Cranefly News

Dipterists Forum Cranefly Recording Scheme

For Superfamily Tipuloidea & Families Ptychopteridae & Trichoceridae

Newsletter No 34 **Autumn 2018**

Editor: John Kramer

Metalimnobia quadrimaculata P. Brock

Field Work & Records

The Dipterists Forum Summer meeting, 24 – 30 June 2018

This year we were based at the University of Staffordshire, Stoke-on-Trent, and enjoyed their excellent laboratory facilities. Four vice-counties were within striking distance giving us a wide range of habitat types to explore. The weather was hot, dry and sunny but there were a surprising number of nearly-full lakes and ponds, flowing streams and damp sites, perhaps due to the very heavy rains some 5 weeks previously. Among the more popular destinations where good lists were obtained was Wybunbury Moss, which Alan discusses below. A visit to Shavington Park was organised by Nigel Jones, this proving to be an interesting site with good damp habitats. Fallen timber yielded *Gnophomyia viridipennis* in good numbers, and *Trimicra pilipes* and *Molophilus bihamatus* were collected from the margin of the large lake. *Scleroprocta pentagonalis*, *Lipsothrix nervosa*, and *Atypophthalmus inustus* came from willow carr at the northern end of the lake. At Harston Woods adult *Dolichopeza albitarsus* were frequent and taken from both *Conocephalum* and *Pellia* liverworts. *Dicranota pavida* and *Molophilus corniger* were also seen at the stream margin. Cotton Dell (See photo taken by Andrew Cunningham) was another excellent site with *Paradelphomyia ecalcarata* and *Dicranomyia caledonica*. *Idioptera linnei* came from Budworth Country Park, recorded by John Mousley and this is a new site for this species. Another new site was recorded when a number of members came across *Tipula alpina* in Hopton Quarry.

Other interesting species found included *Tipula pierrei, Diogma glabrata, Erioptera nielseni, Lipsothrix errans, Idioptera pulchella, Dicranomyia didyma* and *Helius longirostris*. The hot dry weather probably both helped, in making insects more active, and hindered by baking dry some unshaded sites … and dipterists. The list of cranefly species recorded during the week reached 100 species, although a few more remain to be examined.

Craneflies at Wynbunbury Moss

Alan Stubbs

During the Stoke Field Meeting, 4 dipterists collected samples of craneflies which were passed to me for identification:- John Mouseley (20 species), Andrew Halstead (9 species), Rob Wolton (7 species) and Roger Morris (6 species). The first 3 dipterists made their visit on 26th June 2018. They did very well since my visit with Roger Morris was in the afternoon of the following day which was excessively hot, with few craneflies to be found, but there were two additions.

The combined total is 31 species, pretty good considering the drought and heat. The site potential covering the entire season may be three times that figure.

Wynbunbury Moss is a basin mire which is enclosed on 3 sides within an amphitheatre of steeply sloping meadows. It is a closed hydrological system in that there is no stream feeding into the basin but groundwater seepages at the bottom of the slope support sedge beds locally. One section visited was where cattle grazing reduces some sedge density and imposes trampling on wet peaty ground. The cranefly fauna of this belt includes craneflies characteristic of poor fen, and fen where some calcareous influence is present. The groundwater is captured by a rim ditch and it was good to see high water levels. On the inner side there is a belt of very wet scrub carr with some further ditches, this zone on peat being relatively nutrient - rich. The core of the basin is the moss proper, a low raised mire largely dependent on rainfall, and hence acid in character, when compared to the more nutrient rich groundwater (however, winter flooding can distribute weak levels of nutrient more widely than in dryer summer periods). Zonation is common on basin mires but too often past attempts at drainage have compromised the hydrology.

The species list is highly ambiguous as an ecological assemblage and needs interpretation to make sense. Hence I offer an interpretation of plausible habitat attributions within this high quality mosaic.

	Meadow seepages	wet scrub carr	central raised moss
TIPULIDAE			
Nephrotoma cornicina	dry ground only	-	-
Nephrotoma flavipalpis	-	drier bits	-
Priococera turcica	-	aquatic	-
Tipula fulvipennis	-	yes	-
Tipula maxima	-	yes	-
Tipula oleracea	yes	yes	-
Tipula pruinosa	cattle trampled bits	-	-
Tipula unca	yes	yes	-
CYLINDROTOMIDAE			
Diogma glabrata	-	drier bits	-
LIMONIIDAE			
LIMNOPHILINAE			
Austrolimnophila ochracea	-	saproxylic	-
Dicranophragma nemorale	-	yes	-
Euphylidorea aperta	-	yes	-
Paradelphomyia senilis	-	yes	-
Phylidorea fulvonervosa	-	yes	-
Phylidorea squalens	-	yes?	yes
Pseudolimnophila sepium	yes	-	-
CHIONEINI			
Erioptera flavata	-	yes	yes
Erioptera fuscipennis	cattle trampled bits	-	-
Ilisia maculata	-	yes	-
Molophilus bifidus	yes	-	-
Molophilus flavus	yes	yes	
Molophilus medius	-	yes-	-
Molophilus obscurus	yes	-	-
Molophilus occultus	-	-	yes
LIMONIINI			
Dicranomyia lucida	-	yes	-
Dicranomyia morio	yes	-	-
Helius flavus	-	yes	-
Helius longirostris	-	yes	-
Limonia macrostigma	-	yes	-
Rhipidia maculata	?	yes	-
PTYCHOPTERIDAE			
Ptychoptera minuta	-	yes, aquatic	-

The acid specialists *are Molophilus flavus* (preferring some scrub), *M. occultus* and *Phyidorea squalens* (the latter 2 most characteristic of open habitat but they can occur in scrub).
Those species requiring habitats with calcareous influence (better defined as a base influence, since calcium is not the only basic element: magnesium in particular being another) *are Pseudolimnophila sepium*, *Molophilus bifidus* and *Molophilus obscurus*.

Light to moderate cattle trampling is important to *Tipula pruinosa*, a local species, as well as *Eriopterra fuscipennis* a common species. *Rhipidia maculata* is known to use cattle dung as a larval habitat but is believed to also use rotting vegetation.

Many of the species in the carr zone are not strictly dependent on shade but in a site such as this, the abundance and viability of most species is carr-dependent: species such as *Diogma glabrata* and *Dicranomyia lucida* are shade dependent.
Alan Stubbs

I had a note from a very busy **Peter Boardman** to let me know that he found *Dicranomyia distendens* from the valley mire at Gentleshaw Common SSSI near Cannock Chase, Staffs last week. It appears to be the first West Midlands record.

News from the Devon Group

The Devon Group continue to produce interesting records of rare craneflies, and it will soon have an impact on Devon house prices as Dipterists from all over the country flock to Devon to try to get in on the action. Andrew Cunningham has re-recorded *Molophilus cziziki* at the only Devon site where it was previously recorded in 1997 by Adrian Plant. The first British record was made in Brecon by F.W. Edwards in 1937, and there have been only some 20 British records of this species since then. Andrew has also recorded *M. niger* this year.

The soft cliffs of Devon also produced specimens of another rarity this year, *Dicranomyia (Idiopyga) lackschewitzi*. The genitalia of this subgenus (See photo by JK ©NHM) are large but seem glass-like in a number of ways. The cuticle is thin, transparent, reflective and brittle and so they must be prepared for microscopic examination with care.

Idio - pyga is derived from Greek words meaning 'distinct- rump' and so the members of subgenus could be referred to as 'big-bottoms'. Since a diagnostic feature for *lackschewitzi* is a club-like structure covered with bristles, an appropriate English name for the males of *Dicranomyia lackschewitzi* could perhaps be 'the hairy-clubbed big-bottom' !! However, it would be most inappropriate for the females of the species.

John Mousely's collection from this site included *Dicranota claripennis,Gonomyia tenella* and *Dicranomyia goritiensis.* Mark Marshall recorded *Ctenophora pectinicornis* for the first time from his light trap in Devon (SX783512, 18 June 2018). [Also see below. Ed]

Some Scottish records from Kjell Magne Olsen

On his holiday in Argyll and Bute, Scotland, at the end of May, Kjell Magne Olsen, an entomologist from Norway, recorded a number of lesser-known species. At Taynish (NR7283) *Dicranomyia distendens* and *Orimargo virgo* were recorded. *Tasiocera fuscescens*, and *Dicranomyia radegastri* Starý (m) were recorded at Glen Nant NNR (NN0127). This latter would be a first for Britain if confirmed. It was taken together with *Dicranomyia quadra* which Kjell Magne also found to be plentiful in the Taynish NR, and some other sites.

Neolimnophila carteri was recorded from Middle Hill (NR8381) and *Ormosia fascipennis* from Lochead Cottage (NR7677). Balmaha in Stirlingshire (NS4191) yielded *Tipula alpium* and *Ula mixta* (f). *Dicranomyia caledonica* (m) was recorded from NW Barachander (NN0226)

Two tipulids new to the Outer Hebrides
Phil Brighton

After a sun-scorched week around Stoke-on-Trent with the Dipterists Forum field meeting, it was a relief to go off to the Outer Hebrides for the first week of July. It was a general wildlife holiday led by Robin Sutton and Martyn Jamieson for the Field Studies Council, and any Diptera recording was purely incidental. The weather was still fine though considerably cooler and cloudy at times. Two observations are worthy of note in this newsletter.

On the day of arrival (2nd July) after the dramatic aircraft landing on the beach at Barra, I found a female *Tipula maxima* in the gents at the Castelbay Hotel. Then, during our exploration of the sandy north tip of the island at Eoligarry on the 5th, I spotted another member of the subgenus *Acutipula*, a male *T. luna* apparently drinking from hogweed.

A comprehensive review of the Diptera of the Western Isles was one of the last papers published by the late Peter Skidmore in 2008 in *Dipterists Digest* Vol 15 No 2, Second Series, pages 99-194. This provides a detailed compilation of records by the author and others over many decades. While there were numerous records of these two species in the Inner Hebrides (or Ebudes as they are called in the review), there were none for the Outer Hebrides (called simply the Hebrides by Skidmore). Neither does the NBN Atlas show any records there. It seems unlikely that these large species could have escaped detection for so long, and so it would appear that they are recent arrivals, perhaps migrants in the current hot weather, along with the many *Scaeva pyrastri* seen.

Phil Brighton

Some Spring 2018 Records From Northamptonshire
John Showers

Generally, I only receive one or two records of comb-horned craneflies each year. However, this Spring has seen an increase in the number reported from around the county. I do not believe it is due entirely to increased recorder effort but may reflect a greater emergence than previous years I wonder if this has been noted elsewhere? [This increase seems to occur in hot Summers and may be due to increased dispersal activity. See for example Cranefly New #26, Autumn 2013. Ed.]

Ctenophora pectinicornis (Linnaeus, 1758), reported from Fineshade Wood in Rockingham Forest, the Nene Valley near an avenue of Limes, Hollowell Reservoir and from several parts of Yardley Chase MoD area, including a conifer plantation on an area of old coppice stools.

Dictenidia bimaculata (Linnaeus, 1770) has been reported from Old Sulehay Forest, Yardley Chase MoD area and Salcey Forest. In Yardley Chase it was regularly recorded from all parts of the park and forest areas and on 13th June at least 10 individuals were recorded together at the old tree trunk that was illustrated in the Autumn 2017 Bulletin in the article on the 2017 Spring Field Meeting.

In July, Alan Stubbs and I visited some alder carr fed from some seepages alongside the River Nene. Here we found an interesting array of craneflies, despite the site being much drier than usual. These included such locally scarce species as *Molophilus bihamatus* de Meijere 1918, *Ellipteroides lateralis* (Macquart, 1835), *Gonomyia recta* Tonnoir, 1920 and *Dicranophragma miniscula* (Edwards, 1921). This habitat is extremely scarce in Northants and efforts will be made over the winter to try to find similar areas. One such area, in Fineshade Woods, produced *Ellipteroides lateralis* and *Pilaria fuscipennis* (Meigen, 1818) during a bioblitz.

John Showers

***Ctenophora ornata* Meigen, 1818 recorded at Moth Trap**

Ashley Leftwich

Working under a Forestry Commission collecting permit, Bournemouth Natural Science Society (BNSS) ran a UV moth trap at Pig Bush [OS Ref. SU36041484] in the New Forest on the evening of Saturday 7th July 2018. Pig Bush is a stand of Ancient Semi-Natural Woodland with numerous mature trees of Beech *Fagus sylvatica* and Pedunculate Oak *Quercus robur*, and is bound to the south by an open landscape of lowland heath and mire surrounding the Shepton Water drainage system. The weather conditions were warm and humid, and a count of 77 moth species confirmed the ideal weather conditions.

During the trapping session a series of four male *Ctenophora ornata* Meigen 1818 were attracted to the 125W MV lightbulb between approximately 2300 hours and midnight, i.e. about two hours after sunset. This species is well known to be responsive to UV lights (e.g. Falk, 1991) and the New Forest National Park is widely regarded as its stronghold in the UK – with the NBN Gateway showing 70 records for the SU major square.

This large and distinctive saproxylic fly is Nationally Endangered (RDB1) and regarded in Continental Europe as an indicator of surviving primeval forest within the European deciduous forest zone. In the UK its larvae have been bred from the nutrient-poor rot material of veteran Beech, but a range of host trees are known in Europe including elm *Ulmus* spp., horse-chestnut *Aesculus* spp., maple *Acer* spp. and *Malus* spp. (Menier, 1973; Savchenko, 1973). However, despite being known for over 200 years, new locations are still being found e.g. Sherwood Forest in the UK in 2009 and 2013 (Pendleton & Pendleton, 2013) and recently found in Poland between 2005 to 2009 (Bakowski *et al*., 2011). There is a suggestion that the warming world climate could favour a range expansion in this species.

References

Bakowski, M., Bruder, D. & Piatek, W. 2011. Distribution of a rare cranefly *Ctenophora ornata* Meigen, 1818 (Diptera, Tipulidae) in Poland. *Fragmenta Faunistica*, **54**(1): 43-46.

Falk, S. 1991. *A Review of the scarce and threatened flies of Great Britain (part 1)*. Research and Survey in Nature Conservation No. 39. Nature Conservancy Council, Peterborough.

Menier, J.J. 1973. Les Ctenophorinae de France (Dipt. Tipulidae). *Annales de la Societe Entomologique de France*, **9** (4): 929-942.

Pendleton, T. & Pendleton, D. Undated. *Ctenophora*, *Tanyptera* and *Dictenidia* Craneflies of Sherwood Forest NNR. See website www.eakringbirds.com.

Pendleton, T. & Pendleton, D. 2013. Cranefly News #26 Autumn 2013

Savchenko, E.N. 1973. *Family Tipulidae. Subfamilies Tipulinae (Final Part) and Flabelliferinae*. Fauna of the USSR, Diptera 2, 5. Nauka, Leningrad, 282 pp. [In Russian]

***Pedicia rivosa* larvae.**

Judy Webb. (Photos by the author)

More observations of cranefly larvae are being recorded and Judy Webb found 2 larvae of *Pedicia rivosa* under a rotting tufa-encrusted log in a small shaded stream at Raleigh Park, Oxford (SP4905) in April this year. She observed how these large predatory larvae kept inflating and deflating a segment at the tail end – behaviour mentioned in T. T. Macan's book, 'A guide to Freshwater Invertebrate Animals'. Perhaps it serves to anchor the back end of the body while the front end pushes against it, using the hydrostatic skeleton of the haemolymph. [In Cranefly News #33 Alan Rowland recorded the same species in Cornish streams.]

For those members who enjoy messing about in streams a lot of useful work could be done to study the ecology of aquatic cranefly larvae, not only in the Pediciidae. Larvae of many species of Tipulidae and Limoniidae spend at least part of their life cycle in fresh water. An advantage of this interest is that it could provide some field-work in the winter months – in addition to the pinning, identification and recording !! There are 2 aquatic genera in the Pediciidae, *Pedicia* and *Dicranota*. Both are predators and both have sharply pointed jaws for gripping prey, although larvae of *Pedicia* eventually grow to twice the size

of *Dicranota* and presumably feed on larger prey. The former species has 4 pairs of cylindrical 'false legs' while the latter has five pairs.

Behaviour

Lecking behaviour in *Tipula lateralis*.

Peter Smith. (Photo by the author)

At Netherfield Lagoons we have a path that is crossed by a very small stream. Where it crosses the path there is a concrete lined dip, that collects a little water as the stream passes through. The hot weather has evaporated some of the pool and exposed wet, slightly muddy, concrete which is in direct sunlight for much of the day, so gets quite warm.

The craneflies, *Tipula (Yamototipula) lateralis*, about five males, pick a spot on the damp concrete and sit there like jump-jets ready for take-off. As soon as another cranefly approaches they jump up to intercept, going extremely fast, from my experience of craneflies. They contact the other cranefly and the two of them spin incredibly quickly before breaking off and settling back to their spots.

I was not aware that craneflies behaved in this way, it is almost like they are on a lek. So far I have seen no females and don't know where they are.

[Has anyone else seen this kind of behaviour in *T. lateralis*, or other species of *Tipula* ? Ed.]

Observations on *Metalimnobia quadrimaculata* in the New Forest, 2018

Paul D. Brock. (Photo by the author)

Having observed the attractive *Metalimnobia quadrimaculata* (RDB2) on beech by day in the New Forest several times from May to July, I was surprised to see a number on oak in July 2018. Although not searching for them, I usually see *M. quadrimaculata* resting singly on beech trees or beech logs mainly at well known sites such as Denny Wood, Mark Ash and Ladycross. The craneflies are well known to be associated mainly with the fungus *Inonotus bispidus* on beech, but may be attracted to a wide variety of bracket fungi in deciduous woodlands (Alexander, 2002. English Nature Report 467). At Ladycross (SU336030), a site well known since Victorian times for two species of crimson underwing moths, I observed at least ten at the base of an old oak on 22 July 2018 at dusk, on and around a smart, new *Inototus dryadeus* [See photo on banner header]. This fungus turns rather dirty brownish colour with age. The underside also becomes greyish, yellowish or brownish with age. Seven specimens were still present on 25 July, on both occasions including recently emerged adults.

My thanks to Sara Cadbury for identification and comments on the fungus.

Taxonomy and Identification

It is worth drawing attention to the draft cranefly keys as a source that presents numerous subjects for worthwhile investigation. Clearly defined differences - discontinuous variations – are the ideal characteristics to use in keys, but often we have to make do with characters which overlap to some degree with other species. If we have to deal with a battered specimen sans legs, sans antennes etc., then these extra confirmatory characters can be useful. Distance between the eyes beneath the head is used as one of the characters in the part of the draft *Tipula* Key, to identify *Tipula submarmorata*, and to separate *T. varipennis* and *T. pseudovariipennis (p14-15)*. Ken Merrifield has done some preliminary exploratory work on this topic and it will be worth publishing his experience and thoughts on this problem in a future issue.

It is often necessary to work with plenty of specimens in order to get reliable representative values so your voucher specimens may be very useful.

Recent Publications

1. Hancock, E.G and Moore, P.G. 2017. Alexander Cuthbertson (1901 -1942): from Scotland to Rhodesia, a dipterist's journey. Dipterists Digest 2017 24, 1-31.

Cuthbertson was a keen naturalist, professional applied entomologist and dipterist. He was born in Govan, Glasgow and went to Rhodesia in 1926 to work as a Junior Entomologist in the Dept. of Agriculture. He died aged 41 but the focus of his short

working life was the larval ecology of flies. The article is a very interesting account of dipterology and the personalities involved prior to WWI.

2. Kramer, J. 2017. Fungal hosts of Ula Haliday (Diptera, Pediciidae in Britain with reference to the collection of P.A. Buxton in the Natural History Museum, London. Dipterists Digest 2017 24, 195-205.
When Buxton did this work on the flies associated with fungi between 1950-1955, only a single species of *Ula, Ula sylvatica (Meigen 1818)* had been designated. His collection was curated first at the London School of Hygiene and Tropical Medicine, where he worked, and then at the NHM. The genus has now been split and three British species are now recognised. In this study more than thirty of Buxton's original *Ula* specimens were re-identified by the author. An attempt was made to allocate fungal preferences to the different *Ula* species. This still remains a tantalising problem !!

3. Macdonald, M. 2017. Prionocera pubescens Loew (Diptera, Tipulidae) in Highland. Dipterists Digest 2017 24, 211-217.
This study increased the known Scottish sites for *P. pubescens* from a single site to 14 sites in 5 hectads. Interesting facts including habitat descriptions and species assemblages are described

4. Manual of Afrotropical Diptera, **Vol. 1. Introductory chapters and keys to Diptera families, edited by A.H. Kirk-Spriggs and B.J. Sinclair. Suricata 4, 2017, i–xiii+1–425. Price: ZAR350. [£39.00] ISBN 978 1 928224 11 2. Manual of Afrotropical Diptera, Vol. 2. Nematocerous Diptera and lower Brachycera, edited by A.H. Kirk-Spriggs and B.J. Sinclair. Suricata 5, 2017, i–xii + 426–1361. Price: ZAR520. [£49.00] ISBN 978 1 928224 12 9.**

Although these volumes are beyond our usual remit, they are never-the-less worth flagging up for the most recent thinking about Diptera. The Craneflies are covered in Volume 2, and Chapter 14, 'Tipulidae and Limoniidae', occupying some 50 pages (pp 427 – 477) is written by Herman de Jong. There are no genera described for the families Cylindrotomidae and Pediciidae since these are currently thought to be absent from the Afrotropical biogeographic region. Eleven genera of Tipulidae are described, three of which are Palaearctic. In the family Limoniidae 58 genera are described, 32 of which are Palaearctic. The b/w illustrations include those on morphology, the wings for each genus, the larva of *Limonia* and the pupa of *Austrolimnophila*.
One innovation which comes from the study of fossil craneflies, is the re-naming of vein A1, the first anal vein, as CuP - the posterior Cubitus. The current 'cubitus vein' is now CuA, the Anterior Cubitus vein. So we now have the cup cell – the posterior cubital cell, and then the anal cell, going round the wing in the conventional way. The genus The word 'rostrum' is still used to describe both the anterior part of the head, and the beak on the inner inflated style of *Dicranomyia*. The volumes are amply illustrated and very well presented - a pleasure to use. The remaining two volumes are scheduled to be published in 2019. They are available from Pemberley Books at the prices shown in GB Pounds above.

Thanks to all the contributors. The next copy date for the Spring Edition of Cranefly news (#35) is December 15th 2018