomass for blanket bog habitat.

Figs. Emergence trap in-situ and example of large bodied cranefly specimen (*Tipula subnodicornis)*

There have been population declines and losses of species of conservation concern, such as the golden plover in the uplands. The loss of such an important prey group as the large bodied craneflies may at the least partly account for the recent observed declines in such breeding bird populations.

William Stiles

Stop Press ! Cranefly Crosses the Atlantic !!

Andrew Cunningham of the Devon Dipterists Group collected a male species of *Nephrotoma* at light while on holiday in December 2015, in the Algarve region of Portugal. After working through the Palaearctic Keys, I sent photos to Pjotr Oosterbroek in Amsterdam, the authority on this group. He was able to identify the cranefly as *Nephrotoma suturalis wulpiana,* a Nearctic species, possibly originating in the USA. Perhaps by similar cause and effect, a male specimen of the same species arrived at the same time in the post to Geoff Hancock, Emeritus Research Fellow at the Hunterian Museum, Glasgow. and again Pjotr provided the name. The species is widespread and has been recorded across the USA from California to Washington.

It seems very improbable that these two specimens winged their ways across the stormy ocean to reach landfall in the Algarve. What seems more likely is that they travelled as larvae or pupae tucked comfortably into the soil around the roots of some imported plants to emerge as adults into the warm air of Portugal.

This is quite a common story in these times of global trade, so keep looking and who knows what might turn up.

John Kramer

Next Copy Deadline: The deadline for authors for Cranefly News Autumn 2016 (issue 32) is **20 July 2016**

APPENDIX:

Draft key for *Dicranomyia*; Group 4 Both sexes (*mitis*/*chorea* group; small spot at apex of Rs, or absent).

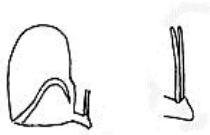
Wings with few if any markings, those with markings in addition to the stigma have the minimum of a spot over the apex of vein Rs. Main style inflated, often elongate, the beak short with a closely spaced pair of spines near apex (some species in other groups are rather similar).

1. Femora narrowly black at apex. Abdomen often strongly banded. Male main style compact, beak short with spines short (about as long as from their base to the beak apex).  ***chorea***

- Femora with apical marking different or absent. **2**

2. Femora with a subapical dark ring, sometimes darkened to apex resulting in a long dark apex. Wings normally with some dark markings, at least over the apex of Rs. Sc distally with hairs near apex. (as *chorea*)  **3**

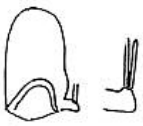
- Femora often only vaguely darkened at apex. Wings often without even a dark mark over the apex of Rs. Sc without hairs.  **4**

3. Pleura blue-grey dusted, propleuron dark. Top of thorax dusted but often with a shining black median line. Beak of male gonostyle with both spines equidistant from apex.  ***affinis***

- Pleura yellow-grey dusted, propleuron yellow. Top of thorax dull dusted. Male style beak with spines oblique or in line from apex.  ***mitis***

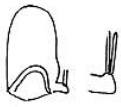
4. MALES **5**

- FEMALES **7**

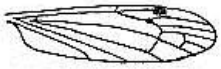
5. Smaller species without stigma. Tarsal segments 4 & 5 very short, 5 flattened (as chorea). Claw as shown.   ***imbecilla***

- Tarsal segments 4 & 5 normal, elongate cylindrical. Claw with several teeth.  **6**

6. Yellow species. Stigma pale or absent. Main style very elongate when dry (sometimes less so fresh), spines very long and adpressed together. Wing less elongate (see female)  ***lutea***

- Stigma dark. Main style fairly elongate. Rostral spines shorter and obviously separated. Wing longer and narrower (see female).  ***quadra***

7. Females: Stigma and spot over apex of Rs usually dark and obvious. [streams, can stray] [Separation of this and the next 2 species can be difficult in females]. ***quadra***



- Stigma and spot over apex of Rs usually faint or absent. **8**

8. Wing slightly longer. Bright yellow when alive. [calcareous, terrestrial but can occur with Species A by streams]. ***lutea***

- Wing slightly shorter, weaker slightly smaller species. Weaker yellow when alive though colour stronger when dry. [calcareous seepages]. ***imbecilla***

Notes on Species (*Dicranomyia;* Group 4)

chorea	Common, even in gardens. May be swept from tree foliage or evening swarms. Subject to varieties from all yellow to very dark, and abdomen not always banded. Some forms occur in unusual situations. Most abundant in early spring and autumn.
affinis	Scarce. Mainly heathland and moorland.
lutea	Common in some districts. Swept from tree and bush foliage on dry calcareous soils, including Chalk. Can occur with Species A where streams are present. A yellow species, but sometimes darker.
mitis	Common in some districts. Moist woodland soils, calcareous to neutral. Spring, rarely later to autumn. [note new strict definition].
quadra	Common in west and north. By woodland streams, including ravines. Mainly spring and summer. Top of thorax likely to be partly darker than in *lutea* but both species variable. [within *mitis* var *lutea* of Coe].
imbecilla	Rare. Northern and western. Calcareous seepages on rock faces or other rather bare surfaces. Shaded in woodland, or within ravines or tall herbage by waterfall splash zone. Summer.