Cranefly News

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

Newsletter No 28 **Autumn 2014**

Editor: John Kramer
Sub-editor: John Dobson

Nephrotoma crocata (Bex Cartwright)

Notices

There are two workshops this Autumn:

Sept. 6th-7th: Cranefly Workshop with John Kramer. Woodland Centre, Yarner Wood, nr Bovey Tracey.

Sept. 27th-28th: Sorby Society, Derbyshire.

Details are available from Derek Whiteley: invertebrates@sorby.org.uk

Field Work Reports for 2014

Pitsford Reservoir, Northamptonshire. 25th May 2014

John Kramer joined the Northants and Peterborough Diptera Group meeting at Pitsford Water Reserve (GR. SP7870) in May. Members attending with JS and JK, were Jolyon Alderman, Kev Rowley, GrahamWanes and Brian Harding. The site includes lake and stream margins, marsh and carr. The weather was warm, dry and still; perfect for recording.

After a morning's field work JK helped the group with identification issues in Anglian Water's Holcot Fishing Lodge. I have not yet received all the records from the group but John found 23 species of cranefly including: *Tipula* (3 spp.), *Ula sylvatica* (Pediciidae), *Gonempeda flava*, *Molophilus* (4 spp.), *Limonia* (4 spp. including *L. flavipes* and *L. nigropunctata*). I found 13 species, 8 of which were not on John's list, giving 31 species in total. It is hoped that John's efforts will encourage more cranefly recording in Northants., which is an under-recorded vice-county for Diptera, except in the Peterborough area.

The Wildlife Trust team and their volunteers at Pitsford Reserve run two moth traps throughout the year and I have been collecting the Diptera by-catch. So far this year 7 species of cranefly have turned up in the traps.

Two days after receiving the June edition of British Wildlife, with Alan Stubbs' article on the comb-horned craneflies, I found a female *Ctenophora pectinicornis* in Stoke Wood, near Desborough. A couple of days after that I received a photo from Robin Gossage of a male *Dictenidia bimaculata* from Glapthorn Cow Pastures.

John Showers

Craneflies in Scotland: Kingussie field trip: June 2014

Spurred on by the DF field meeting in September 2013, a small group of dipterists paid a return visit to Kingussie in early June 2014. Here I have chosen a few highlights of ecological interest rather than a full commentary.

On route to our base at Kingussie in the Spey Valley, a stop at Glen Shee Col gave access to a mountainside at 2200+ft. Here *Tipula varipennis* was frequent on the drier ground (normally thought of as a lowland woodland species). The seepage and rivulet habitats were however of greater interest for craneflies.

At this height, the early spring species *Tipula subnodicornis* and *Molophilus ater* were easy to find (the latter is small, black and wingless, easy to overlook after sweeping, but very noticeable (*cont.*)

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once tuned to what to look for), together with another acid associate, *Euphylidorea meigenii*.

More significant was the presence of some local species, here associated with base-rich flushes with rivulets; *Limnophila schranki* (small specimens), *Eloeophila trimaculata* and *Molophilus propinquus*.

Stops by the River Dee, near Braemar and Crathie, yielded *Tipula montium*, *Hexatoma fuscipennis* and *Limnophila schranki* (the latter at a backwater channel), and adjacent wetland had *Tricyphona unicolor* and *Euphylidorea phaeostigma*.

The roadside limestone quarry just west of Tomintoul was a priority stop for craneflies, and we were rewarded by finding *Tipula cheethami* and *Dactylolabis sexmaculata* on a wet rock face, and on the quarry floor, along with *Dicranomyia occidua* and *Molophilus propinquus* where sparsely vegetated calcareous mud was present. Not bad for day-1, before reaching Kingussie.

The Spey valley has extensive glacial deposits, often well-drained but with boggy ground in the hollows, and some excellent groundwater-fed sloping mires. The high ground accessible *via* the Cairngorms ski lift car park yielded expected species such as *Tipula subnodicornis* and *Molophilus ater*, but a combination of drought and wind was limiting.

The margins of Loch Morlich (a lake with both inflow and outflow, and both gritty and sedge-lined shores) and related ground produced 7 species of *Tipula*.

A very different lake is found at Kinrara, in a big hollow in glacial drift, and connecting narrowly with the River Spey. Here the mire is peat-based, in part floating, and is largely groundwater-fed as evidenced by sloping mire margins (which are not directly related to fluctuating water tables *via* river level fluctuations). Some very unusual species for the Spey Valley were found included *Helius pallirostris* (among reeds and sedges at aquatic margin), *Tipula pierrei* (in a limited area where muddy peat was present) and *Phylidorea longicornis* (seepage on poor fen). *P. abdominalis* was locally common in very wet areas with bog-myrtle (*Myrica gale*). Where the outflow from the Kinrara hollow meets the River Spey, *Dicranota exclusa* was present. Other useful records included *Tricyphona unicolor*, *Cheilotrichia imbuta* and *Idioptera pulchella*.

Craigellachie NNR lies on a hillside overlooking Aviemore. There are two small lakes of limited interest, but it is the shaded stream- and seepage-fed mire that are of particular interest for craneflies; the presence of bog myrtle usually indicates good potential. On this occasion, the main find was the stream species *Pedicia littoralis*, a fairly large yellow cranefly that appears to be uncommon in the Spey valley.

Access to the RSPB Inch marshes was given for some areas that were not critical during the main bird-breeding season. Tromie bridge meadow has some very nice seepages on poor-fen, where *Ptychoptera scutellaris* and *Phalacrocera replicata* were found (the latter is rarely recorded).

A long period of drought had resulted in river levels being low, and so rather poor for river-margin craneflies at that time. We picked up single female of *Tipula bistilata*, as a species of sandy exposed riverine sediments (early June should be the peak period so emergence appears to have been exceptionally early this year; larvae in drained 'terrestrial' sand would warm-up quick in a drought) and some male *Hexatoma fuscipennis* (aquatic larvae, emergence at typical time). We found only a few of other species, such as *Hoplolabis vicina* and *Eloeophila verralli*.

A small party that went to the coast found *Dicranomyia melleicauda* ssp. *complicata* at the western end of Culbin sands, an important Scottish record for this very scarce upper saltmarsh species: *D. sera*, a very local upper saltmarsh species, was also found.

Overall, although their numbers were down during the drought, it was a very productive meeting for craneflies.

Alan Stubbs

DF Summer Field Meeting 2014,
Craneflies in NW Wales: 5-12 July 2014

Bangor is conveniently placed by the bridge from Caernarvonshire to Anglesey, two very different landscapes with very different histories in the recording of craneflies.

In the early 1920s, Barnes surveyed the cranefly fauna of Caernarvonshire for a PhD, as far as I am aware the first ecological study on insects in Britain. It was published in volume 13 of the Journal of Ecology in 1926, so he began his study in the very early days of ecology as a discipline. He chose a series of sampling locations, made some visits and wrote-up his findings in a manner which is very familiar today but ground-breaking at the time. Anglesey by contrast still lacks a published list.

Anglesey is relatively flat, (although not by Peterborough standards). It lacks significant woodland but is famed for its wetlands and sand dunes. It has the advantage of the presence of an outcrop of Carboniferous Limestone, largely masked by Boulder Clay, with a hydrology that supports major fenlands, some of which are NNRs with convenient board walks. There are many ecological variants, including curious juxtapositions, such as sundew growing inches away from true fen vegetation.

The very early spring and drought proved limiting but we did have major finds, including a species of *Pilaria* only previously known from one fen in S Wales and some fens in East Anglia (we have still to confirm it's identity); recorded here in a stand of slender sedge (*Carex lasiocarpa*) in a seepage fen. Other good finds included *Molophilus pleuralis*.

On sand dunes, we succeeded in finding *Nephrotoma quadristriata*, (See map) at Aberfaw, where there are major areas of dune slack. There is

an old record for nearby Newborough Warren. It is otherwise known from a few dunes on the coast of mid- and south Wales, Braunton Burrows on the N. Devon coast and on the coast of SW Cumbria. The coast also includes some saltmarshes, producing *Dicranomyia melleicauda* at several sites. (See map) (*complicata* de Meijere is the subspecies - the male genitalia are very complicated). *D. melleicauda* favours situations where freshwater seepages are present but this is not always the case on Anglesey. *D. sera* was found on the upper saltmarsh on several saltmarshes in association with saltmarsh rush (*Juncus gerardii*); the males of this yellow cranefly are very distinctive as the styles of the genitalia look like a pair of pincers.

The Lleyn Peninsular of SW Caernarvonshire lacks Carboniferous Limestone but it has extensive base-rich igneous rocks, and some interesting fens. Cors Geich NNR proved especially productive: carr beside the entrance had *Nephrotoma dorsalis*, a cattle-trampled margin to a reed bed had *Dicranomyia ventralis*, a cattle trampled wet fen had *Tipula pruinosa*, and beside a pond, *Molophilus pleuralis*. Cors Grianiog had *Erioptera nielseni* in open fen and at Cors Gyfelog, *Phylidorea longicornis*, in fen carr. The latter has few localities, although it is known from mid-Wales.

The Lleyn is noted for its Boulder Clay cliffs, with seepages supporting rare craneflies, but the great storms of last winter had removed most of the landslips and we were too late in the season on the surviving habitat. The north coastal belt of the Lleyn is dominated by granite hills within ultrabasic rocks forming the lower ground. One of the most interesting sites was Coed Elerion, a Wildlife Trust NR with some land owned by the Woodland Trust, on a north-facing hillside with seepages and streams in sallow carr and other woodland. This very productive site had a rich cranefly fauna including *Tipula yerburyi* and *Dicranomyia lucida*.

In northern Caernarvonshire, off the road from Bangor to Llandudno, the Aber Valley extends into the hills. This valley has long been known to be of entomological interest. A previous autumn field meeting had ascertained that there was very promising cranefly habitat with seepages with base-rich conditions within woodland, resulting from ultra-basic rocks which outcrop in part of the valley. This site provided a rich cranefly fauna, the prize find being a specimen of *Tipula truncorum*, a species with very few Welsh records; indeed it is rarely found anywhere within its wide GB distribution.(See map)

In the Conway Valley a party got rained off (in an otherwise dry week), but not before finding *Tipula helvola*. (See map) The 1992 atlas displays a very isolated cluster of records in Merioneth so this is a useful extra location in N. Wales.

Various expeditions headed for the Betws-y-coed area, to the east of Snowdon, with the lure of its woodlands and easy access, moderate altitude wetlands. Here *Ctenophora pectinicornis*, *Tipula yerburyi* and *Neolimnomyia batava* were among the interesting finds. *Dicranomyia aquosa* was found in Snowdonia behind Idwal Cottage, and also at Bethesda.

We hit the peak for *Diogma glabrata*; it was found on a spread of sites, a species often regarded as scarce. But in dashing off in all directions from home base, it is easy to omit to record habitat on the doorstep, a limestone rock seepage yielding *Orimarga virgo*. At the time of writing there was still some material to be checked but the total for the week was about 90 species, a respectable total under drought conditions. Among the other most interesting species were *Limonia dilutior*, *Eloeophila apicata*, *Rhabdomastix edwardsi* and the 'summer' winter gnat *Diazosma hirtipennis*.

Alan Stubbs

Report from the Mersey Basin

As outlined in Newsletter No 26, I have continued sampling sites characteristic of the Mersey Basin, ranging from the peat bogs which are a relic of the ice age to post-industrial sites. Covering several other recording schemes as well as craneflies means that I currently manage about one survey a week, including identification and input of records. John Kramer reckons that it takes at least 6 visits to achieve a reasonably comprehensive cranefly list for one location. As I have at least 16 sites on the list already and there seems to be no end of other interesting places, you will see that my embryonic project is going to take a while. I have a preference to circulate around sites and hit them at different times in successive years. I wonder though whether more intensive sampling of a few sites many times in the same year might be more revealing in some ways?

As highlighted in the Spring 2014 issues of the Bulletin, I have also become involved in helping to get the diptera records from Cheshire verified for submission to the NBN Gateway. For craneflies, it appears that much of the recent data are from surveys conducted by Alan Stubbs and Martin Drake, and are already on NBN.

Martin has kindly sent me a copy of his report on a survey in July 2003 of a large number of locations in the Delamere Forest. A visit to two sites in the forest on 16 May yielded a total of 28 cranefly species, surely by far my best daily tally. These included two noteworthy species apparently not recorded in previous surveys; *Cylindrotoma distinctissima* and *Molophilus bihamatus*. The area as a whole has a range of habitats and currently the Delamere's 'Lost Mosses' project coordinated by the Cheshire Wildlife Trust is aiming to restore peat bog areas which have suffered from drainage and afforestation: this includes re-introduction of the white-faced darter dragonfly (*Leucorrhinia dubia*). It will be interesting to see whether any effect on the cranefly fauna can be detected.

The data verification review has also led to the discovery of Leonard Kidd and Alan Brindle's 1959 publication *The Diptera of Lancashire and Cheshire, Part I*, as mentioned in the obituary in the

last DF Bulletin (No 77). This is more than just a checklist, giving qualitative abundances, and site locations for the scarcer species. It appears that the Delamere Forest was a favourite sweeping ground of those I think of as the Manchester School of dipterists from the 1920s to the 1950s. (The original record cards compiled by Harry Britten senior are still preserved at the Manchester Museum). *C. distinctissima* was regarded at that time as "fairly common" in woods. *M. bihamatus* is not listed.

Another valuable baseline is provided by the report of a comprehensive invertebrate survey by the World Museum, Liverpool (WML) performed in 2009 for the Lancashire Wildlife Trust (LWT) at Astley Moss (SJ69). This report highlighted *Tanyptera nigricornis* as one of the most significant finds. This was especially interesting in view of our independent find of this species last year at Holcroft Moss just a few miles away. The WML did not however find *Nephrotoma crocata*, which I found last year. Anna Keightley of the LWT found a specimen in a polytunnel at a second site, Cadishead Moss (also SJ69) and we saw it again at Astley on 3rd July, feeding on hogweed. Kidd and Brindle (1959) had only 19th century records for this species at Southport and Warrington in VC59 (South Lancashire), but their second supplement (1970) noted a 1964 record at St Anne's-on-Sea. For Cheshire, it was described as local, being found at 5 or more unspecified locations.

Cranefly News No 26 described an outbreak last year across Warrington of *Nephrotoma dorsalis* from its expected habitat of exposed river sand or shingle (see Chapter 4 of the Dipterists' Handbook). One male has been seen again this year, having entered our bathroom on the night of 19th July. This is another species not recorded by Kidd and Brindle.

I have received from Clive Washington a record of *Dictenidia bimaculata* at Wybunbury Moss NNR near Crewe, while I myself found *Neolimnophila carteri* at Hopyards Wood along the valley of the Marbury Brook, near Northwich. Both these species have only one or two previous Cheshire records.

Tipula helvola was listed in Coe's RES handbook of 1950 as rare and known only from Merioneth and Hampshire. The NBN Gateway distribution map (see maps on last page) shows how it has now been found widely to the south-east of a line from Portland Bill to the Wash. Also since 1980 it appears to have expanded from its Welsh stronghold eastwards to the Marches and into England. My submission of a single record of a female *T. helvola* from Holcroft Moss near Warrington in 2012 met with some caution, not least on my own part. This summer on 22 June I netted six individuals there, five of them males, in the birch and willow areas bordering the lowland bog reserve: in fact it was the only tipulid I found on that day. Moreover the species has turned up at two other locations only a few miles away but in quite different habitats including our own small garden. Pete Boardman's 2007 Shropshire cranefly atlas reports a single record of this species flying over farmland by a wood. He has told me that since then there have been six further records in Shropshire. The breeding habitat requirements would seem rather uncertain, as in the South of England it is known from dry woodland on heaths and chalky soils.

Turning to the more common species, *T. vittata* has provided some attractive photo-opportunities this spring (see photo), it not having crossed my path last year.

Tipula vittata (Photo: Phil Brighton)

Ormosia hederae was another species I completely missed last year. On 8th May around Astley Moss, in rather cool damp conditions, it was swarming *en masse* with a male/female ratio of about 3:1. I don't think it was just a matter of being in the right place at the right time as I have seen it elsewhere this year. The number of records of *O. nodulosa* has been about the same as last year.

References:

Kidd, L. N. and Brindle, A., (1959): The Diptera of Lancashire and Cheshire. *Lancashire and Cheshire Fauna Committee*. T. Buncle & Co. Arbroath.

Phil Brighton

Cranefly Report for Shropshire (VC40):

First half of 2014

Most of the first half of this year has been spent putting the finishing touches to 'Shropshire Craneflies' (Boardman *in prep.*), the follow-up to the 2007 Shropshire cranefly atlas (as well as 4 other Shropshire atlas projects), therefore fieldwork has been somewhat limited to date. Now though, with the book sent to the publishers (FSC Publications) there is a little more time for fieldwork scheduled. For those interested, 'Shropshire Craneflies' will cover the 244 species of craneflies, winter gnats and fold-winged craneflies recorded in the county since 1930. Included, apart from up-to-date distribution information, is a family key and synoptic keys to all species recorded, plus lots of other identification information and over 500 figures showing key identification features such as wing photographs, etc. Whilst obviously Shropshire-

focussed, the Shropshire cranefly list will be similar to most other parts of the United Kingdom with the exception of anywhere that has coastal specialists and true upland specialists. It should be available from late summer / autumn from FSC Publications *via* their website, and from other well-known entomological distributors. When it is published I will place a note on the DD website with full details.

So far this year a single new species has been recorded; *Molophilus ater* was found by Nigel Jones close to The Stiperstones NNR in South-west Shropshire on the 16th May. During the preparation of the first Shropshire atlas (Boardman, 2007) I noted Cyril Pugh had found the fly in the uplands above Oswestry, but (annoyingly for us) just over the Welsh border. Unfortunately the countryside Pugh knew in the 1930's has changed very significantly due to mass drainage, and the arrival of sheep has destroyed many of the fabulous sites for craneflies that he would have known along the Shropshire/Wales border. I did predict in 2007 that *M. ater* should turn up in Shropshire at either The Stiperstones or on Long Mynd and so it was nice when this came to pass this year, and just in time to include it in 'Shropshire Craneflies'.

A cranefly I was particularly keen to see and one I had spent quite a bit of time searching for in the build-up to the first version of the atlas was *Dicranomyia ornata*. This is a species associated with butterbur (*Petasites hybridus*) and was found by Ken and Rita Merrifield at Whitwell Coppice in 1994. No other records came to light until I found the fly on the 16th May 2014 at Haybridge by the Mill Brook, a tributary of the River Rea, in the extreme south of the County. It was disturbed from butterbur leaves at the side of the brook growing in a drainage channel. This situation was not that different from other locations that I'd searched in the past towards the end of May (based on Ken and Rita's record date of the 27th May 1974) leading me to the conclusion that either the flight period of the fly is very short, or it just didn't occur where I'd looked for it. It certainly wouldn't have been overlooked as it has various dark patches on the wings that would alert the observer to the presence of something different within the *Dicranomyia* genus. Also taken there was *Molophilus niger*, a dark brown species that we are finding at a lot of woodland dingle and sheltered streamside sites in south Shropshire and the Marches. This species occurs quite early in year with the bulk of records coming from late April through May.

I am continuing to look at the cranefly fauna of seepages this year as part of some work for our local records centre (Shropshire Ecological Data Network) after re-finding *Dicranomyia nigristigma* and discovering *D. aperta* at calcareous seepages on the Long Mynd last year. So far I've found *Gonomyia recta* and *G. abbreviata* on shaded wet sandy spoil underneath willow at a sand quarry site in south Shropshire. Stubbs (*in prep*) suggests both species are found from wooded calcareous sites. Hopefully more findings from this project will be detailed in my report of the second half of this year.

Finally two more sightings of the distinctly local tiger cranefly *Nephrotoma crocata*. The first came from an entomologist who had seen it before (Bex Cartwright) and the second from a non-entomologist who spotted it, photographed it, then circulated the photo via social media where a colleague of mine spotted it and passed it on to me. *N. crocata* has an interesting distribution in Shropshire so please see the accompanying article for more details.

References

Boardman, P. 2007. *A provisional account and atlas of the Craneflies of Shropshire*. Peter Boardman. Weston Rhyn.

Boardman, P. (In prep.). *Shropshire Craneflies*. draft text.

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Peter Boardman

Species Notes

Nephrotoma crocata (L., 1758) in Shropshire

Nephrotoma crocata or the 'Bright-belted Tiger (Stubbs in prep.) has been somewhat of an enigma. Stubbs states the view that it is a species that is seen less now than in previous years. Certainly given today's penchant for digital photography and sharing of images through i-Spot and other social media, confirmed sightings are reasonably uncommon. Stubbs notes that a mildly damp to wet substrate (mostly sand) is the preferred habitat, often in association with pines. Elsewhere in Europe it is known to be associated with dry habitats such as heathland, and with more humid places such sandy or gravelly river banks, fen woodland, or even gardens. Larvae are known to feed on the roots of grasses and tree seedlings but they occur at low density so are unlikely to be viewed as a pest species (Oosterbroek, 2011). (*continued*).

Nephrotoma crocata (Photo: Bex Cartwright)

Through work undertaken on two Shropshire atlases I've been able to build up a picture of the appearance of this species in the county from the first known record in 1927 up to the present day. This also gives me the opportunity to discuss the substrate and habitat.

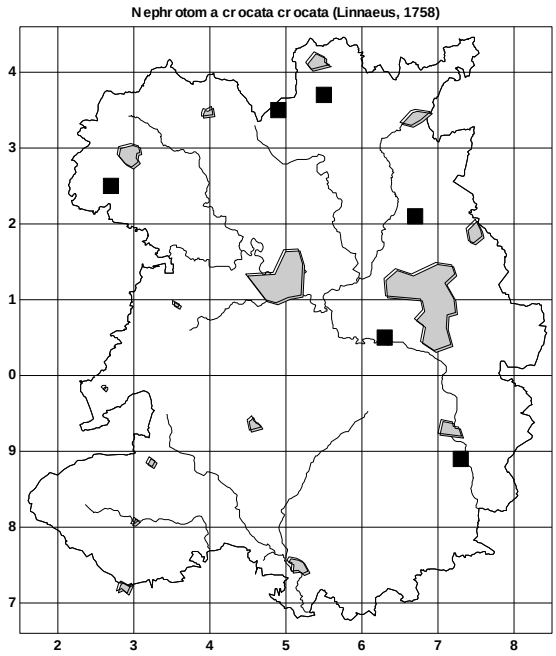
As mentioned, the first Shropshire record was from 27th May 1927 and was recorded by Cyril Pugh at what is now Fenn's, Whixall & Bettisfield Mosses NNR. The substrate here is peat and there is every chance that pines may have featured on the landscape in those days, though judging from old photographs of the site we might be forgiven for thinking the extent of peat-cutting at that site was less than it actually was. Modern industrial peat cutting denuded most of the site in the 1970's-1980's. The peat ranges from extremely wet to totally dry depending on its location across the site. Pugh's specimen from Whixall is housed in Manchester Museum.

There was then a fifty year gap in records before specimens now in the Liverpool Museum collection were recorded; a pair *in cop*. that were taken from Prees Heath in the 1970's. Prees is a lowland heathland site that was used as a World War II airfield. It is currently owned by Butterfly Conservation who are restoring it as habitat for the regionally rare silver-studded blue butterfly. The majority of the heath is very dry, although there is a modern pond with a damper fringe in one part of the site. It is not known exactly where on the site the flies were seen.

The first modern record (27th May 2012) and third in total came from an unexpected site; a working limestone quarry in north Shropshire. Dan Wrench, the county ecologist, was visiting the site and happened to see and photograph the cranefly. The habitat there is mostly bare limestone rock which some areas of spoil, some scrubbed-over, and establishing limestone grassland.

The fourth record was equally unexpected as it was from a very agricultural setting. Bex Cartwright found a few of the flies at the edge of a maize field at Bolas Heath whilst undertaking some pollinator research. She recorded the exact spot and I went over the following week to look at the habitat. She had seen a number of the flies around an area of rabbit diggings in a south-facing field margin. The soil was very close to being pure sand (no doubt dug up by the rabbits) and consequently very well drained.

The fifth record came during a field survey carried out by the FSC's Invertebrate Challenge aculeate hymenopterists at Devil's Dingle near Buildwas on 14th May 2014. This site has been used to tip waste ash from the local power station and has become an impromptu equivalent of a lowland heath in terms of its free-draining qualities. Approximately 179 species of aculeates have now been recorded there (Nigel Jones and Ian Cheeseborough pers. comm.). Bex Cartwright (yes again!) was lucky enough to see a fly examining potential ovipositing sites amongst the waste ash substrate. The immediate site was open, although a shelter belt around a nearby pond protects the area from excessive wind. Bex, a non-dipterist, remains the only person to see the fly at two different sites in Shropshire!



Map of the distribution of *Nephrotoma crocata* in Shropshire

The sixth and final record to date came from Eardington Quarry Local Nature Reserve on, or around, the 2nd June 2014. The site, an old sand and gravels quarry now is leased by the local authority as a nature reserve and looked after by a local Friends Group, one of whom spotted the fly and photographed it. The fly was seen crawling over an area of mixed sand and loose gravel where some bryophytes and higher plants were growing. There are pine trees on the site and I would suggest the fly was photographed in an area quite close to pines.

Given the range of sites where the fly has now been recorded, or at least the range of substrates (peat, damp/dry sand, sandy soil, limestone, and ash waste) it could potentially turn up anywhere where there is sufficient bare, free-draining substrate which is sheltered during the period mid-May to early June.

References

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Acknowledgements

Thanks to Mary Thornton at EON for access onto Devil's Dingle, Dan Wrench for passing on details of the Eardington Quarry find, Bex Cartwright for permission to use her photograph of *Nephrotoma crocata*, and Nigel Jones and Ian Cheeseborough for information about Devil's Dingle. Thanks also to Guy Knight at Liverpool Museum and Dmitri Logunov at Manchester Museum for allowing me to access the collections.

Peter Boardman

Tipula (*Pterelachisus*) *irrorata* Macquart, 1826:

Its first discovery in Britain: The Glasgow connection; with a note on Robert Henderson

Tipula irrorata Macquart, 1826 is a common species, probably most easily recorded as larvae. Their characteristic grey bodies are frequently found below moss covering dead trees, under loose bark of dead wood and sometimes actually within the softened timber. Larvae found in this situation nearly always result in the appearance of *T. irrorata* adults. The larvae can be identified from their spiracular field pattern (see Brindle, 1958) without rearing.

Perhaps the adults being more elusive explains why knowledge of the existence of *T. irrorata* in Britain was initially sporadic, and also why there was some confusion about where and when it was first identified. It was discovered fairly late in the history of cranefly studies relative to its status as a widespread species. An attempt at disentangling the earlier records is given below.

A number of early records of the British cranefly fauna were supplied by several active Glasgow-based entomologists who were interested in the group. One of these, Robert Henderson (1864-1940) published a number of papers in the local journals summarising their work. A short biography of him is given below.

Tipula irrorata (as its synonym *pictipennis* Staeger, 1840) was included by Henderson (1911) on the basis of 3 male and 3 female adults which emerged from larvae collected at Cartland Crags (Clyde valley, near Lanark) on 14th May 1903. They were found in soil under trees and were collected in the company of Alexander Ross (1857-1940), another of the local enthusiasts. One of these specimens is preserved in The Hunterian Museum, Glasgow, a female that emerged on 11 June 1903. Henderson suggested it was "Apparently new to Britain".

The use of the name *pictipennis* leads one to contemplate how the early workers on Diptera in Britain identified their captures given the paucity of English literature that supplied key characters. This must have been a problem especially to amateurs living away from major city museums and libraries. But continental European books and papers were accessed and a network of correspondents, local societies and museums all played a part. For example, the Glasgow Natural History Society had an extensive publication exchange programme with other organisations here, in Europe and further afield (it still does but diminishing rapidly as organisations go digital and cease to send paper through the post). In the case of Diptera, another local entomologist, J. J. F. X. King (1855-1933), had a copy of Zetterstedt (1851), preserved in The Hunterian, which has the entry for *T. pictipennis* annotated in pencil as being a synonym of *T. irrorata*. This entry (Zetterstedt, 1851; Sp. No 12, p. 3929) refers only to females whereas a male, queried in print under *T. signata* (Zetterstedt, 1851; Sp. No 65, p. 3932) is also annotated by hand as *irrorata*, thus matching up these two concepts into one taxon.

Clearly, British naturalists could develop their studies and were not as isolated as is sometimes thought. John Russell Malloch (1875-1963) is another example of an amateur engaging in a scientific manner using the latest continental literature. After leaving the Glasgow area he became one of the more famous professional dipterists operating on a world scale (see a biography of him on the Malloch Society website http://www.mallochsociety.org.uk).

There are several other local specimens of *T. irrorata* in The Hunterian, from the years 1899 to 1913, labelled retrospectively as *irrorata* by F.W. Edwards who later accessed the collections (in 1926 and 1937) for his own studies in the Tipulidae. A male from Strathblane (Stirlingshire), 19 July 1899, collected by George Walker Ord (1871-1899), is actually labelled as '*pictipennis*' by Henderson, and that particular record annotated as such in his notebook.

In 1924 Edwards referred to *irrorata* as having been re-introduced as British by Mr Womersley on the basis of specimen from the Bristol area. Womersley (1922) actually says:

"*One male confirmed by Goetghebuer and distinguished from our other species of marmorated "Daddies" by distinct bluish wing reflections. Verrall … gives it in his reputed British Tipulas ... but omits it from his 1901 list*."

Presumably Edwards, in saying that it was re-introduced to the British list, is also referring back to Verrall (1886) and not to Henderson (1911). It transpires however that Verrall merely gives his source as Curtis (1834) and so suddenly we find that *irrorata* was actually first claimed as a British species by Curtis! However, it is on the basis of a record from Parley Heath, Hampshire, in September, 1834. Curtis refers to the original description. Indeed the words of Macquart (1826) were the only available information at that time. The problem is that the adult occurs earlier in the year, in May and June, and so it seems quite likely that Curtis had actually got something different and therefore his record is suspect.

So we come back to Henderson (1911) and then Womersley (1922) as supplying the first definite records on the species, in Scotland and England respectively. The latter was seemingly unaware of the former's claim, even though the Bristol Naturalists Society is one of Glasgow's long-standing journal exchange partners. This may be the consequence of the use of *pictipennis*, a synonym that has never featured in any British checklist and so the link would be rather difficult to make.

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Notes on the Pupae of *Dicranomyia goritiensis*

Larvae of what turned out to be *Dicranomyia goritiensis* were collected in moss and algae covering the lower part of a sea cliff face on the uninhabited island of Mingulay, Outer Hebrides, in 2013. Before they could be transported away for examination they had pupated and only later when adults emerged could they be identified.

An hour or so later adults were collected in an adjacent sea cave, accessible only when the tide was low. They were flying out of and around clumps of scurvy grass (*Cochlearia* sp.) growing from the rock face but no larvae were found at that place (see photo of colleague Jeanne Robinson of Glasgow City museums gathering mined leaves of the scurvy grass at this cave).

It was not realised that there was any connection between these two collecting events as the larvae were not recognised in the field. It does, nevertheless provide the opportunity to illustrate the pupal stage of this elusive species whose ecological associations have been debated in previous newsletters.

The pupae of *Dicranomyia goritiensis*

The main features of the pupae appear to lie in the prothoracic horn and the 'fault line' on the thorax which splits as the adult emerges. The prothoracic horn is long, slightly curved, parallel-sided and distinctly knobbed, quite different from other known species of limoniines. The zip-like split on the dorsum of the pupa is also interesting. The corrugated edges appear more complex than other species but relatively few other species have been examined for comparison. At present these images are presented in a simply descriptive manner. Comparison with other species is hampered by lack

Jeanne Robinson of Glasgow City Museums gathering mined leaves of scurvy grass (*Cochlearia* sp.): Mingulay, Outer Hebrides, 2013.

of material, and obviously obtaining preserved larvae would be desirable.

The chances of returning to Mingulay are slight but now that the nature of a breeding site has been established it should be possible to find them elsewhere. The larvae were under a thickness of about one centimetre of a mixture of moss and filamentous algae over which water was trickling. This was on a vertical cliff face of friable rock within the splash zone and in heavy weather would have been considerably drenched in sea water. However, the salt would not appear to be an absolute requirement in such quantities. Adults have been collected elsewhere over seepage substrate that has calcareous tufa-like coating in coastal areas but not so close to the water's edge.

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Some Observations on the Behaviour of *Dictenidia bimaculata*

I found 11 males of *Dictenidia bimaculata* in a small area of birch scrub alongside open heather on the Yorkshire Wildlife Trust lowland heath reserve at Allerthorpe Common, East Yorkshire SE759475, on 28th July 2014. The area had been cleared two years previously and was now birches about 4ft tall, mixed in with *Juncus* and bramble, with piles of large birch logs and the odd rotting birch stump up to about 4ft high.

The males were scattered among the birches and flew up when disturbed. My count of 11 is a conservative one - there were almost certainly more as I only searched in one small area within a larger swathe of suitable habitat.

Dictenidia bimaculata (Photo: Ian Andrews)

I revisited the site on 31st July, at 17.00hrs and again males were present; the four seen were all flying slowly up and down the standing birch stumps and continued to do so for the time that I was there. They made their way to the top of the stumps and then returned to the bottom and started again. I also watched two females for about 10 minutes as they flew around a pile of large birch logs (probably *in situ* for about 5 years). They flew down into the pile and disappeared from sight occasionally, and they would push under any exposed bark and disappear from view there. They also repeatedly entered any gaps where chain saws had cut into the logs, leaving cuts about 8mm wide deep into the logs. I assume they were ovipositing in these areas, although I did not see any direct evidence of such.

It looks to be a productive spot for craneflies, as I also had a single male *Ctenophora pectinicornis* and several *Nephrotoma crocata* in the same area earlier in the year.

Ian Andrews

Conference & Meeting Reports

Some notes from the
8th International Congress of Dipterology:
Potsdam, 15 August 2014

The programme of talks began at 8.30am each morning, finishing after 5.00pm, and every early talk was unmissable! With four rooms in use there were tens of talks every day over the 5 days, and probably all of the 400 participants from every continent had different experiences. Here are just a few thoughts of mine.

In very many of the talks there was a strong focus on phylogeny, particularly in relation to geographical distribution, plate tectonics, and the fossil evidence. The goal is to build a complete narrative of the evolutionary history of the Diptera, integrating taxonomy, world-wide distribution, the fossil record, and of course the 'trees' (cladograms) produced using structural characteristics and evidence from the new molecular techniques. This evolutionary story clearly still exerts as strong a pull on the human imagination as it did 150 year ago and is one concern of many of the dipterists from academia.

The importance of taxonomy and accurate identification was emphasized by Maureen Coetzee from the Department of Medical Entomology at Johannesburg University in her talk on '*Mosquitoes and the prospects for Malaria elimination*'. Out of about 140 species of *Anopheles* Mosquitoes only 4 species are vectors of malaria, so it is important to identify your enemy correctly before trying to eliminate it. She discussed the increasing problems caused by resistance of mosquitoes to the available insecticides, and possible responses. Other presentations relating to disease vectors in the areas of Medical and Veterinary Dipterology, included talks on the biting midges (Ceratopogonidae) and *Stomoxys* flies (Muscidae). Aspects of agricultural and forensic dipterology were also covered while I was busy occupying myself with the Tipulomorpha.

The popularity and importance of digital photography was discussed by Steven Marshall from the University of Guelf in Canada, in a talk entitled, '*Dipteran diversity through a different lens: digital photography and the democratization of Dipterology*'. It raised questions about the efficient curation, dissemination and use of these images, which have relevance to a lot of our current work.

There were a few talks on larval ecology, for example, one by Virginija Podeniene from Vilnius University, Lithuania, on '*Immature stages of the cranefly genus Phyllolabis (Osten Sacken 1877. Limoniidae) with discussion of the systematic position of the genus'*. This is not a genus found in Britain but the larvae feed in the decaying wood of the larch. This was an excellent study of larval and pupal structures, comparing those of *Phyllolabis mongoliae* with those of the genus *Austrolimnophila.*

Andrey Przhiboro from St Petersburg gave another talk relating to larval ecology '*Immature Diptera of small lakes of North-western Russia. Tendencies in the colonisation of shallow aquatic and semi-aquatic habitats*'. Andrey had collected substrates, and individuals from lakes and bred-out the larvae, as well as using emergence traps, He outlined some of the problems he encountered in his work which was very much in tune with our aims in the UK and our efforts to understand the ecological requirements of craneflies and their functional roles in ecosystems.

There was so much more that I have not touched on, including over 100 posters on a wide variety of topics. There was time to discuss the poster themes with their makers and also to meet in person many people that I had only previously met on line. On Wednesday afternoon time was set aside for a panel discussion about the future of Diptera taxonomy and systematics. (*continued*)

The Congress provided an excellent opportunity to think about responses to everything that I had seen and heard from the wider field of Dipterology (and also gave me a lot of ideas for future editions of Cranefly News).

John Kramer

People & Historical Notes

Robert Henderson (1864-1940)

Robert Henderson was born in Ireland and his family moved to Glasgow when he was six years old. According to his obituarist (Somerville, 1944) he excelled academically and athletically at school and went on to study botany, chemistry and bacteriology. By profession he worked latterly for William Beardmore & Co, a famous Glasgow heavy engineering firm, for whom his role is described as foreign correspondent. Exactly what he did is unclear but he did annotate his entomological notebooks with shorthand which suggests some kind of journalistic experience. The notebooks have been shown to a number of people who do not recognise the type of shorthand used, which is a bit frustrating although fortunately the main entries are in normal words.

Henderson (1901a) listed 129 species from the families we think of as craneflies today for the Clyde area. He included Dixidae, Ptychopteridae and Trichoceridae, and also added 11 more species. Percy M Grimshaw, a professional entomologist at the Royal Museum of Scotland, Edinburgh, provided data on the rest of the Diptera in the same volume. Five species were not given names despite consultations with George H. Verrall and E. E. Austen. Nomenclature utilised Verrall's list (1888), the only one available. Over the next few years species continued to be added such as *Tipula irrorata* (as discussed in the article on p. 7 of this newsletter).

Henderson's friends and collaborators were Alexander Ross, George W. Ord, A. Adie Dalglish, J.J.F.X. King and J. R. Malloch. The first two were college friends and it was a great blow to him when Ord died so early, having started a promising career as a curator at the City Museums in Glasgow. A considerable amount of correspondence is preserved between Henderson and Malloch which concerns arrangements to meet for collecting, looking over specimens and resolving names helped by exchanges with other British collectors. These letters would be interesting to transcribe but would take some time as they are densely written in handwriting that would take some experience to decipher.

Outings involving all the local entomologists were frequent in addition to official society field excursions. All the Diptera were covered by these naturalists and other insect orders also, not to mention a whole range of plants and animals, typical of the broad approach of the period.

Henderson's papers are listed below. A few references in the society's Proceedings to exhibits, etc., are not itemised. At one meeting, in referring to his latest paper (Henderson, 1911b), he claimed:

"*it is gratifying to know that the Clyde list ... upwards of 1,000 species is in Britain second only to that list which takes the whole kingdom in its field … and at no distant date will be as complete as that of any of the other groups of Insecta which have been so long and so well studied by local entomologists*".

Henderson's main collection was donated to the University of Glasgow along with correspondence and notebooks, where it is in excellent condition and full of most interesting captures. There are a few specimens in Glasgow City museums separately acquired. All the Diptera records in Henderson's notebooks, not just the hoverflies, were extracted by Kenn Watt for his work on mapping Scottish Syrphidae and entered into a database. The system used became redundant and the records were later scanned for the Diptera recording schemes from a print-out and put into national distribution maps. Unfortunately the process was not sufficiently robust or checked-back with the originals and many of his records are not in the squares to which they belong. They are sometimes quite close, often being in adjacent tetrads, but for example the several dots for *Nephrotoma lunulicornis* in NBN Gateway are not in squares where the river bank sites where they were found occur.

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Thanks to all the contributors who have made this edition so varied and interesting.

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Dactylolabis sexmaculata

Dicranomyia melleicauda complicata

Dicranomyia occidua

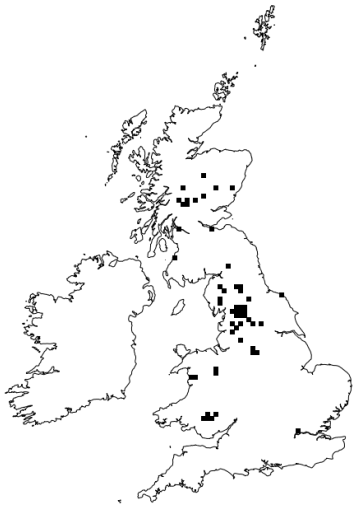
Eloeophila trimaculata

Molophilus bihamatus

Neolimnophila carteri

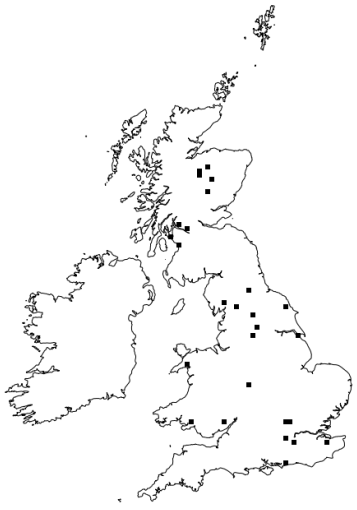
Nephrotoma quadristriata

Tipula bistilata



Tipula cheethami

Tipula helvola



Tipula truncorum