

Cranefly Recording Scheme Newsletter

Newsletter 18

Spring 2009



Note on Winter Gnat names

The genus *Trichocera* has had few friends. A small, insignificant, scrag-end, a family of Tipulomorpha (or perhaps Psychodomorpha). the pragmatic approach was to acknowledge that a few species could be identified with confidence, and a name could be attached to most specimens providing they just happened to be a perfect match to the ideal. That idyll corresponded with reality in samples from some localities, whilst other localities seemed dominated by 'odd balls'.

Others have trod the lonely path before but over the last decade or so a few fool-hardy dipterists on the Continent have dared open wide the can of worms. The good news is that with better-refined taxonomy it has become possible to better define the boundaries between long-recognised species. The outcome is more good news, or yet more anguish, as the genus proves to be an ever larger one full of cryptic species. Scandinavia and the Alps/Carpathians are species rich, and it is likely that many more species are yet to be discovered, since many regions are still almost unrecorded.

The test key to *Trichocera* notes some extra taxa in Britain and the matter of a revised British list has met some urgency for a new Crane fly Recording Scheme record card. The following decisions have been made.

Trichocera (Saltrichocera) brevis Krzeminska, 2002 This is a split of *saltator* of the British list, most easily recognised in the female: ovipositor short in *brevis*, longish in *saltator*. These are black bodied species, the male styles with almost no hint of a basal tubercule. *T. brevis* is more modest in size than the average *saltator*. Both species are widespread in Britain.

Trichocera (Saltrichocera) Species A Though very distinct from other British species, a confident match with a described species has not yet been concluded. The voucher specimen is from Roxboroughshire.

Trichocera (Saltrichocera) Species V The designation refers to a broad V-shaped notch on the hind margin of the last sternite. The name *japonica* was floating as a candidate but this is no longer a serious option. *T. recondita* Stary 2000 comes close but the relative lengths of the male flagellar segments differ from British material. *T. implicata* Dahl, 1976 is supposed to have a rectangular rather than V-shaped notch, and is certainly a likely contender as a potential British species. British material has been found in the North York Moors National Park.

It is noteworthy that the two un-named species were found in northern districts. In the Oslo district the maximum species-richness occurred in December (a period with virtually no sampling in northern Britain).

Alan Stubbs

Photos of Craneflies

Regrettably the Cranefly Book is still on hold in late draft pending agreement with BENHS Publications Committee on final shape and content.

Meanwhile, more dipterists having been getting into digital photography. Since dried specimens of craneflies can lack luster, a better option may be field shots of live specimens. That supposes the opportunities arise and are taken. Thus please feel encouraged to help build up the DF website picture gallery.

Alan Stubbs

New record card available soon !!

Record cards can be a quick and legible way to enter records from a site, and these records can then be transcribed to Recorder using secretarial assistance without the need for expert knowledge of synonyms, possible abbreviations and variations in spelling. A new edition of the Record Card for Craneflies has been produced. Please let me know if you wish to use them and I can co-ordinate the order with the Biological Records Centre.

| | | | |
|--------------------------|--------------------------|--------------------|-------------------------------------|
| Grey cells for GPS users | Locality | | Date(s) from: _____ |
| | | | to: _____ |
| Grid reference | Habitat | | Vice county |
| | | | Altitude (metres) |
| | Recorder | | Source (circle one) *Source details |
| | | | Field |
| | | | Museum* |
| | | | Literature* |
| | TIPULIDAE | Tipula varipennis | |
| | Ctenophora ornata | Tipula alpium | |
| 703 | Ctenophora flaveolata | Tipula cheethami | |
| | Ctenophora pectinicornis | Tipula confusa | |
| | Dictenidia bimaculata | Tipula gimmerthali | |
| | Tanyptera atrata | Tipula grisescens | |
| | Tanyptera nigricornis | Tipula holoptera | |
| | Dolichopeza albipes | Tipula invenusta | |

Wingate's Craneflies - Part I, Tipulidae and Pediciidae

In the previous Bulletin, Spring 2008, No. 66, I described my impressions of Wingate's Durham Diptera, 1906, and ended by wondering how his records from 100 years ago compare with those today. The aim of this piece is to provide some background to readers, especially those in northern England, who may re-visit Wingate's sites.

Thanks to June Holmes, Archivist of the Natural History Society of Northumbria, I can add a few more details to the life of the Reverend William John Wingate, though only a few. He

was born in Glasgow on the 19th August 1846 and occupied curacies in Gateshead as a young man. In 1884 he was a Vicar in South Shields and then later, for most of his working life, at St. Peters, Bishop Auckland. When he died in 1912 at the age of 66 he was vicar of South Hetton. In 1902 he was founder and Secretary of the Durham County Naturalists' Union, and donated collections of Marine Algae, Vascular Plants, Mosses, Coleoptera and Diptera to Sunderland Museum. He also donated 243 specimens of Diptera to the Hancock Museum, Newcastle Upon Tyne. His largest publication was his book, 'A Preliminary list of Durham Diptera, with Analytical Tables', in 1906. In his Obituary it says '*he was a good botanist, and a good geologist as well, and by his energy as an organiser and lecturer he did great service to the local scientific societies of the county of Durham.*'

Following my previous piece, Andrew Grayson drew my attention to his own paper in Dipterists Digest 2004, Vol. 11, No. 2, pp144-146, about the species of *Tabanus* recorded by Wingate. Andy recommended that I read Wingate's paper, 'Durham Diptera', in The Naturalist [28], 1903, (pp 269-288) where Wingate has included descriptions of some of his sites, (quoted by Andrew) most of them in Weardale, by the River Wear and its tributaries. I have done so and these descriptions are included in the list below, to which I have added grid references. Wingate also acknowledges help from some of the leading Dipterists of the day; Mr. Austen, Col. Yerbury, Mr. Collin, Mr. Henderson, Mr. Wainwright, Herr P. Stein, and Mr. Grimshaw.

Wingate used Schiner's Fauna Austriaca, published in Vienna in 1862, and it may be that he was helped with the translation from the German by 'Herr P. Stein.' He also probably used the keys in Verrall's papers and British Checklists of 1886 to 1901 to organise his work. Both Schiner and Verrall used dichotomous keys to identify species.

Wingate's sites where he collected craneflies were as follows:

- BC** **Barnard Castle** - NZ0516
- Bd** **Bedburn** - NZ 1032
- BI** **Belburn** - River near Binchester. NZ 21649 31797. Strip of wood and stream below Auckland.
- BA** **Bishop Auckland** – NZ2228. 350ft. Practically the small plot of ground round the vicarage.
- Bo** **Bollinghope Common** - NY 9834 - 700-900 ft. A dale running into Weardale.
- Br** **Brancepeth** - NZ 2338
- D** **Deepdale** - NY 9615
- G** **Gibside** - North Durham. NZ 176589. 100 - 400 ft. Wooded estate (Snipes Dene Wood) on the River Derwent, about 7 miles south-west of Newcastle. (Wingate was vicar in this parish.).
- Ha** **Harperley** - NZ 17463 53017 400ft. Wooded Wear banks
- He** **Hesleden** - North Durham NZ 4438. Sea shore, flowery sea banks, sandhills, wooded dene and farm land, about 3 miles north of Hartlepool. Collected mostly during the holiday month of August.
- R** **Raby** - Near Raby Castle and Park: NZ 12893 21807
- SM** **Shipleigh Moor, Shipleigh Glen** - 400-700ft. Wooded glen with bog at the top.
- Sh** **Shull** - Near Consett NZ 07653 82487 600-900 ft. Pine woods with stream.
- St** **Stanhope** - NY9939 - 700-900 ft. Wooded dene.
- Wa** **Waskerley** - NZ 05092 45442. 700 - 1,300 ft. Wooded glen and moorland.
- We** **Wearhead** - NZ 17633 53397 1,000-1,500 ft. High dales and moors.

A Checklist of Wingate's species - Families Tipulidae and Pediciidae

TIPULIDAE

Genus NEPHROTOMA

- Nephrotoma analis* Schumm. BA/07/1902 – 1m
Nephrotoma appendiculata Pierre (as *maculosa* Mg) BA - 2f, Bo 06/1897-1901- 1f
Nephrotoma cornicina Linn. BA - 2m, Ha/06/1902 -1f
Nephrotoma crocata Linn. Bd/07/1902 – 2f
Nephrotoma flavescens Linn. (as *histrion* Fabre 1794) BA - 2f, He - 1m,3f, 08/1889
Nephrotoma guestfalica West. BA 07/1901 – 1f
Nephrotoma lunulicornis Schumm. BA – 1m, Ha - 1m, 06/1902
Nephrotoma quadrifaria Mg. BA 1F, He/08/1900 – 1m, 4f
Also *Pachyrhina annulicornis* Mg (Walker 1856) which may be *Tipula annulicornis*, ie *Tipula* (*Schummelia*) *variicornis*. Ha/06/1902 – 1m

Genus TIPULA

Sub-genus ACUTIPULA

- Tipula fulvipennis* (as *T. lutescens* Fab) BA/07/00-1m,SD06/02-1f,Ha/06/02-1m,He/08/02-2m
Tipula maxima (as *T. gigantea* Schrank) Ha/06/00-1m, Ha/06/02-1m Sh/07/02-1m.
Tipula vittata Mg Ha/06/00-1m, Bl/04/00-1f, R/04/00-1f

Sub-genus BERINGOTIPULA

- Tipula unca* (as *T. hortensis* Mg,) BA/06/1897-1901-2m, Ha/06/01-1f, Wa/04/01-1f, R/05/01-1m,2f
Tipula unca (as *T. longicornis* Schummel) BA/06/02-1m, Ha/06/1902 2m,2f.

Sub-genus LUNATIPULA

- Tipula fascipennis* Mg He/08/00-1m,Ha/06/02-2m.
Tipula lunata L (Probably *T.luna*) Ha/06/02-2M,2F
Tipula lunata L (as *T. ochracea* Mg) BC/06/00-1m, BA/06/1900-01-5m,1f.
Tipula peliostigma Schumm BA/06/02-1f
Tipula vernalis Mg Ha/06/00-1m, Bo/06/01-1f, Wa/07/01-1f,
Bl/08/1898-2f.

Sub-genus PTERELACHISUS

- Tipula truncorum* Mg BA/06/01-1f
Tipula varipennis Mg We/06/01-2m, BC/06/01-2f

Sub-genus SAVSCHENKIA

- Tipula confusa* V.deWulp Sh/09/1900-2m, We/08/1901-6m,2f.
Tipula pagana Mg Sh/09/1900-4m
Tipula subnodicornis (as *plumbea* F) Ha/06/01-1m, Ha/06/02-1m, Bd/07/02-1m,1f.

Sub-genus SCHUMMELIA

- Tipula variicornis*
Tipula oleracea L BA/06/00-1m, He/08/1899-1f, common.
Tipula paludosa Mg He/08/00-2m,2f. We/08/01-4m,4f.

Sub-genus VESTIPLEX

- Tipula scripta* Mg We/08/01-1m, Ha/06/02-1m.

Sub-genus YAMATOTIPULA

- Tipula lateralis* Mg BA/06/00-2m, Bo/06/00-2m, Ha/06/00-1f, Wa/07/01-1f, He/08/00-4m,2f, We/08/01-2m.

PEDICIIDAE

- Dicranota bimaculata*
Pedicia rivosa

Tricyphona immaculata
Tricyphona unicolor
Ula sp.

The names follow Chandler P.J. 1998

Conclusions

Many of the records are common species that are widespread over the UK. The genus *Nephrotoma* is well represented in Wingate's list, and, if the identification is correct, it includes two records for *N. lunulicornis*, a very rare and local species of shaded, sandy river banks. (Stubbs 1992). Also *N. analis*, *N. cornicina* (RDB 3) *N. crocata* and *N. guestfalica* are all local species. Local species of *Tipula* recorded by Wingate are one female *Tipula truncorum*, and *T. subnodicornis*. No members of the Cylindrotomidae are on his list, but the local *Tricyphona unicolor* is a member of the Pediciidae worth noting. All of these records would be worth investigating next season, and his collection, currently not accessible, would be worth checking, once it is available again.

Bibliography

- Chandler, P.J. (Ed) (1998) Checklist of Insects of the British Isles. Part 1: Diptera. Roy. Ent. Soc. London.
- Stubbs, A.E. 1992 Provisional Atlas of the Long-palped Craneflies (Diptera Tipulidae) of Britain and Ireland.
- Wingate, R.J. 1903. Durham Diptera, in The Naturalist [28], 1903, (pp269- 288)
- Wingate, R.J. 1906. Durham Diptera, Trans. Nat. Hist. Soc Northumberland, Durham and Newcastle upon Tyne. (New Series) Vol II.

Acknowledgements

Thanks to June Holmes, Archivist of the Natural History Society of Northumbria, who sent me biographical details and grid references of some sites that I was unable to locate.

John Kramer

Some Interesting Records

I received some interesting records from Ivan Perry from his field work in England and Scotland during 2008. Perhaps the best was of *Phylidorea bicolor*, a new British species, first recorded in the Lake District earlier in the year. Ivan's specimen was recorded from an ancient coppiced wood on calcareous clay, in west Suffolk. This species superficially resembles *Phylidorea squalens*. (See Alan Stubbs Test Key to the Sub-Family Limnophilinae, p16.) The site also provided habitat for *Diogma glabrata* (Cylindrotomidae), *Molophilus cinereifrons* and *Nephrotoma cornicina*,

Another good list was gathered by Ivan in the Aviemore area in early June, and this includes *Symplecta meigeni*, and the very rare *Tipula bistilata*. Also in the district were *Tricyphona unicolor*, *Hoplolabis vicina*, *Molophilus curvatus*, *Ormosia staegeriana*, *Pilaria meridiana*, *Dicranomyia distendens*, *Dicranomyia caledonica*, and *Lipsothrix errans*,

John Kramer

Does *Dicranomyia goritiensis* occur inland in the UK ?

In the last Newsletter #17 Geoff Hancock cited what seems to be a unique record of *Dicranomyia goritiensis* at an inland site. This prompted me to check on as many sources as I could. Firstly the map on the NBN Gateway (www.searchnbn.net) shows no inland sites. (I must ensure that both Geoff's inland, and Islay records are entered.) Then I checked the specimens in the National Museum of Wales in Cardiff, and the NHM, London. Again, there are no specimens from inland sites.

Why certain species are restricted to the coast may relate to a tolerance of factors which give them an advantage over competitors which are less tolerant. Perhaps the larvae of *Dicranomyia sera* are better able to tolerate saline conditions than others. However, *D. goritiensis* seems to thrive on cliff edges well above the sea, where there is seepage of fresh-water. Perhaps there is some salt spray, but from my experience of their sites, saline conditions would not seem to be part of their habitat requirements. So why are all records but one from coastal cliff edge sites? Again their unique response to factors in their habitat may confer an advantage. For example, perhaps a behavioural response by *D. goritiensis* to wind speed, restricting flight to very calm weather, may be beneficial. It may also be that they can better exploit the food resources there. The larvae are as yet unknown, but the food available would often seem to be roots of grasses, eg *Festuca*, alive or decaying.

All of this points to a need to explore similar inland sites. Well established quarry edges with seepages seem possible habitats, or better, a natural cliff, with higher land above, draining water into seepages, perhaps, as at the Spout of Ballagan with a waterfall. The mossy fringes of waterfalls are the habitats of the closely related *D. didyma*. Are there any inland habitats like that in your county? Under the over-hanging tussocks of grass it may be possible to sweep *D. goritiensis*. I found that it is better to disturb them with a stick in one hand, and then catch them with the net in the other as they fly up. There may be two emergences in the year, with modes in May-June, and another in late August-September.

If *D. goritiensis* is reluctant to fly and disperse, so that they are not easily blown away, and their cliff top seepage habitats are rare inland, this may explain why nearly all recorders have never found them away from coastal cliffs.

John Kramer

Leicestershire Cranefly Checklist

I have recently updated my checklist of Leicestershire Craneflies (see below). Many of the species listed (with asterisk) have only one record, and some others have only two, and so further confirmatory records would be reassuring. There are a few other biotopes to explore, such as the disused sand/gravel quarries, and undoubtedly more cranefly species will be added to the checklist in the future.

A Check-list of Leicestershire Craneflies

Compiled by John Kramer. January 2009

TIPULIDAE

*Ctenophora pectinicornis**
*Dictenidia bimaculata**
*Prionocera subserricornis**
Prionocera turcica
Nephrotoma appendiculata
Nephrotoma cornicina
*Nephrotoma crocata**
Nephrotoma flavescens
Nephrotoma flavipalpis
Nephrotoma guestfalica
Nephrotoma quadrifaria
Tipula fulvipennis
Tipula luna
Tipula maxima
Tipula vittata
Tipula unca
Tipula flavolineata
Tipula cava
Tipula fascipennis
Tipula lunata
*Tipula selene**
Tipula vernalis
Tipula submarmorata
Tipula varipennis
Tipula confusa
Tipula pagana
Tipula rufina
Tipula staegeri
Tipula oleracea
Tipula paludosa
Tipula scripta
Tipula couckeii
Tipula lateralis
Tipula pruinosa

CYLINDROTOMIDAE

Cylindrotoma distinctissima

PEDICIIDAE

Dicranota bimaculata
Paradicranota pavida
Pedicia littoralis
Pedicia rivosa
Tricyphona immaculata
Ula mollissima
Ula sylvatica

LIMONIIDAE

CHIONEINAE

*Cheilotrichia imbuta**

Empeda cinerascens
Crypteria limnophiloides
Ellipteroides lateralis
Erioconopa trivialis
*Erioptera divisa**
Erioptera flavata
Erioptera fuscipennis
Erioptera fusculentata
Erioptera griseipennis
Erioptera lutea
Erioptera squalida
*Erioptera verralli**
*Gnophomyia viridipennis**
Gonempeda flava
Gonomyia recta
Gonomyia simplex
Ilisia maculata
Ilisia occoecata
Molophilus appendiculatus
Molophilus bifidus
Molophilus bihamatus
Molophilus cinereifrons
Molophilus corniger
Molophilus griseus
Molophilus medius
Molophilus niger
Molophilus obscurus
Molophilus ochraceus
Molophilus pleuralis
Molophilus serpentiger
Molophilus undulatus
Ormosia hederiae
Ormosia lineata
Ormosia nodulosa
Ormosia pseudosimilis
Rhypholophus bifurcatus
Rhypholophus haemorrhoidalis
Rhypholophus varius
Symplecta stictica
Symplecta hybrida
*Trimicra pilipes**
LIMNOPHILINAE
Austrolimnophila ochracea
Eloeophila maculata
Eloeophila submarmorata
Eloeophila verralli
Epiphragma ocellare
Euphyllidorea aperta

Euphylidorea dispar
Euphylidorea lineola
Limnophila schranki
Neolimnomyia adjuncta
Neolimnomyia nemoralis
Neolimnomyia batava
Neolimnomyia filata
Paradelphomyia fuscula
Paradelphomyia nielsenii
Paradelphomyia senilis
Phylidorea ferruginea
Phylidorea fulvonervosa
Pilaria discicollis
Pilaria fuscipennis
Pilaria scutellata
Pseudolimnophila lucorum
Pseudolimnophila sepium
LIMONIINAE
Achyrolimonia
decemmaculata
Antocha vitripennis
Atypophthalmus inustus
Dicranomyia autumnalis
Dicranomyia chorea
Dicranomyia didyma

Dicranomyia lucida
Dicranomyia mitis
Dicranomyia modesta
Dicranomyia morio
Dicranomyia fusca
Helius flavus
Helius pallirostris
Limonia flavipes
Limonia macrostigma
Limonia nigropunctata
Limonia nubeculosa
Limonia phragmitidis
Limonia trivittata
*Lipsothrix nervosa**
Lipsothrix remota
Metalimnobia bifasciata
Neolimonia dumetorum
Rhipidia maculata
Rhipidia uniseriata
*Thaumastoptera calceata**

Ref: Chandler, P. (Ed) (1998) Checklist of
Insects of the British Isles. Part 1: Diptera.
Roy. Ent. Soc. London.

People and Historical Notes



Sir Christopher Howard Andrewes M.D. M.R.C.P. FRS. 1896-1988

While researching the craneflies from the Aviemore area for the Summer Field Meeting the name of C.H. Andrewes frequently occurred. Andrewes' collection of 15,000 specimens of Diptera was presented to the Natural History Museum in 1982. These included many craneflies collected in Scotland between 1945-1965 and especially in 1949 when, during May and June, he spent about a month in the area. Even in his obituary in the E.M.M. it says: 'No doubt other interesting species will be found in his collections, though care will be necessary in interpreting locality data as his labels are all handwritten and (as befits a medical man) almost indecipherable!'

Andrewes had an interesting life. Born and brought up in Mill Hill, London, the son of a pathologist, Sir Frederick William Andrewes M.D., FRS., he went as a student to Bart's and then served as a surgeon in the R.N.V.R. from 1918-19. He returned to Bart's, and then for two years worked in New York. From there he again returned to Bart's, but from 1927 to 1961 he worked at National Institute for Medical Research at Hampstead, in the field of animal and human virology. He became very eminent in that field and was, from 1947-61, the first Director of the World Influenza Centre. He was one of the team who discovered the influenza virus and became the first director of the Common Cold Research Centre at Porton Down. He retired in 1961 and from then lived at Coombe Bissett, on the edge of Salisbury.

During his days in London he got to know Ralph Coe, Cyril Hammond, Len Parmenter and others of that generation and while living there he recorded craneflies for the London area, especially in north and north-east London.

Both Andrewes and Len Parmenter lived close to the New Forest, after retirement, and they took on the task of working-up a Diptera list for the area. Parmenter assembled a card index of past and present records, though, regrettably, Parmenter died after a few years so the project lapsed prematurely.

His forte was being a good collector and Alan Stubbs persuaded him to leave his large collection to the NHM, rather than the local museum. When the collection reached NHM, and Alan went through the craneflies, there were a number of problems. (Lessons for us all!!) One such, coupled with the lack of det. labels, had been his returning of examined specimens in the wrong place in his collection. Another problem was his handwriting on location labels. Fortunately he wrote out an index of place names with grid references. One must remember that in those days most recording used to be by county, the use of grid references on data labels coming quite late in his time.

In spite of his busy life he also made a significant contribution to the study of Hymenoptera and his Hampstead records date from 1917.

Ref: 1989 Obituary EMM John Kramer and Alan Stubbs

European species of the subgenus *Brachylimnophila*.

In an important paper just published in *Entomologica Fennica* Vol 19, Jaroslav Starý and Herbert Reusch have proposed that the members of the subgenus *Brachylimnophila* ALEXANDER (Genus *Neolimnomyia* SÉGUY) be transferred to the genus *Dicranophragma* OSTEN SACKEN. After a considerable amount of work they state that 'the male terminalia of *Dicranophragma* are similar to those of *Brachylimnophila* to an extent that leaves no doubt that the two are congeneric despite the very different general appearance.' The species of *Brachylimnophila* are carefully re-described from the types and new names proposed as follows:

Neolimnomyia (Brachylimnophila) nemoralis (Meigen 1818) becomes *Dicranophragma (Brachylimnophila) nemorale*

Neolimnomyia (Brachylimnophila) separata (Walker 1848) becomes *Dicranophragma (Brachylimnophila) separatum*

Neolimnomyia (Brachylimnophila) adjuncta (Walke 1848) becomes *Dicranophragma (Brachylimnophila) adjunctum*.

In Alan Stubbs' Test Key to the Sub-Family Limnophilinae, p8-9, the subgenus *Brachylimnophila* includes the three species above, together with *Brachylimnophila minuscula*, and 'species A'. Verrall noted the variations within the 'nemoralis' group and Edwards, to try and make sense of this, proposed five varieties, including *Limnophila nemoralis* var *minuscula* in his 1921 paper. Like some other species of crane fly, it would seem that this is a polymorphic group, with similar genitalia, all forms of which can interbreed. What do you think? It is perhaps something for the next edition of 'Crane fly News'.

John Kramer

In the last edition of the CRG Newsletter I discussed the problem of separating the males *Euphyllidorea phaeostigma* and *E. meigenii* and Jukka Salmela has responded by sending the piece below about the differences between the females of these species.

Euphyllidorea phaeostigma (Schummel) and *E. meigenii* (Verrall) in Finland, including morphological notes on female terminalia

Jukka Salmela

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In this short article I will summarise the distribution and ecology of *Euphyllidorea phaeostigma* and *E. meigenii* in Finland, with notes on the female taxonomy. The data presented on their occurrence is based on my own collecting, covering all vegetation zones or ecoregions (hemiboreal, southern, middle and northern boreal) and main aquatic-semiaquatic ecosystems (mires, swamps, alpine wetlands, brooks, springs, Baltic coastal meadows) of Finland. In the collecting I have mainly used Malaise traps (over 300 localities) and I have also examined trap material collected by other Finnish entomologists. In addition, I have collected crane flies with a traditional sweep net. Although there still are poorly known regions and habitats in Finland, some conclusions on the Finnish crane fly fauna may be drawn, as presented here.

Female terminalia (8th sternite, hypogynial valves, 10th tergite and cerci) have been illustrated by Starý and Rozkošný (1969), but their vaginal apodeme is here figured for the first time.

Euphyllidorea phaeostigma

Euphyllidorea phaeostigma is common in Finland. It is distributed all over the country

(Fig.1.), its absence from the provinces lying in the border of middle and northern boreal Finland (Om, Ok, Oba) is most probably due to inefficient sampling. The species occurs in a wide array of moist biotopes, including spring-fed spruce mires, headwater brooks and their surroundings, aapa mires, ombrotrophic bogs, grooves and alpine wetlands. It is usually quite low in numbers (1-10 specimens in a Malaise trap within a season), but may be rarely abundant (ca. 30 specimens) around small brooks characterised by spruce mire vegetation. The species is common especially in the southern parts of the country, but decreases in frequency toward north Finland. *Euphylidorea phaeostigma* is a summer species, its flying season extends from June to August.

Euphylidorea meigenii

Euphylidorea meigenii is relatively scarce species in Finland. It has been recorded from southern, middle and northern boreal zones, but it is probably absent from the southernmost Finland (provinces Ab and N) (Fig. 2). The species is quite common in the northern boreal Finland, being present there around brooks, minerotrophic fens and alpine wetlands. In the southern parts of its range it is mainly found in fens and spruce mires. In fact, the species is probably sensitive to ditching and consequent drying of peatlands, and thus, it may be an indicator of good habitat quality and pristine hydrological conditions of southern mires. Like *E. phaeostigma*, *E. meigenii* is usually low in numbers (1-10 specimens), but it may be quite abundant (ca. 25 specimens) around alpine spring fens and headwater brooks in the northernmost Finland. *Euphylidorea meigenii* is a summer species, it is on the wing from late June to August.

Female terminalia of *Euphylidorea phaeostigma* and *E. meigenii*

Cerci and hypogynial valves are longer in *E. phaeostigma* than in *E. meigenii*, if assessed in relation to 10th tergite and 8th sternite, respectively. Coloration of 8th sternite of *E. phaeostigma* is dark brown with a longitudinal pale stripe in the middle (may not extend to the proximal margin); in *E. meigenii* 8th sternite is yellowish brown (pale and indistinct, longitudinal middle stripe may be present). Vaginal apodemes of the species also differ significantly (Fig. 3).

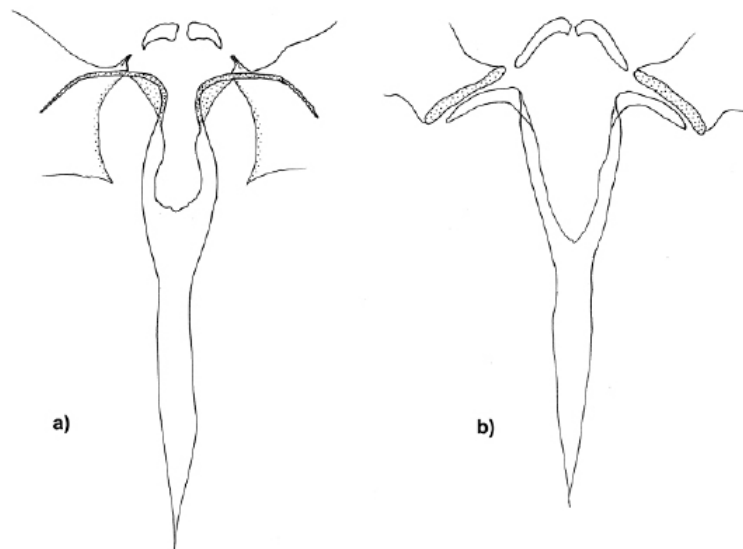
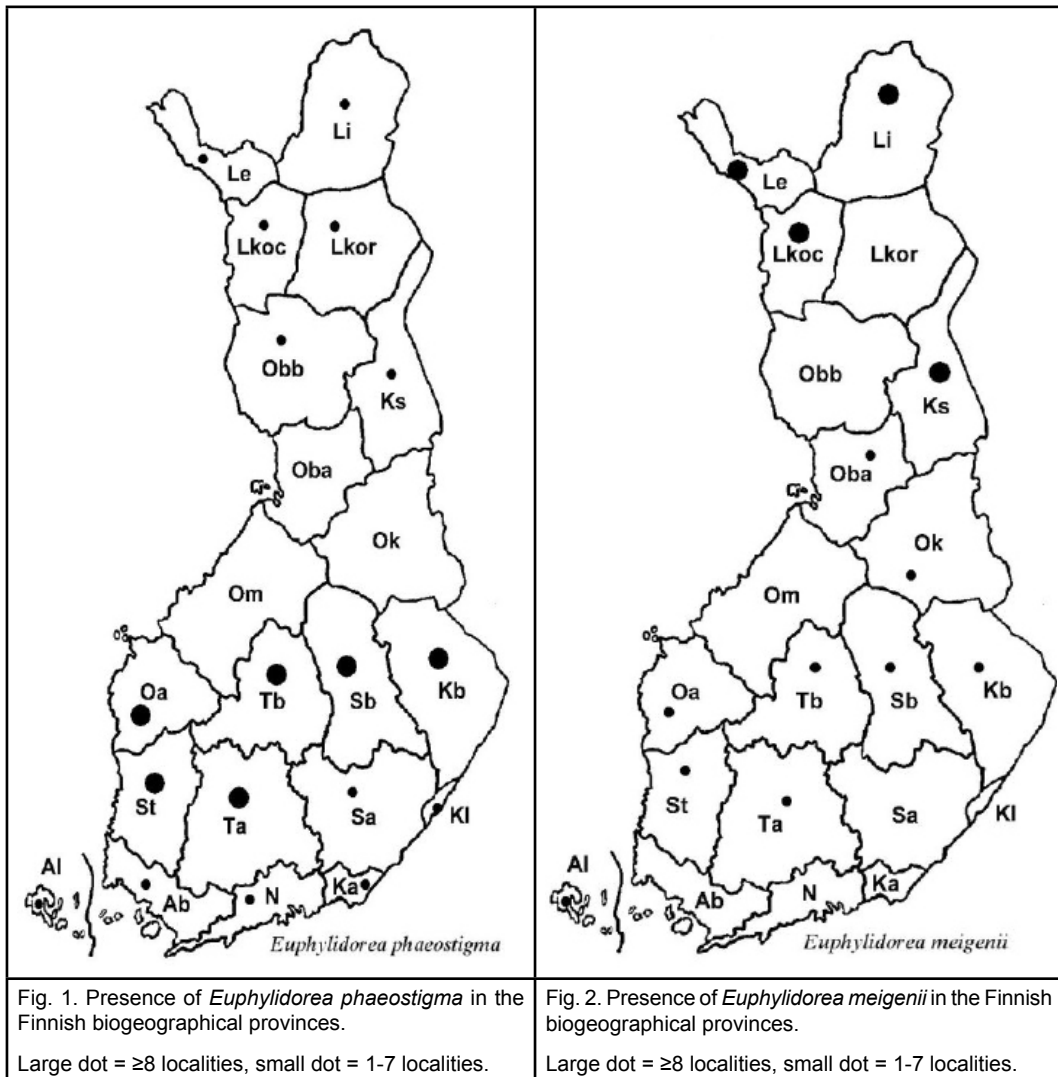


Fig. 3. Vaginal apodemes of *Euphylidorea meigenii* (a) and *E. phaeostigma* (b), ventral view



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References:

Starý, J. & Rozkošný, R. 1969: Die Slowakischen Arten der Unterfamilie Limoniinae (Tipulidae, Diptera). –Ac. Rer. Natur. Mus. Nat. Slov., Bratislava 15: 75-136.

Please note that the next copy deadline is July 31st for distribution in mid September.