

Micropezids & Tanypezids

Stilt & Stalk Fly Recording Scheme

Newsletter 5

Spring 2023

Recording Scheme - News

A fairly intensive few sessions on data-gathering throughout the UK and Europe and even a brief foray into the Nearctic has led to both an improvement in Open Data contributions and biogeographical perspectives.

NBN Atlas now has the Open Data, up from 5373 to 6409 as shown opposite. Clearly I'm able to do the maps long before the data upload gets processed (takes about a month), starting with a few selected ones for this newsletter.

The website gets those maps too, check it and you'll find both old and new ones.

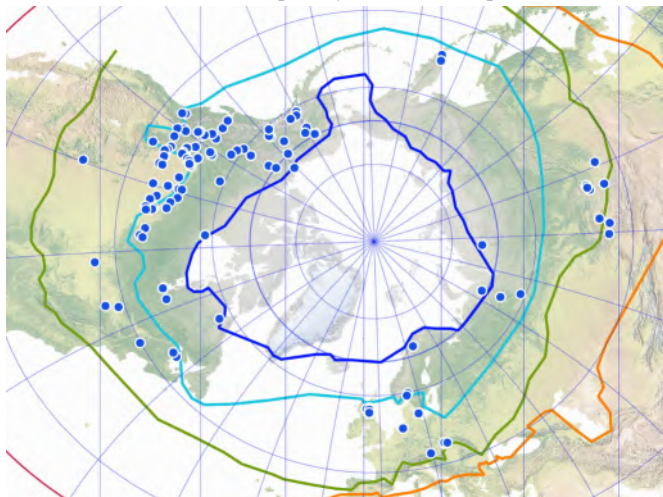
The European Atlas gets an update too, this time with points distributions rather than being country-based (as in my Researchgate preprint at <https://doi.org/DOI: 10.13140/RG.2.2.34834.99529> with ~250 reads) If you've any work scheduled in this group then the website maps are the most current.

World Atlas. Again just the Calobatinae. The rest of the Palaearctic was a little tricky; papers in Russian, Korean and Japanese languages stretched the abilities of the OCR in my pdf reader and my use of online translators but I think I got them all. In contrast the Nearctic data was a breeze, half their museums seem to have uploaded to GBIF and the missing stuff I scanned from the maps in:

Merritt R.W. & Peterson B. V. 1976. A synopsis of the Micropezidae (Diptera) of Canada and Alaska, with descriptions of four new species. *Can. J. Zool.* 54: 1488-1506.

All these world atlas maps are to be found on the Scheme's website at <https://micropezids.myspecies.info/node/385>

One outcome is that we can portray an Holarctic species:

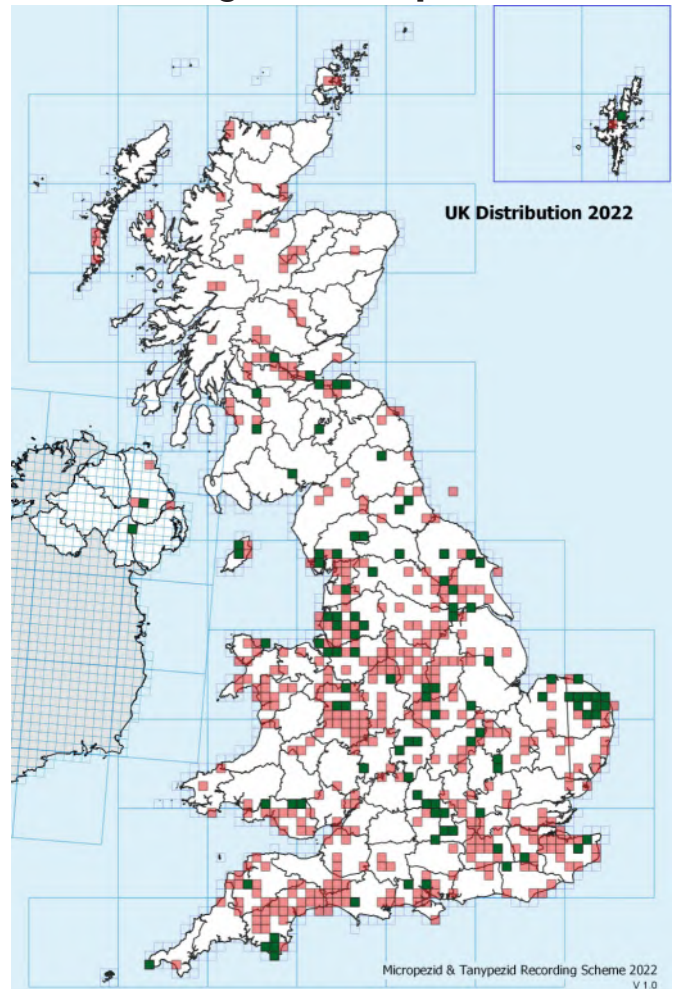


Cnodacophora stylifera which, according to Ozerov (1990) is synonymised with the Nearctic *Cnodacophora nasoni* Making this a Boreal (teal line) or high altitude Temperate species. The block to the right is Mongolia, the rest of the eastern Palaearctic is even more inhospitable for entomologists



Fingered Strider (*Neria commutata*) photo ©Darwyn Sumner

UK Recording Scheme Open Data 2022



Recent records to 2022. All are publicly accessible through NBN Atlas. Dark green 10km squares are 2021/22 records, mainly through iRecord & iNaturalist. Pale red squares are from the 2011-2020 decade. Recent hotspots due to a Dipterists Forum field week in Norfolk. Plenty more promising old and new ground to explore. Thanks to everyone for their contributions so far.

Contact the Recording Scheme if you've any more or simply add them to iRecord or if images then iNaturalist is preferred.



European Micropezids & Tanypezids at <http://micropezids.myspecies.info/>

DIPTERA: Superfamilies NERIOIDEA (Micropezids) - Families Pseudopomyzidae & Micropezidae + DIOPSOIDEA (Tanypezids) - Families Diopsidae, Tanypezidae, Strongylophthalmyiidae, Megamerinidae & Psilidae

Darwyn Sumner

Online version of this newsletter (with hyperlinks) on the [Newsletters](#) page

Note that the Scratchpad website for this scheme [has now been closed](#) to further editing



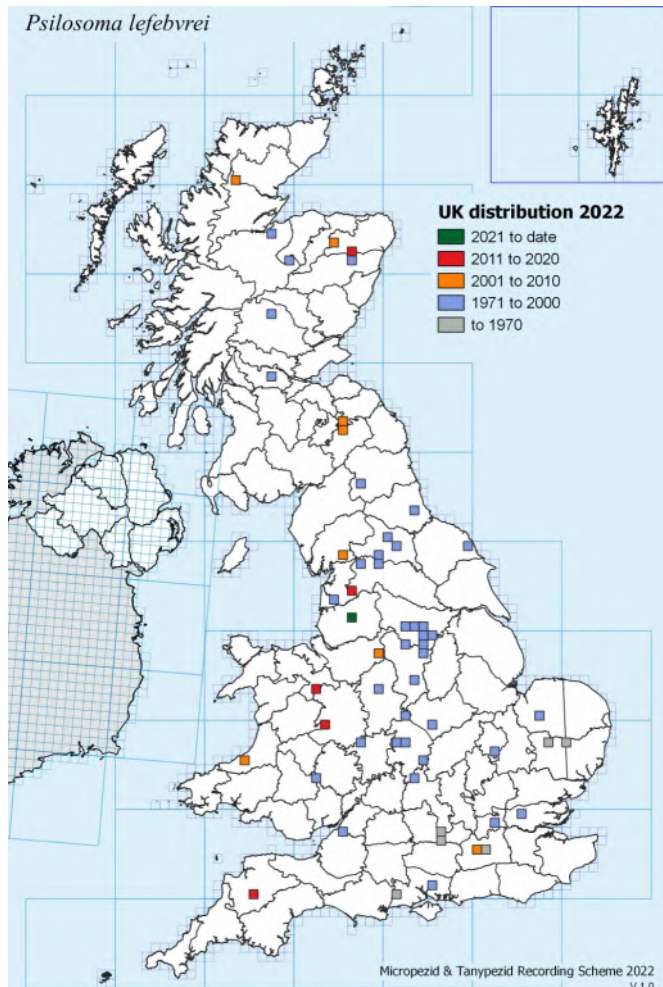
Featured species

Whatever happened to the Atlantic Pierrot?

Psilosoma lefebvrei (Atlantic Pierrot)



Identification tips from Jessica Joachim on her 2018 blog <https://jessica-joachim.com/insectes/dipteres/psilidae/psilosoma-lefebvrei/>



The map suggests a disturbing decline in *Psilosoma lefebvrei*, at one time widespread its range has now shrunken considerably to only 6 sites in the last decade and only a couple of records on iNaturalist.

Peter Chandler (1975) reported it as frequent in Scotland and the north of England. Peter collected it on Foxgloves (*Digitalis purpurea*). Check your finds carefully and don't mix this up with *Psila* spp. (1 notopleural bristle), it can be confirmed using the keys of either Jocelyn Claude or Paul Beuk. Post suspects on iNaturalist so that Jocelyn sees them.

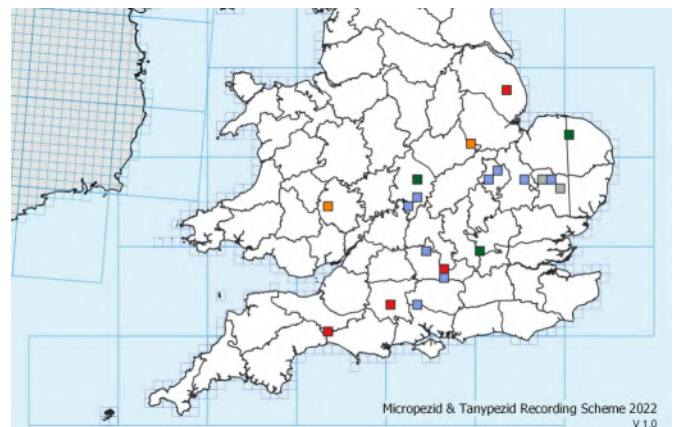
Tanypeza longimana (European Harlequin)



The fifth occasion I've found this species, my first from the UK, at [Whitwell Common SSSI](#) in East Norfolk last year.



Alan Stubbs included this discovery in his regular *British Wildlife* Diptera column and so my photograph was used as an illustration.

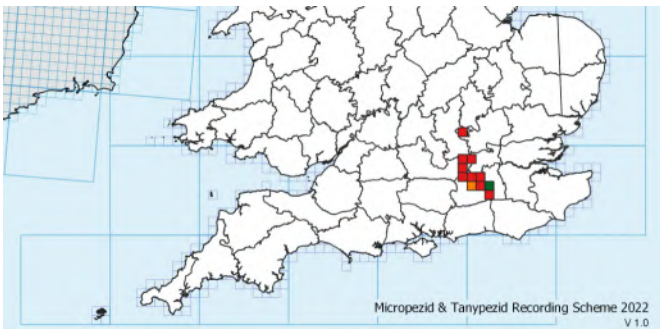


In mid June 2023 it was additionally recorded in Jersey by Jody Robert.

Rainieria calceata (Beech Échasseur)



Though commonly encountered in certain parts of Europe, this remains a UK prize due to the scarcity of its habitat here. Just two additional UK records this year (Paul Brock on Flickr & Paul Davis on iNaturalist), both from its known stronghold in the Windsor Forest region. The publicity we give to this species was tracked down by Helen Read, an environmental consultant on veteran trees at Burnham Beeches, one of its known sites. Her team didn't find any there in 2022 though.



It was however refound on Corse in 2023, the first record since Séguy reported it in 1934.

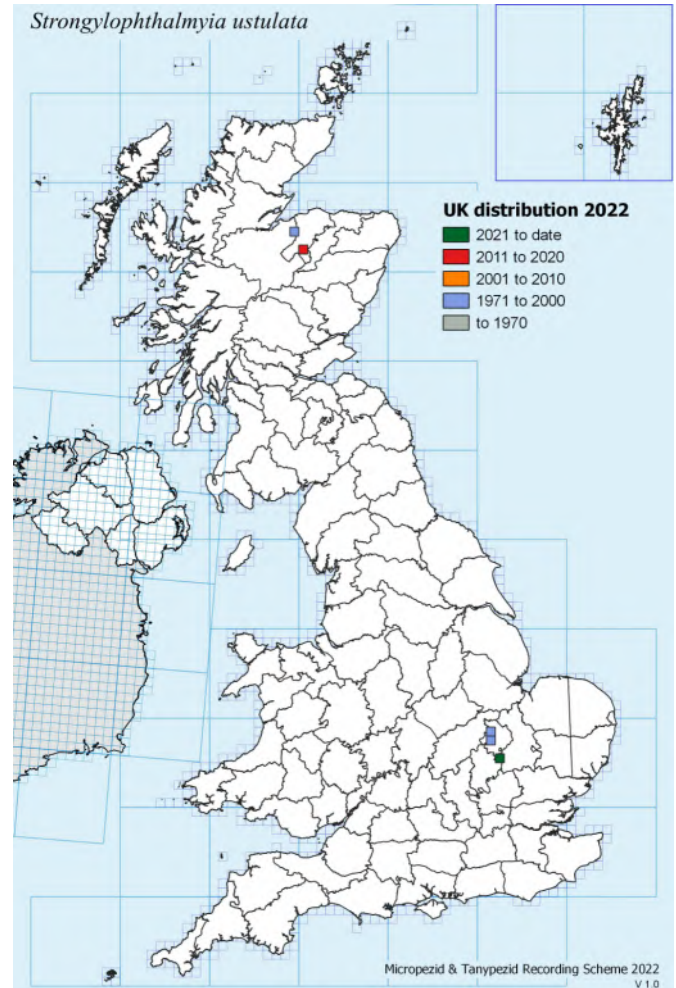
Strongylophthalmyia ustulata (Western Juggler)



A good year for this species in Europe with 5 records, one in France by Marie Lou Legrand (*renko*), another in the Netherlands by Rob Westerduijn both on iNaturalist. On Diptera.info a Spanish one (pictured) by *picoverd* in the Pyrenees is at the southern end of its range and the Saxony one is by Marion Friedrich. Thanks to Jere Kahanpää for help in confirming them.

The UK record was by Ivan Perry (reported in the latest Dipterists Digest) a career "one-off" by an experienced dipterist so don't expect to emulate them.

It's an unremarkable beast, the only distinguishing feature being the nominative "ball-shaped" eyes though I observe in *renko*'s superb images that the mouthparts are distinctive and the wing tips are infuscated. Keys in Krivosheina (1982), specimens amongst your sweepings near Aspen or other *Populus* spp..



Austria

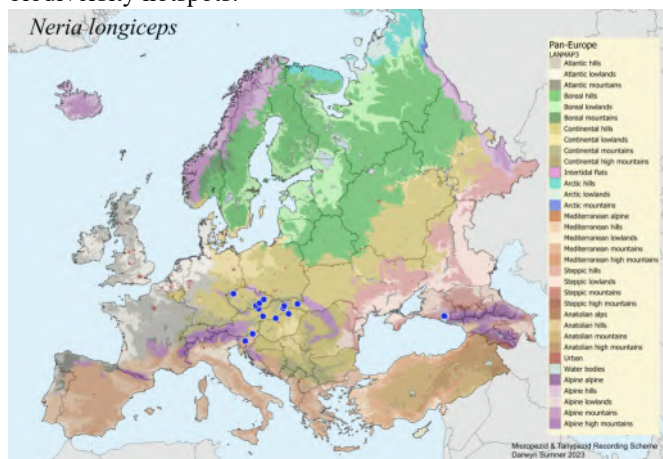
Neria longiceps (Long-headed strider)

An exceedingly rare species, so much so that only nine papers refer to it, and five of those are country checklists. There are no figures of the male genitalia to be found in any of them, however the striking appearance of the head serves to identify it.



Neria longiceps female [Gernot Kunz on iNaturalist]

Restricted to the Alpine-Carpathian corridor and the Caucasus biodiversity hotspots:



An Austrian checklist?

Considerable interest was shown by several Austrian dipterists in the above find by Gernot Kunz on iNaturalist, so much so that the discussion there (<https://www.inaturalist.org/observations/160211655>) resulted in them all chipping in with lists of species they knew from Austria. Validating them all and collecting them together for a list on the Scratchpad site is not feasible any longer but the potential exists for a most valuable paper in the future.

Palaeobiogeography

The Schizophora are the most recently evolved group of Diptera, recent DNA work can trace them back to 80-60mya. The Micropezidae arose soon after South America and Africa separated and probably before South America's connection to Antarctica (60-40mya) was lost (perhaps accounting for the presence of *Calycopteryx mosleyi* on the Heard Is. & *Badisis* in Western Australia.) Later, when Africa met Eurasia and various mountain ranges arose, the Calobatinae diversified in hotspots evidenced by the finding of an early Oligocene (25-23mya) fossil: *Calobata (Neria) rottensis* Statz, 1940, in Chattian lacustrine shale in Germany.

Intriguingly *Neria longiceps* seems to have stuck close to its origins in the Alpine-Carpathian corridor + Caucasus biodiversity hotspots whilst other Calobatinae have spread much further, across the Palaearctic with one getting across to the Nearctic and becoming Holarctic (*Cnodacophora stylifera*) whilst others may have diversified in the New World or their eastern Palaearctic progenitors are lost or undiscovered. Perhaps there are yet others awaiting discovery in the European hotspots.

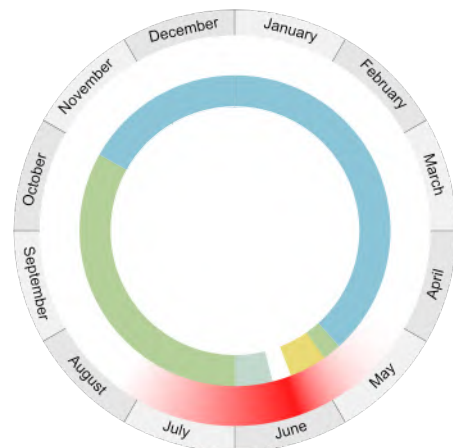
My [World Atlas of Calobatinae](#) maps them all.

G. Statz. 1940. Neue Dipteren (Brachycera et Cyclorhapha) aus dem Oberoligozän von Rott. Palaeontographica Abteilung A 91:120-174

Life-cycle investigations

For clues as to where the Micropezids & Tanypezids might be breeding it's difficult to do better than Peter Chandler's 1975 account of plant associations in the Psilidae. Though a number can be tracked down due to host-plant specificity (e.g. *Chyliza*, *Chamaepsila*) or fungi/tree associations (*Rainieria*), many are simply generalised feeders on decaying plant material in wet situations (not aquatic) such as riparian wetlands. Innumerable diptera species favour that life style so the chances of narrowing down any of the Calobatinae (for example) to anything specific are remote. By the time their larvae have dispersed in their favourite "soup" the chances that any extraction method will have of detecting them will be low, the same proportions as that of the adults amongst most other diptera in that particular habitat - and far less obviously identifiable.

Outer wheel: red = sightings of adults (*Neria* sp. UK)



Inner wheel immature stages: Blue = diapausing instar 3 larvae, green active instar 3 larvae, yellow = puparia. White = ova, pale green are the instar 1 & 2 larvae. Estimated from Barnes, 2016.

The above diagram shows a typical life-cycle, based on the research by Barnes. Much of the larval (inner circle) cannot easily be investigated but observations of adults may give clues. Ovipositing is rarely observed, mating pairs scarcely seen either. Early and mass emergences can be detected though, *Neria commutata* for example was observed freshly emerged in the UK this year (a hot June) on the 3rd, then in considerable numbers (>50) a week later with numbers declining only a little over the next few days. The opportunity to further study dispersal and life-cycles is feasible given well-timed observations of the adults in appropriate sites (<https://tinyurl.com/4y7eeprv>) where metapopulations can be located.

Chandler P.J. 1975. Observations on plant associations of the Psilidae (Diptera). Entomol. Rec. J. Var. 87: 13-17.

Rotheray G.E. 2016. Fieldcraft and closing the knowledge gap between immature and adult stages of Diptera Cyclorhapha. Dipterists Dig. Second Ser. 23: 85-96.

Barnes J. 2016. Biology and Immature Stages of *Compsobata univittata* (Walker, 1849) (Diptera: Micropezidae: Calobatinae).

iNaturalist projects



This Scheme's [iNaturalist project](#), set up in May 2020 is steadily growing. It now has 22 members, users signed up to keep an eye specifically on this group. By the end of June 2023 the number of observations across Europe had risen from last year's 1100 to 2620 and the list of species stood at 51.

The project is clearly encouraging more recording. More than 50% of UK (image) recording is now through this site. There has also been a good deal of positive feedback occasioned by my habit of providing a link to each taxon on my Scratchpad site when confirming an identity. Hopefully contributors go and read that before confirming my ID.

I'm indebted to Jocelyn Claude (France), Sam Rees (UK), Erikas Lutovinovas (Lithuania), Nikola Szucsich (Austria) & Jere Kahanpää (Finland) for showing an interest and helping to raise many to Research grade, a good example of the effectiveness of international collaboration. Thanks too to others such as Katja Schulz (USA) and Gernot Kunz (Austria) and several more for the many interesting and informative exchanges there.

Do participate by joining the project as a member, there are always many unconfirmed ("needs ID") records and plenty of creatures out in the field waiting for you to find.

A second (UK) project was set up in 2021:



Many thanks to those confirming my personal records so that I could process them through iRecord (and thus get them on to NBN Atlas). Thanks too to Jocelyn who stepped in to do the many trickier *Chamaepsila*

By the end of June there were 364 observations of 24 species via 151 observers, 55% of them identified by 53 identifiers. Membership rose to 6, presumably those in the UK with a particular interest in this group. Do feel free to join, every project you join shows up alongside your posted image so that you can see which Recording Scheme you've contributed to - join as many Dipterists Forum RS projects as you wish.

<https://www.inaturalist.org/projects/dipterists-forum>

I check the iNaturalist project pretty much daily (a bit like checking email but with the potential of exciting new discoveries) and that team of 53 identifiers do so somewhat less frequently. The records all get fed into iRecord, but images simply uploaded to iRecord alone are infrequently checked by their sole verifier. There's no team in i(Record)

Previous Newsletters

1. Stilt & Stalk Fly Recording Scheme [Newsletter 1](#)
2. Stilt & Stalk Fly Recording Scheme [Newsletter 2](#)
3. Stilt & Stalk Fly Recording Scheme [Newsletter 3](#)
4. Stilt & Stalk Fly Recording Scheme [Newsletter 4](#)

Identification Online keys

There are a number of methods of constructing dynamic online keys; some, such as Paul Beuk's online keys to Psilidae seem to be text and couplet based. Others are somewhat more complex to build as they are based upon weighted matrices of characters. One such was developed by the UK's Field Studies Council, the [FSC Identikit](#)

FSC's Biolinks Projects funding has ended and the project consequently discontinued. Thus some of the support facilities are no longer available and some links broken (e.g. the help forum) due to FSC's revision of their website and staff redeployment.

The GitHub pages at the above link still appear to be functional however and presumably the downloadable kit still operates. Developing such matrices results in a desktop version which can be endlessly modified then recompiled to produce a satisfactory key (see their [Opiliones key](#)). It can also be shared between collaborators. To make that key then available online requires that it then be hosted somewhere.

This scheme has developed two which FSC kindly hosted (and still do) since the Scratchpads were not suitable vehicles for such hosting.

They are as follows:

1. **European [Psilidae](#)**
An initial experiment so not as good as those of [Beuk](#) or [Withers & Claude](#)
2. **European [Micropeza](#)**
Adequate but the [Visual key](#) below is an improvement

A third one has now been begun:

3. **World Calobatinae**

Collaborators are invited, workers across the Holarctic may be contacted when any progress has been made. Many illustrations and images yet to be found or drawn and I'll need somewhere to host it to demonstrate a first version.

Visual keys

The following were included in previous newsletters:

1. Micropeza (European) in Newsletter 3
2. Loxocerini, Chylizinae (European) in Newsletter 4

Scheme Publications

Preprints: Though I've had offers from journals to publish items arising from this Recording Scheme, the decision to publish them as preprints on **ResearchGate** seems to have been prudent. Anything containing distribution maps or phenology reflects the state of knowledge at a particular point in time and so such fast publishing has proved valuable. The recent 20% increase in our UK records underlines this.

The following preprints are now accessible ...

- Sumner, D. P. (2018). Vernacular names: European Micropezids & Tanypezids (Diptera, Nerioida & Diopsoidea). Preprint, A 3(3 V2), 1–14. <https://doi.org/DOI: 10.13140/RG.2.2.10298.31688>
- Sumner, D. P. (2018). Observations on *Phytomyza orobanchia* Kaltenbach, 1864 (Diptera, Agromyzidae) and *Chyliza extenuata* Rossi, 1790 (Diptera, Psilidae), both new to Wales, on Ivy Broomrape (*Orobancha hederaceae*). Preprint, 1(2:V1), 7. <https://doi.org/DOI:10.13140/RG.2.2.31761.35686>
- Sumner, D. P. (2018). Biogeography, population dynamics and status of *Micropeza lateralis* Meigen, 1826 (Diptera, Micropezidae) in Europe. Preprint, 1(3 V1). <https://doi.org/DOI: 10.13140/RG.2.2.15823.00160>
- Sumner, D. P. (2018). European Atlas: Micropezids & Tanypezids (Diptera, Nerioida & Diopsoidea). Preprint, A 1(1 V5), 1–94. <https://doi.org/DOI: 10.13140/RG.2.2.34834.99529>
- Sumner D.P. (2021). Biogeography, Phenology & Status of Micropezids & Tanypezids (Diptera, Nerioida & Diopsoidea) in the UK. Dipterists Forum Report: Stilt & Stalk Fly Recording Scheme, A(11 V1), 48 <http://dx.doi.org/10.13140/RG.2.2.35312.38407>

The above ResearchGate preprints have been consulted widely by researchers and cited a few times.

Online: Updates to Atlases both European & UK as maps with occurrences as points, some extending to Palaearctic and Holarctic regions. Publishing online is no longer as feasible due to Scratchpad closures though most maps are available on this scheme's site. A Researchgate update to atlases may be possible in the longer term.

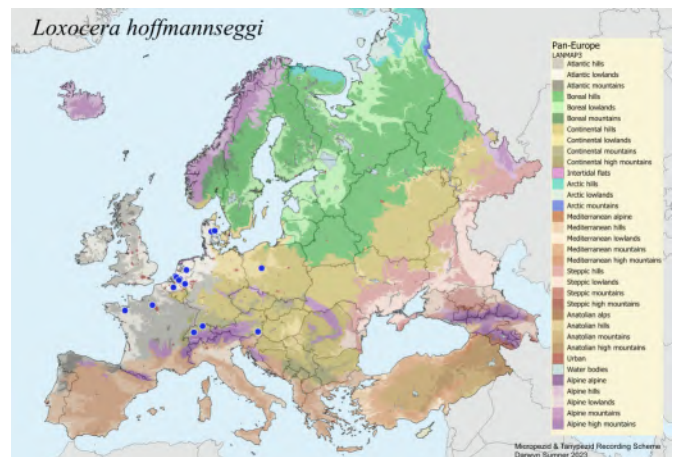
In prep. A number of keys and articles on the biology, ecology, biogeography, palaeogeography and morphology of various taxa, notably the Calobatininae & *Tanypeza longimana*.

Recent Publications

Claude J. & Beuk P. 2023. The Psilidae of the centennial Botanic garden Jean Massart (Brussels-Capital Region, Belgium): five new species of Belgian Diptera with an updated Belgian checklist. *Belgian J. Entomol.* 134: 197–203.

Milkowski M. & Tatur-Dytkowski J. 2022. Rediscovery of the Rust Fly *Loxocera hoffmannseggii* Meigen, 1826 (Diptera: Psilidae) in Poland. *Dipteron.* 38: 32–37.

In Polish. Some valuable habitat and occurrence observations, though lacking lat/long geospatial coordinates. The authors observe that Poland was omitted from *Fauna Europaea* (2013)*. Some Polish records are on iNaturalist (and GBIF) and the species is referenced in the European Atlas (Sumner 2018) and current work on this scheme's site:



The closure of the Scratchpad site did not allow any opportunities for the Polish author's records (not on GBIF) to be interpreted and included in the above map. Their map adds three more locations in Poland, one from a *Fauna Polski* paper (not Open Access).

**Fauna Europaea* is "outdated" (Martinez *pers. comm.*, 2023) and does not cite published sources of species occurrences which clearly extensively mismatch with published data (Sumner, 2018)

Scratchpads scratched

In many ways the ideal format for Recording Scheme websites the Scratchpads lost their support from the UK's Natural History Museum (London) much to the dismay of hundreds of site owners across the world. The sites themselves will remain functional to enquirers as usual but they will be frozen for continued amendment by their managers and operators.

Though alternative website templates (e.g forums, blogs, galleries) have been investigated, none provide the taxonomic backbone to such a complex content management system. Indeed rebuilding such a template may take years and a considerable amount of money. A small international consortium is currently investigating options amongst the biodiversity informatics community and though it may well be that a less sophisticated model of low cost may deliver around 80% of the capabilities of Scratchpads it is likely that a full implementation may take one or two big funders and some crowdfunding.

About the consortium

This "SOS" (Save our Scratchpads) group was initiated and led by John P. Sullivan (USA) and joined by many others, including 3 UK Diptera Recording Schemes, others studying fish, spiders, plants, beetles, myriapods and several others throughout the world together with a couple of developers and individuals involved in some pretty hefty international biodiversity informatics projects. The group, all anxious to explore possible ways forward so as to continue their research, has met several times and canvassed various

interested or involved parties. In the stories being told the picture emerged that Scratchpads were one component of a multi-million euros enterprise that achieved a great deal.

Sustainability was one budget element they overlooked though, one could hardly apply the term "successful" to an enterprise that recruits free amateur expertise then expects these unwaged naturalists to also shoulder the costs of their continued endeavours.

GBIF Forum discussion at <https://tinyurl.com/2p8xb3fz>

In the meantime this Recording Scheme has no alternative taxonomic content management website to transfer its focus to. Nor, given the short notice of 6 months to 1st September, is there any longer a place to store resources such as images, atlases & other biogeography, phenologies, bibliographies, newsletters, publications, keys and guides etc.

There remains one location though for any messages regarding progress: the **Project Journal** on this Scheme's iNaturalist project at <https://www.inaturalist.org/projects/european-micropezids-tanypezids>



Project Journal

News regarding sustainable solutions and free hosting costs (unwaged volunteer!) will ultimately be placed there. It's just a simple blog but it's an editable spot right now.

Countries and regions are thirsty for summarized data and insights for policy-making but we are running short of tools for managing the data (Martinez *pers. comm.*, 2023)

**Hoverfly
Newsletter**
Number 74
Autumn 2023
ISSN 1358-5029



Copy for **Hoverfly Newsletter No. 75** (which is expected to be issued with the Spring 2024 Dipterists Forum Bulletin) should be sent to me: David Iliff, **Green Willows, Station Road, Woodmancote, Cheltenham, Glos, GL52 9HN, (telephone 01242 674398), email:davidiliff@talk21.com**, to reach me by 20th November 2023. Given the size limitations it may be worthwhile to send your articles in good time to ensure that they are circulated with the bulletin, in which newsletters are restricted to a maximum of eight pages. My thanks to all contributors, and also to Martin Matthews for his meticulous proof-reading of the text.

The hoverfly illustrated at the top right of this page is a male *Dasytyrphus pinastri*

HOVERFLY RECORDING SCHEME

UPDATE: Spring 2023

Stuart Ball, Roger Morris, Joan Childs, Ellie Rotheray and Geoff Wilkinson

Progress to date

During the winter, Stuart took on the ongoing gargantuan task of incorporating 2022 data into Recorder. This is no easy process as it involves a lot of checking and cleaning of data (even though Roger does quite a bit of preparatory work before it gets to Stuart). Thus, by the spring, the dataset had grown to 1,731,931 records (Figure 1). As you will see, the numbers of records for 2022 are somewhat below those for 2020 and 2021 but that is to be expected because it takes quite a long while for records to arrive and they continue to build up over several years.

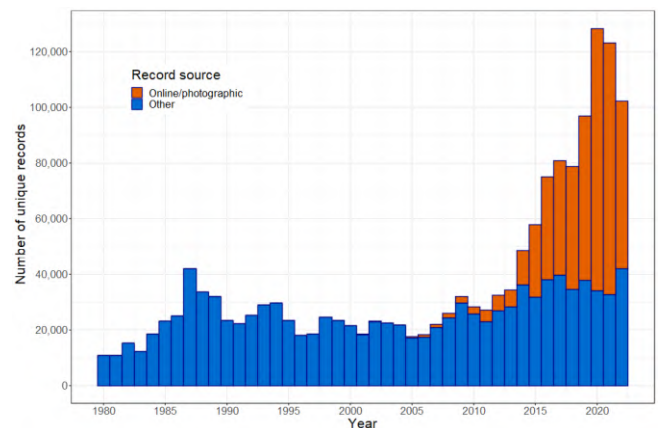


Figure 1: Number of unique records (i.e. unique combinations of species, grid reference and date) received per year from 1980 to 2022 also showing the number based on photographs and online submissions.

The number of contributors to the scheme has risen commensurate with the growth in records, as shown in figure 2. This growth is heavily influenced by the iNaturalist platform, which is dominated by individuals who submit occasional records.

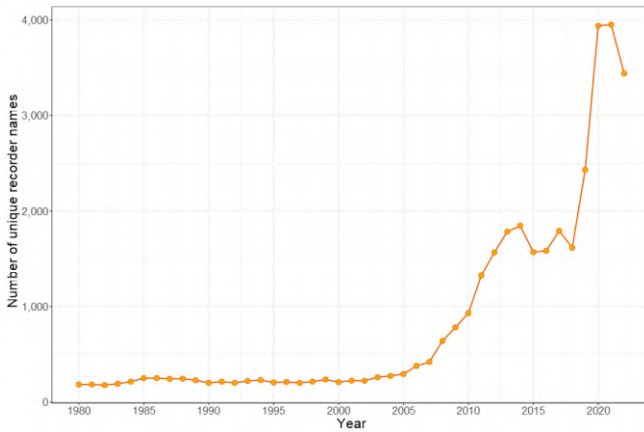


Figure 2: Number of unique recorder names from whom records were received per year.

Coverage is also very patchy, as illustrated in figure 3, which shows that a very high level of recording happens in a small number of places, predominantly in urban areas.

Looking at the levels of activity across the country it is clear that although recording effort varies hugely from hectad to hectad, most parts of England and Wales have been visited. The problem of coverage in Scotland is also obvious. There are far fewer centres of population and comparatively few recorders, so coverage is a lot weaker. It would be great to improve this situation so, if anybody is thinking of where to go on holiday next year, there are some obvious deficiencies in the dataset! Recording in Scotland is not terribly easy, however. In addition to the weather, species diversity is a lot lower and is dominated in many places by Bacchines and Chrysogastrines, which are best sampled by sweeping and often require microscopy to arrive at a reliable determination.

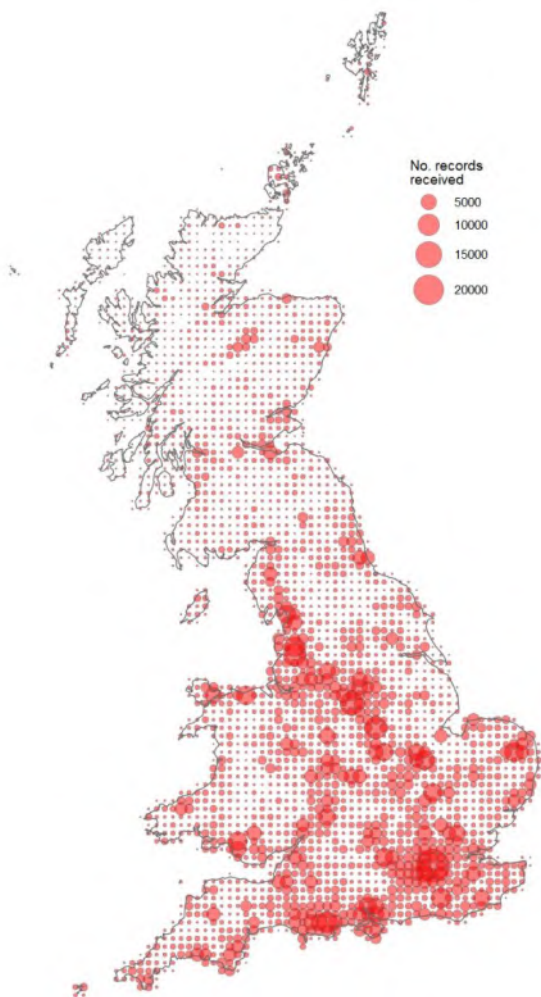


Figure 3: Coverage - the numbers of records received from each hectad.



Figure 4: Coverage - hectads from which records have been received categorised by the date of the most recent record. (the darkest spots relate to 2020 and beyond).

One of the questions lots of you might be asking is ‘it is all very well amassing all these records, but what do you do with them?’ This spring an obvious answer emerged: the data were fundamental to Dipterists Forum’s submission to the House of Commons Select Committee Inquiry into insect decline and food security. The picture is pretty depressing, as shown in Figure 5.

The reasons for this decline have yet to be agreed upon, but we are pretty convinced that the overriding modern driver is climate: a combination of heatwaves and droughts that are devastating for larval stages, especially those that favour humid places or wet soils. After all, a larva that lives in mud is unlikely to fare well if the water-body it inhabits dries up and turns into ‘concrete’. Unfortunately, the landscape in which this problem is most prevalent largely overlaps with areas of highest agricultural activities and consequently a link between agriculture and decline predominates the thinking of many observers. Dipterists Forum’s submission sought to highlight the issue of climate change; not least because it is likely to be affecting all aspects of ecosystem function. The DF submission can be viewed [online](https://committees.parliament.uk/writtenevidence/120837/pdf/) at <https://committees.parliament.uk/writtenevidence/120837/pdf/> together with the many others that came from other individuals and organisations.

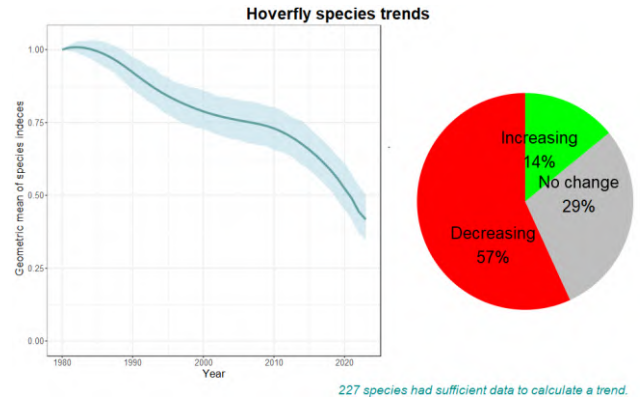


Figure 5: Summary of trends showing the geometric mean of index values calculated for each species and year and the proportions of species categorised as Increasing or Decreasing for 227 species where records were available in at least $\frac{2}{3}$ of the years covered (1980-2022).

Coverage for Ireland

During the winter, Stuart and Roger ran a training course in Belfast. As part of preparations for that event, Stuart prepared a set of maps and a checklist for Ireland based on one compiled by Tom Gittings (2020) but using names from the Checklist of Diptera of the British Isles compiled by Peter Chandler (July 2022 version). The document can be downloaded from the files section of the UK Hoverflies Facebook group. It is a one-off, as we do not hold Irish data and we forward data to the Irish Biological Records Centres when we have an accumulation of records (e.g. from the Facebook page).

A new WILDGuide

There have been a number of complications that have delayed the production of the latest edition of *Britain’s Hoverflies*. When it emerges, it will be a remarkable book with a massive increase in the numbers of photographs, a small increase in the numbers of species covered, and an expansion of the section on data usage. The timetable is currently unclear, but Stuart and Roger are working on it!

An alternative key to *Eristalis*

Roger Morris & Stuart Ball

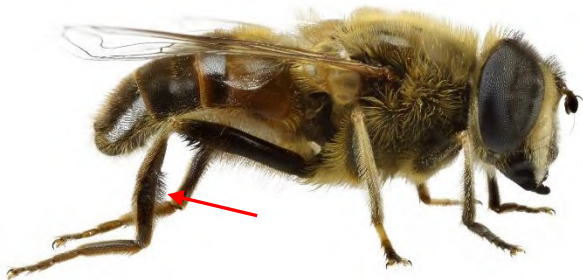
A little while ago, we published an alternative key to *Eristalis* in British Wildlife magazine. Clearly, we cannot republish the whole article here, but the basic key is something that really ought to be used by as many people as possible. For this purpose, we have slightly modified the text to simplify it and to address issues that have emerged subsequently.

Key to species

- 1 Front tarsi yellow/orange (occasionally muddy orange)*pertinax*
A large species that is often confused with *E. tenax*. For confirmation check the stigma which is long and well-formed for most of its length.
- Front feet all (or substantially) dark.....2



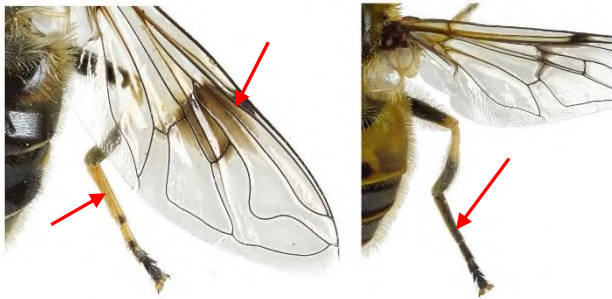
- 2 Hind tibiae completely dark, curved and slightly ‘feathered’; eyes with a thicker band of hairs giving appearance of a dark, vertical stripe.....*tenax*
A large species with a dark longitudinal band of hairs on the eyes and the central area of the face broadly undusted. Frequently confused with *E. pertinax*.



- Hind tibia partly pale, no dark band of eye hairs.....3
- 3 Hind tibiae partly black5
- Hind tibia completely orange*cryptarum*
A species that is restricted to a tiny area on the south of Dartmoor, so unless from that area any putative record should be checked with a specialist.
- 4 Hairs on sides of thorax below wings black, (sexually dimorphic, fury bumblebee and solitary bee mimic).....*intricaria*
Confusion is most likely with other bumblebee mimics but *E. intricaria* is the only one with partially pale hind tibiae.
- Thoracic hairs below wings pale. Hair more diffuse and main patterns created by coloured integument.....5
- 5 Sides of thorax and hind femora strongly dusted ashy grey *similis*
Quite a large species that may be overlooked amongst *E. tenax* and *E. pertinax*. Confusion with *E. nemorum* is possible but the stigma of *E. similis* is somewhat elongate.
- Hind femora lack dusting; thoracic pleurae weakly dusted. Generally smaller and more compact species.....6



- 6 Hind metatarsus pale. Wing with a strong, dark cloud, especially in female*rupium*
Beware, from some angles the downward pressed hairs on the hind tarsi of *E. horticola* can look deceptively pale. A northern and western species.
- Hind metatarsus dark. Wing with a less marked cloud..... 7



- 7 Stigma sharply defined almost quadrate*nemorum*
A very tricky character that is best interpreted in conjunction with a view of the face, which has a clearly defined central undusted stripe.
- Stigma more extended, even if as gradually diffused marking 8
This character can be very problematic and deceptive – there is no easy resolution of the problem.

- 8 Mid tibiae at most obscurely darkened at apex (usually clear yellow). Arista short-haired.....*abusiva*
View from the side, as viewing from the top-down may be confused by reflections from golden dusting on the legs.
- Mid-tibiae extensively darkened at apex. Arista with long radial hairs 9
The colour of the legs can be misinterpreted from some angles, especially obliquely from above and is best interpreted from in front or from side views. Beware the radial hairs of the arista can be worn.



- 9 Facial stripe at most weakly developed, normally completely dusted. Hind metatarsus inflated.
..... *arbustorum*
The face is normally dusted but as the fly ages, rubbing may a thin, uneven stripe or undusted areas. Note that in other small *Eristalis* the hind metatarsus is somewhat inflated but not as prominently as in *E. arbustorum*. This character cannot be used to separate *E. arbustorum* from *E. nemorum* or *E. abusiva*.
- Strong facial stripe. Hind metatarsus no thicker than the end of the tibia when viewed from the side. Wings with well-defined area of dark infuscation *horticola*
The extent of infuscation on the wings can vary and can be misinterpreted from oblique angles, especially face-on.



At long last: *Eristalinus aeneus* recorded in Gloucestershire

David Iliff

When I was appointed the first Hoverfly Recorder for Gloucestershire in 1984 I decided to treat the area to be covered as “Greater Gloucestershire” comprising the whole of VC 33 (East Gloucestershire) and VC34 (West Gloucestershire) and the whole of the present counties of Gloucestershire and South Gloucestershire (even those areas that were outside those two vice-counties). By the end of 2022 the database of Gloucestershire hoverflies contained nearly 30,000 records and the species list totalled 208. When I began recording I noticed that the species *Eristalinus aeneus* did not appear in the records (which date back to the middle of the 19th Century). This hoverfly is of course predominantly found on or near the coast in Britain – I have seen it on the south coast and at the Thames Estuary – with a small number of inland records, but I was surprised that it had not been found in Gloucestershire, particularly at sites close to the Severn Estuary, and assumed that eventually it would appear, but to my amazement none were found even up to recent weeks.

On 3rd July 2023 John Widgery saw and photographed a male *Eristalinus aeneus* that was nectaring on marjoram flowers in his garden at Woodmancote SO9627. Ironically this first county record is well away from the usual coastal sites, but John commented that the hoverfly might have been blown inland on very strong winds that had occurred during the previous night in the Bristol Channel (which had resulted in unprecedented numbers of Manx Shearwater being seen up as far as the lower reaches of the Severn).



Eristalinus aeneus male (Photo: John Widgery)

Photo archive for the early stages of Hoverflies

Geoff Wilkinson, Stephen Suttill and Nicola Garnham

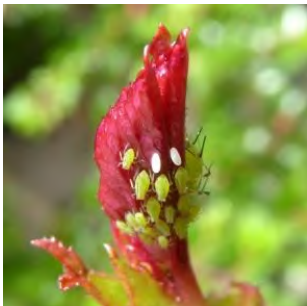
We at the UK Hoverflies Larval Facebook Group have started to collect original, un-cropped images of Hoverfly early stages (eggs, larvae, and puparia) and of associated habitat (e.g., sap runs, aphid colonies) for an image archive. The idea is to have stock images available for identification guides, teaching material and for other awareness raising media. Whilst there is good coverage of the adult stage (e.g., Steven Falk's Flickr account), there is very little available for the comparatively poorly studied immature hoverflies. That is what we seek to change!

At the moment, we are storing images in Dropbox until Dipterists Forum has arranged a more suitable storage system. So far we have 190 images of 20 taxa and their habitats. But we still have a very long way to go! If you would like to contribute to this project, then please do get in touch via the Facebook Group or email smsuttill@gmail.com.

Stephen Suttill has been our point man on the Facebook group and has done a great job in securing original images and permission for their use from members who have been posting some fantastic photos in the group.

We would like to thank the following contributors for permission to use their photographs:

Andy Marquis, Brian Little, Calum James Paterson, Ellie Rotheray, Geoff Wilkinson, Nicola Garnham, Rob Wolton, Stephen Hewitt, Stephen Suttill, Tony Enticknap and Tony Mathews.



Aphids and hoverfly eggs on rose
Photo: Stephen Suttill



Microdon analis puparia
Photo: Tony Enticknap



Parasyrphus nigritarsis larva with Alder Beetle eggs
Photo: Stephen Suttill



Syrphus sp. larva
Photo: Tony Matthews

A Test key to female *Sphaerophoria*

Roger Morris

This key has been adapted from Haarko & Kerppola (2007) and Bartsch (2009). It has not been tested and requires detailed effort from couplet 6 onwards; moreover, I suspect that the final couplet will cause a lot of problems. However, it seems logical to get feedback on experience so that it can be revised and developed to the point where a wider audience can use it. So please give it a go! I will see what can be done about illustrating it in due course.

- 1 Yellow thoracic marginal stripe interrupted.....2
- Yellow thoracic marginal stripe complete.....3
- 2 Antennae black or dark brown.....♀ *loewi*
- Antennae yellow.....♀ *rueppellii*
- 3 Second basal cell substantially free of microtrichia (<50%). Posterior under-side of hind femora with a row of small spine-like hairs and a narrow almost hairless stripe on the posterior face.....♀ *scripta*
Second basal cell more than 60% coverage of microtrichia. Posterior side of hind femora mainly covered with hairs.....4
- 4 Second basal cell 20-40 % bare; markings on tergites 2-4 normally form an uninterrupted band... 5
- Second basal cell almost completely covered with microtrichia. Markings on tergite 2 normally separated by a central dark section. Markings on tergites 3 & 4 either uninterrupted or separated centrally8
- 5 Black band along hind margin of tergite 5 almost of constant width. Tergite 6 as broad as tergite 5 and much broader than tergite 7♀ *taeniata*
- Black band along hind margin of tergite 5 lobed on both sides. Tergite 6 narrower than tergite 5 and slightly broader than tergite 76
- 6 Hairs on sternites predominantly yellow; wing about 40% bare of microtrichia7
- Hairs on sternites extensively black; wing about 20% bare of microtrichia♀ *virgata*
- 7 Lateral margins of tergites 3 & 4 almost completely black.....♀ *batava*
- Hairs on tergites 3 & 4 pale in the anterior half.....♀ *philantha*
- 8 Sternite 3 broader than long..... 9
- Sternite 3 longer than broad ...♀ *bankowskiae*
- 9 Face with distinct broad dark longitudinal stripe; tergites 3 & 4 with large spots tapering towards and barely reaching the margins.....♀ *interrupta*
- Face yellow or with a narrow brown medial stripe; tergites 3 & 4 with narrow spots tapering towards the margins, barely reaching the margins 10
- 10 Hind corners of sternite 3 usually with no more than a few black hairs♀ *fatarum*
- Hind corners of sternite 3 usually with 20-30 black hairs..... ♀ *potentillae*



Cranefly News

The Dipterists Forum Cranefly Recording Scheme

For Superfamily Tipuloidea & Families Ptychopteridae & Trichoceridae

Newsletter No 41

Autumn 2023

Editor: John Kramer



Helius. Male genitalia. Photo. M. Ackland

Alan Stubbs MBE !!!

Many congratulations to Alan on being awarded an MBE for services to invertebrate conservation. (See the 'News' section on the 'Buglife' website for the citation.) It would have been very appropriate had he been awarded another one for making Diptera much more accessible to the general population. Without public involvement, attempts to interest politicians in conservation are wasted. Alan's very significant contribution to our community of Dipterists is covered elsewhere in this Bulletin and is evidenced by the 3 volumes of British Flies, the existence of the Recording Schemes, and of the Dipterists Forum itself.

Alan has been working on Craneflies for over 55 years now and so it is very appropriate for the Cranefly Recording Scheme and Cranefly News to signify his National recognition. Over this time he has provided help and encouragement to many beginners (including the Editor), records for the BRC and very many publications from 1967 to the present day. The Cranefly Recording Scheme (CRS) was launched in March 1972 with record cards produced by the Biological Records Centre (BRC) where John Heath was in charge. Alan published the first hand-crafted dot maps of the Ptychopteridae in the Entomologist in 1972. In 1972 the first new crane fly keys were published by Alan in the Amateur Entomological Society Bulletin. Also authored by Alan, the BRC published an Atlas of the long-palped crane flies (Tipulinae) and of the Ptychopterid Craneflies in 1992 – 3.

The publication in 2021 of British Craneflies was a fitting culmination of Alan's work until then. Perhaps Alan's next book on crane flies will be about the Ecology & Behaviour of British Crane Fly Larvae? If we are to understand and predict the effect of the environment on crane flies, and the effect of crane flies on our environment, it is the larvae that we must study, and the first task is to identify them

References

Alan Stubbs 1990 The beginning of Diptera recording schemes in Britain. Dipterists Digest first series. no. 6. Available on the Dipterists Forum website)

Alan Stubbs, 2021. British Craneflies. BENHS

Also see Cranefly News #40 for the history of the CRS, and 'British Craneflies' for a list of Alan's publications.

Craneflies and Light – Tipulidae.

Geoff Hancock has recently sent me a paper based on some work he did on the Craneflies of Leighton Moss, Lancs. Geoff used a light trap samples of the crane fly fauna from over a period of 7 months in 1972. His results for the Tipulinae are shown in red below. To this I have added in green print, or underlined, those species reported in Cranefly News #40 as having been caught at light. (Thanks also to Rob. Wolton who sent me a list of his MV trap results. These have also been included.)

TIPULIDAE - TIPULINAE

Prionocera pubescens
Prionocera subserricornis
Prionocera turcica

Nephrotoma aculeata
Nephrotoma analis
Nephrotoma appendiculata
Nephrotoma cornicina
Nephrotoma crocata
Nephrotoma dorsalis

Nephrotoma flavescens
Nephrotoma flavipalpis
Nephrotoma questfalconi
Nephrotoma lunulicornis
Nephrotoma quadrifaria
Nephrotoma quadristriata
Nephrotoma scurra
Nephrotoma submaculosa
Nephrotoma sullingtonensis

Nigrotipula nigra

Tipula (Acutipula) fascipennis
Tipula (Acutipula) fulvipennis
Tipula luna
Tipula maxima
Tipula vittata
Tipula (Beringotipula) unca
Tipula (Dendrotipula) flavolineata
Tipula (Lindnerina) bistilata

Tipula (Lunatipula) alpina

Tipula cava

Tipula fascipennis

Tipula helvola

Tipula laetabilis

Tipula livida

Tipula lunata

Tipula peliostigma

Tipula selene

Tipula vernalis

Tipula (Mediotipula) sarajavensis

Tipula siebkei

Tipula (Odanatisca) nodicornis

Tipula (Platytipula) luteipennis

Tipula melanoceros

Tipula (Pterelachisus) irrorata

Tipula luridorostris

Tipula mutila

Tipula pabulina

Tipula pseudovariipennis

Tipula submarmorata

Tipula truncorum

Tipula varipennis

Tipula (Savtshenkia) alpium

Tipula cheethami

Tipula confusa

Tipula gimmerthali

Tipula grisescens

Tipula holoptera

Tipula invenusta

Tipula limbata

Tipula obsoleta

Tipula pagana

Tipula rufina

Tipula serruliferra

Tipula signata

Tipula staegeri

Tipula subnodicornis

Tipula (Schummelia) variicornis

Tipula yerburyi

Tipula (Tipula) oleracea

Tipula paludosa

Tipula subcunctans

Tipula (Vestiplex) hortorum

Tipula montana

Tipula nubeculosa

Tipula scripta

Tipula coeruleascans

Tipula (Yamototipula) couckeii

Tipula lateralis

Tipula marginella

Tipula montium

Tipula pierreii

Tipula pruinosa

It can be seen that a wide variety of *Nephrotoma* and *Tipula* have been caught at light (coloured print) and those records that are missing (black print) are from the rarer and more local species. This evidence supports the hypothesis that all the Tipulinae are attracted to light. Evidence for Tipulidae species not recorded above from light traps would be gratefully received. Geoff noted that no species of Ptychopteridae were recorded in the light trap samples although *P. albimana* and *P. contaminata* were trapped by Rob Wolton.

References:

Boardman, P. & Davies, R. 2023. Crane-fly training and Crane-flies to light. Crane-fly News #40.

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Kramer, J. 2023. Light trapping in Leicestershire - VC 55. Crane-fly News #40.

Showers, J. 2023. Light trapping in Northants – VC 32. Crane-fly News #40.

Species to be added to the Key to British Crane-flies.

Since British Crane-flies went to press we have had a number of possible additions to the British list, all of which need to be added to the Crane-fly Key. One such possibility is *Helius calviensis* Edwards 1928 (See below). Others dealt with in previous issues of Crane-fly News are: *Atypophthalmus umbratus* [CN #39 Autumn 2022], *Dicranomyia radegasti* Stary 1993 [CN #37 Autumn 2021], and *Achyrolimonia neonebulosa* [CN 35. Spring 2020. Also see Crane-flies in Glasshouses, below]. This latter species was discovered from a hothouse plant but it has escaped into natural biotopes in the Netherlands and may well do so here.



Do we have Helius calviensis in Britain ??

Our French colleague, Clovis Quindroit, has reviewed the genus *Helius* in France and found that *Helius calviensis*, described by F.W. Edwards (Edwards 1928) from Corsica, is widely distributed in western France and fairly common. He identified *H. calviensis* from a photograph of genitalia taken by the late Michael Ackland, from Pymore Fen, Dorset, VC9, present on CCW as *H. longirostris*. It was presumably identified by Michael because it had a pale stigma and dark rostrum.

[Catalogue of Crane-flies of the World (CCW): <https://ccw.naturalis.nl>] Clovis also suggests that *Austrolimnophila latistyla* may also be found in Britain. Alan Stubbs, who has taken *Helius calviensis* on Corsica, has contributed the piece below.

The potential occurrence of Helius calviensis in Britain. Alan Stubbs

The genus *Helius* is characterised by a long proboscis or rostrum which is bluntly truncated at the apex. The British fauna has long been known to contain three species, *flavus* (Walker), *longirostris* (Meigen) and *pallirostris* (Edwards 1928). It was something of a surprise when *Helius hispanicus* (Lackschewitz) was found on a coastal cliff in the SE Devon (Stubbs, 1992) and this was added to the British list. It was formerly a species assumed to be confined to the Iberian peninsula.

Helius calviensis was discovered at a riverside marsh in NW Corsica (Edwards, 1928). In the decades since then the distribution of this species has become much better known, embracing Iberia, the west Mediterranean including Algeria and Tunisia, as well as the Balkans, North Caucasus and Turkey. However, it was not reported from mainland France until 2021 (Quindroit, et al., 2021). In a review of the French fauna of *Helius*, a distribution map shows that *calviensis* occurs in NW France, including Brittany. In France at least, it is typically found in the company of *longirostris*.

H. calviensis has a very dark stigma. The only other such species is *pallirostris*, a very localised species and often accompanied by *longirostris*. Thus, we might in the past, have assumed all dark stigma *Helius* must be *pallirostris*, as per British keys, and not recognised this 'misfit' species. Notably, Quindroit does not suggest that *calviensis* and *pallirostris* have been found to occur together, but perhaps that possibility cannot be ruled out. Almost certainly *pallirostris* remains the correct identification of most, and probably all British records but caution is necessary. It is well worth checking the colour of the rostrum of all specimens with a dark stigma.

Key differences to specimens of *Helius* with a very dark stigma

Both species, are brown-bodied, and *pallirostris*, at least, is fairly dark. Both species are unusual in having 3 dark stripes on top of the thorax.

H. calviensis: Proboscis (rostrum) **entirely dark**. Inner end of stigma only very slightly beyond level of end of Rs (where it then forks); stigma a bit less compact. Median thoracic stripe strong but the sublateral ones usually fainter. Male genitalia very similar to that of *flavus* (p. 146, *British Craneflies*).

H. pallirostris As its name implies, the proboscis (rostrum) is **pale yellow**, only apex narrowly dark. Inner end of stigma beyond level of end of Rs by at least length of stigma; stigma very compact, about as long as wide. All 3 thoracic stripes strong. Male genitalia highly distinctive (p. 146, *British Craneflies*).

References

Edwards F.W. 1928. The nematoceros Diptera of Corsica. *Diptera*, **iv** (4) : 157-189.

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Alan Stubbs [alan.stubbs@Buglife.co.uk]

***Phalacrocer* replicata at Yardley Chase SSSI. Graham Warnes**

A Pond net survey was carried out of a Woodland Pond (ref. unit 17, C7/2) at Yardley Chase SSSI on 17th March 2022. The pond was located in Northampton & Buntingsea Copses, broadleaved, mixed and Yew Lowland Woodland of 64.5 ha.

Environmental data

Conductivity 588 µ/ water temperature 12.9°C, ph 7.5/ water temperature 13.0° (Hanna Instruments pocket testers, accuracy ±0.1) Air temperature 12.0°C, cloud cover 20-30%, no rainfall, strong breeze. During the survey, I caught three late instar larval specimens of the cranefly *Phalacrocer replicata* and a single pupal record by hand sieve from the margins of a floating moss mat. The moss mat is a mixture of *Drepanocladus aduncus* and *Calliergonella cuspidata*, set amongst young willow. The *P. replicata* pupal record is the earliest recorded on the Yardley Chase site.



Image 1. The habitat of *P. replicata*

The pupal voucher specimen was retained in a petri dish on a damp mixture of *D. aduncus* and *C. cuspidata* at an air temperature of 7-10°C. On 23/03/2022, an adult female *P. replicata* emerged between 08:16 and 11:35 am.

In surveys at a second site, approximately 1 mile to the south, larval and pupal specimens were recorded from the margins of a woodland pond that is amongst a mixture of *C. cuspidata* and *Leptodictyum riparium*. However, the final instar larvae and pupae recorded at this location were in the month of August 2021, the last pupae record being 21/08/2021. The above mosses suggest wetter locations with *D. aduncus* considered an aquatic moss, however, the named specimens can stand drying out and are fairly tolerant of eutrophication.

All voucher specimens of moss collected have been checked and confirmed by Dr Rachel Carter, VC32 Bryophyte recorder and former secretary to the British Bryological Society (BBS).

Rachel has said that she is currently unaware of a Northamptonshire location for *Sphagnum* moss as a recent survey of the last known site recorded no specimens. Rachel believes *Sphagnum* moss to be extinct in the county, and the nearest possible location for it is perhaps Flitwick Moor, Bedfordshire.



Image 2: *P. replicata* pupal case – post emergence

Image 3: *P. replicata* pupal case showing emergence point.

***Tipula (Vestiplex) hortorum* Meigen - the fourth Scottish record. E.G. Hancock**

During Malloch Society excursions in late April 2022 in the Nethy Bridge area, Inverness-shire, a male example of *Tipula hortorum* was collected on the edge of Craigellachie NNR (NGR: NH887124), 29.iv.2022. The purpose of this note is to assess the existing known occurrences in Scotland and correct an earlier record of this species. The NBN Atlas for this species has three Scottish records, the earliest of which is dated 16 March 1964 recorded from 20 Km S of Mallaig at side of main road to Fort William by P.R. Bailey (who lived in Orpington, Kent, one of the first members of the CRS from the 1973 membership list). No further detail is given. Another dot on the map is from Threave, near Castle Douglas, Dumfries & Galloway (Dobson, 1973). Ron Dobson, also in the first membership list using his University of Glasgow address, recorded *hortorum* from two suction trap samples dated between 19 May - 16 June 1967. Note the event date of 29 November 1972 given in the Atlas appears to be the date of publication of the journal. Dobson (1973) commented that *hortorum* was apparently a rare species in Scotland and referred to only one other record known to him from Luss on the west side of Loch Lomond but with no further data. This record has not been incorporated into the NBN Atlas possibly due to a lack of more tangible support.

The third NBN Atlas record is of a female from the slopes of Ben Vrackie, Perthshire on 28 June 1986 and is credited to me. However, it is incorrect as the specimen is an example of *T. (V.) scripta*. In addition to the late date the habitat is not normally where *hortorum* is found. I have established how this happened as my field notebook has an entry for that trip and there is an entry corresponding to this record. However, on examining the specimen in the Glasgow city museum's collection (I deposit vouchers in the various museums I was working in at any one time) it is labelled *scripta*! I think I must have filled in a BRC Field Card to send off that year's records and forgotten that it had been corrected. *Mea culpa!*

To summarise, there are thought to be four valid records of *T. hortorum* in Scotland, two of which are in NBN Atlas but which has a third incorrect submission. The two others from Luss and Aviemore and are not mapped.

References

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E.G. Hancock

New Records of *Nephrotoma sullingtonensis* Edwards 1938 – John Kramer

This crane fly has for me an almost mythological status, like a mermaid or goblin. Four male and three female specimens were brought by chance to F.W. Edwards at the BM (Natural History) in 1936, having been collected by Miss L. Frederick and Miss H. Wright on Sullington Warren (TQ0914) on 27th June 1936. It is difficult to know why they gave them to Edwards, but they probably didn't say 'We thought these were *Pales maculata* (as *N. appendiculata* was then called) but they don't look quite right to us.' However, we will never know. These specimens are in the collection in the Natural History Museum, but, as far as I know, these are the only British specimens available.

The next record was made by M. Edwards also on Sullington Heath, on 4th June 1983, and another by J. Paul on 10th May 2001. It would appear that no voucher specimens were taken. I have yet to make contact with 'J.Paul' to confirm this, so if anyone can help, I'd be grateful.

I have recently heard from Graeme Lyons that this year on 28 April 2023 there were another sightings of this elusive fly on Wiggonholt Common, (TQ058161) which is near Sullington Heath, although not continuous with it. Graeme writes: *Yesterday, while doing some intense recording for City Nature Challenge at Wiggonholt Common at TQ058161, I found large numbers of a Nephrotoma, most of which were in pairs (from memory, something like 15 or more – they were everywhere),*

I took two males and they were the same species. It keyed to *N. sullingtonensis* and the genitalia match too. The insects were very much around the Heather to the north of the site, I didn't see them to the south in the wetter area dominated by *Molinia* and birch. I have two males in alcohol that I will send to whoever wants them, but if anyone else could get there, they could find many live adults right now I am sure. It was that common!

I let Alice Parfitt know, so that she could look for them on Sullington Heath. Given how many there were, could it be that this species has a much earlier flight period than previously thought. I later heard from Alice that, although she did not find it at Sullington Heath, it was present at Hurston Warren, so that is another new site for the record books.'

Have all these sites got the same sandy soil I wonder. At Sullington Heath *Tipula cava* was common, in this, its typical habitat. *N. sullingtonensis* is distinguished, in the first place from *N. appendiculata* by having dark stigma spots (but no dark seams) and the three black stripes on the yellow thorax are merged for a short distance.

John Kramer

***Austrolimophila ochracea* (Meigen 1804)**

I received the letter below from our French colleague Clovis Quindroit, which I sent out to members of the CRS at the beginning of the season, however, Clovis would still appreciate specimens in cop, if you have any.

Dear fellow tipuloid-ologists, I am currently working on separating females of Austrolimophila ochracea (Meigen 1804) and A. latistyla Sary 1977, which are, as yet, undeterminable at species level. (The latter species is really common in all France, and might be found in Great Britain.) In order to do so, I am looking for specimens of the two species in copula. In my area, A. latistyla dominate, but I have not been able to get A. ochracea in copula, this is why I am asking for specimens from the UK, either in alcohol or dry. Copulation is easy to achieve by putting a male and a female in the same box. They usually copulate within 15 minutes.

Please send pairs of specimens to this address:

Clovis QUINDROIT
6 av. Iareveillère
49240 Avrillé
FRANCE

For any question: clovis.quindroit@tutanota.com

*If you collect in France during your holidays, I'll always be interested in your data on all Tipulomorpha.
best wishes, Clovis QUINDROIT*

Baron C.R. Osten Sacken 1828-1906. John Kramer

After my item on Osten Sacken's work on Crane flies in the last issue of Crane fly News #40, Spring 2023, Geoff Hancock was good enough to alert me to the sale of the book 'Record of my Life Work in Entomology' by Baron C.R. Osten Sacken (OS). This was first published in parts in 1903-04 in Massachusetts, USA, and Heidelberg Germany. In 1977, E.W. Classey Ltd. Published a facsimile copy of this work in one volume, with an introductory preface by K.G.V. Smith. I learnt of the existence of this book from Phil Withers who had a copy and recommended it to me, so I am very pleased to read it now.

Reading it not only gives you glimpses into the working conditions and mind of OS but also sheds light on interesting times in dipterology. His descriptions of the personalities he met and worked with, reminds me of John Aubrey's book, 'Brief Lives'. Thus: *It is a strange coincidence that Walsh, Riley and Walsh's successor as State Entomologist of Illinois, Le Baron, all met with a more or less unnatural death: Walsh from a railway accident, Riley from a fall with his bicycle and Le Baron from the consequences of sunstroke* Read this if you want to know about Loew's quarrel with Schiner, Osten Sacken's opinion of Brauer and Mik, or Miks relationship to Brauer !!

Crane flies in Glasshouses – John Kramer

[This article was published in the digital version of Crane fly News #40 and is repeated here to obtain a wider readership.]

***Atypophthalmus umbratus* (de Meijere 1911)**

This species is noted in 'British Crane flies' as captured in 1987 by Alan Stubbs and seems like a new addition to the British List (British Crane flies p350) but it was not included in Peter Chandler's RES Checklist of British Diptera published in 1998, Specimens were discovered in a hot house in Kew Gardens in and they are reported as last seen in 2002. It is one to look out for at Kew, and other similar hot houses where plants from hot tropical regions are grown. The Dome at the Eden Project, Cornwall, might be another site to search. It is recorded as pantropical in the Palaeartic Catalogue. The type locality is given as Djakarta, Indonesia, and it has been recorded in Asia and Israel. If anyone has any information, or any British specimens, there is a paper waiting to be written !!

Figures of *A. umbratus* (see below) are from Catalogue of Crane flies of the World [<http://ccw.naturalis.nl>]



Fig 1

Fig 2

Fig. 3

Figs 1&3. *Atypophthalmus umbratus*. Photo M. Andersson, Gothenburg, Sweden. Specimen in greenhouse in Botanical Garden. Fig. 2: *Atypophthalmus umbratus*. Male genitala: Byers 1966.

***Achyrolimonia neonebulosa* (Alexander) (Diptera, Limoniidae) – a new crane fly for the British List** – On 25 September 2019, photographs of a male specimen of *Achyrolimonia neonebulosa* (Alexander, 1924) were posted on the Dipterists Forum website by MJ (Fig. 1). The adult fly had emerged from the pupa (Fig. 2) on 24 September in Bradwell (V.C. 25, East Suffolk, TG5004) from the compost of a plant pot containing an imported plant of *Sarracenia* (a carnivorous pitcher plant) which was purchased from South View Nurseries, Beccles Road, Fritton, Great Yarmouth (V.C. 25, TG4801) on 29 August 2019.



Achyrolimonia neonebulosa: male genitalia

Fig. 2, pupa (Photos MJ)

Figs 1, Figs 3, *A. decemmaculata* (Photo JK).

The assumption is that the larva must have been present in the compost which was imported from the Netherlands, although there are a number of other logical possibilities. It is worth noting that the first Dutch record in January 2005 was from a glass house in Naaldwijk used for growing orchids (Oosterbroek, P. 2009. New distributional records for Palearctic Limoniidae and Tipulidae (Diptera: Craneflies) mainly from the collection of the Zoological Museum, Amsterdam. *Zoosymposia* **3**, 179-197). The section where the carnivorous plants are housed in South View Nurseries also houses orchids and so *A. neonebulosa* may be established there, and in other nurseries, and be populating other pots as well.

The specimen was identified from the male genitalia which contrast strongly with the established British species, *A. decemmaculata* (Loew, 1873) (Fig. 3). The wing pattern is similar to *A. decemmaculata* (Figs 5-6) and it is well worth examining the genitalia of any specimens previously identified as *A. decemmaculata* (Fig. 5) in case there has been a misidentification.



Fig 5. *Achyrolimonia neonebulosa* wing (Photo MJ).



Fig. 6. *Achyrolimonia decemmaculata* wing (Photo JK).

This is the first British record for this species, which in nature inhabits woodland. It has a very widespread (Holarctic) distribution, and records range from the United States (Massachusetts) across Europe and Asia to China and Japan.

References.

- Stubbs, A.E. 2021 British Craneflies (p350) BENHS
- James, M. & Kramer, J. 2020. New Cranefly for the British List. Cranefly News #35

Is this specimen of *Erioptera* a hybrid, a variant or a new species? A question from Martin Harvey



Erioptera flavata (Janet Graham):
<https://www.flickr.com/photos/130093583@N04/32346322066>



Erioptera nielseni (Esko Viitanen):
https://eskoviiitanen.fi/erioptera_nielseni.htm

Two versions of the same *Erioptera* sp. from Crymlyn Bog, south Wales (Martin Harvey)

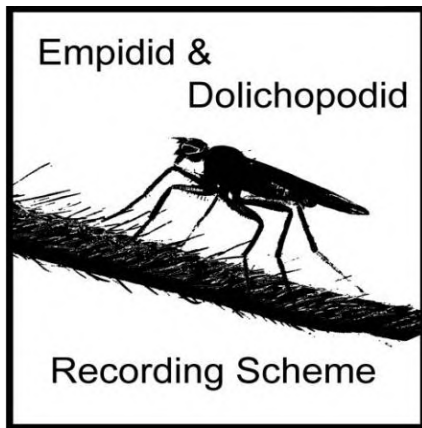
The central photo was taken by Martin Harvey of the styles of a specimen of a yellow *Erioptera* captured on Crymlyn Bog during the Dipterists Forum Summer Field Meeting (8-15 July) this year. The adjacent photos are of the male genitalia of two species nearest in form, both of which have been recorded from the bog. The upper style is closer to *E. nielseni*, although with the point midway instead of at the lower edge. The lower style seems closer to *E. flavata*, with a thickening of the upper angle, although there is no spine.

I think we will have to leave this question hanging in the air, but if members have specimens of yellow *Erioptera* from Crymlyn Bog it would perhaps be worth examining them. Typical *E. flavata* are very distinct, with a strong orange-yellow colouration and the styles can usually be clearly seen with a hand lens. The paler *E. nielseni* are the ones to examine more closely.

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Thanks to all contributors.



Newsletter No. 28

Autumn 2023

Tachydromia - a gateway drug to the Hybotidae

Stephen Hewitt

The genus *Tachydromia* has the attraction of being fairly easy to recognise, not too difficult to find in the right places, containing enough species (15 in Britain) to make things interesting but not so many as to make the key cumbersome to use. Their autecology is interesting, and they occupy a sufficiently diverse range of narrowly defined habitat niches to make them useful indicator species in some cases. These attributes make the genus an interesting group to study and a good introduction to the wider Hybotidae family.



Tachydromia umbrarum on a tree trunk

Tachydromia larvae probably develop in damp soil, leaf litter or wood-mould, where they are assumed to be predaceous. The adults are opportunistic predators, actively running over bare substrates in search of small invertebrate prey, such as springtails and small flies including Sciarids and Cecidomyiids. They are most often found in sheltered, sunny or lightly shaded situations, often close to wetland of some sort. Several species are associated with exposed riverine sediments (ERS) of different grades from fine sands to coarse shingle, others occur on bare sand or gravel away from rivers or are typically found running on tree trunks at woodland margins or over the leaves of herbaceous plants in various situations, including urban gardens. *Tachydromia* are under-represented in sweep net samples because of their tendency to run on firm surfaces and their reluctance to fly. As a result, it

is more effective, and satisfying, to search for them directly on their preferred substrates. One then has the challenge and frustration of trying to directly poot these fast-running insects without causing them to fly off and often getting a pooter-full of sand in the process. Specialist *Tachydromia* of bare ground and ERS can be found sheltering under stones and debris or beneath the leaves of plants such as dock growing on the substrate. That said, on sunny days, bare and thinly vegetated ground may become too hot for *Tachydromia* and then they will take shelter in the shady canopy of over-hanging trees and other foliage, where they can sometimes be swept in numbers.

At around 1.5 to 3 mm long and black, they are not extravagantly obvious flies, but *Tachydromia* are readily distinguished, both in appearance with their rather boat-like shape and banded wings and in their general behaviour of actively running about on bare surfaces. The only really similar species are those belonging to the sister genus of *Tachypeza*, which are usually restricted to tree trunks (although *Tachypeza nubila* can also be found running over boulders on peaty moorland on occasion) and, although their wings are slightly darkened, they lack the distinctly dark-banded wings of those species of *Tachydromia* that are similarly found on tree trunks. With experience, *Tachypeza* can be pretty readily distinguished from *Tachydromia* but initially it will probably be necessary to check the key characters of a lower branch to vein Cu and conspicuous whitish setae on the occiput below the neck which are present in *Tachypeza* but not *Tachydromia*. Also, the upper margins of the eyes extend well beyond the ocellar tubercle in *Tachypeza* whilst in *Tachydromia* they are about level with it.



Tachydromia aemula on a log

Their habit of running over bare surfaces allows the opportunity to observe *Tachydromia* in situ, using close focus binoculars or digital cameras. Sue Taylor for one has used such methods in a fascinating study of a population *T smithi*, gaining new insights on their hunting and courtship behaviour.

In 1961 Collin recognised just 8 species of *Tachydromia* (under the name *Sicodus*) in Britain. There are now 15 species listed as British. Chvála published a review of the Palaearctic *Tachydromia* in 1970 in which he recognised 45 species. There are now some 81 Palaearctic species described. Chvála assigned species to different ‘groups’ based on their morphological characters. Although recent molecular studies have shed new light on the composition of some of these lineages, Chvála’s groups, each named after a representative, remain a useful way of sub-dividing the genus. There is no strong correlation between the different groups and their habitat preferences. A key was included in the handout produced for the 2019 workshop at Preston Montford.



Tachydromia morio on river shingle

The following species accounts are based on the Recording Scheme data and my own personal experience. All photographs were taken by me unless otherwise stated.

Arrogans Group species

There are three British species in this group – *T arrogans*, *aemula* and *lundstroemi*. They typically run about on tree trunks, rocks and foliage in well vegetated situations, and have shiny black bodies with a silver-dusted episternum, slender male genitalia and two, unconnected, dark bands across each wing.

Tachydromia aemula (Loew, 1864)

This is the most widespread *Tachydromia* species in Britain. It can be found in a range of habitats from tidal riverbanks to high mountain ledges. I have frequently found it running over the leaves of *Petasites* growing along river margins, as well as on the sand beneath. I also see them running on the soil and on the foliage of herbaceous plants in my garden in Penrith. An individual on the tidal sand at the vegetated edge of a river flowing into the Solway estuary had a small springtail as prey. *T aemula* is very similar to *T arrogans*; however, *aemula* can be distinguished by its polished black occiput (which is silver-dusted down the eye margin in *arrogans*) and the pale base to the hind femora (hind femur all black in *arrogans*). The two species are much the same size, although individuals of *aemula* can be smaller (1.6 – 2.5mm) than *arrogans* (2 –

2.5mm). In his monograph of the Empididae in 1961, Collin regarded this species as a form of *T arrogans* and for that reason perhaps there has been confusion as to the British distribution of the two species, with many specimens of *T aemula* arranged over the name *arrogans* in museum collections. Flight period: May-October.



Tachydromia aemula

Tachydromia arrogans (Linnaeus, 1761)

Similar to *T aemula* and frequently confused with it, these two species can be distinguished by the characters mentioned in the account for *aemula* above. I personally have not found *T arrogans* in Britain, for which I have confirmed records only from south of a line between the Humber and Dee estuaries. I have however encountered the species in Europe where in most cases it was in riparian situations. I have seen them running on boulders in a wooded gorge in the Austrian Alps and on the walls of a limestone ravine in southern Spain. I have also swept it from vegetation along the banks of streams. Flight period: May-October.



Tachydromia arrogans

Tachydromia lundstroemi (Frey, 1913)

Very similar to *T arrogans* but larger at 3mm long and with legs all black apart from the knees (the anterior four femora are pale in *arrogans* and *aemula*) and with the double row of short black spines extending the full length of the fore and mid femora beneath. A short appendix to vein R₂₊₃ is said to be unique to this species within the Palaearctic fauna but I have specimens of *arrogans* in which at least one wing has this feature more or less developed. *T lundstroemi* is a north European species which has been reported from Sweden, Finland and Russia, so the single British record from Wiltshire is somewhat anomalous. A single specimen was swept from grass by the River Ebble at Coombe Bissett by Sir Christopher

Andrewes on 18 August 1964 and identified as this species by J.E. Collin. Andrewes left his collection to the NHM but the *lundstroemi* specimen is not among the material held there. There are however, several specimens of *T arrogans* collected by Andrewes on subsequent visits to Coombe Bissett, so he clearly returned several times to try and re-find the species but without success. Rob Douglas informs me that there is a single specimen of *T lundstroemi* from Coombe Bissett in the Verrall-Collin collection at OUMNH, so it appears that Collin retained the specimen although the date on the label is 'June 1965'. Flight period: June/August?

Annulimana Group species

The three British species in this group, *T umbrarum*, *smithi* and *woodi*, have a similar two-banded wing pattern to the *arrogans* group but the episternum is polished black and the middle of vein R₂₊₃ is strongly arched towards the costa. These species are generally found running on tree trunks and fence posts, often in the vicinity of water. They seem to prefer smooth, pale-barked trunks, perhaps because these bare surfaces provide the best substrate for hunting and courtship display, although there could be also some recorder bias in that they are more easily spotted on such surfaces.

Tachydromia smithi Chvála, 1966

This species resembles *T umbrarum* in having strong spinose setae on the hind part of the thorax and the scutellum. But whilst *umbrarum* has 4 to 8 scutellar bristles, *smithi* only has two. *T smithi* was first reported new to Britain by David Gibbs in 2006 after he found a single male on the trunk of an aspen tree at Centre Parks in Sherwood Forest, Nottinghamshire on 2 July 2005. There is now an earlier record on the recording scheme database, of a female found at a disused quarry at Chafford Hundred in South Essex in 2000, identified by D.A. Smith. I am embarrassed to find that I had myself collected a specimen of *T smithi* in 2004, from the River Monnow at Llangua, Herefordshire and which then went unrecognised for 15 years among unsorted material. There have been several subsequent records of the species from scattered locations in Kent, Buckinghamshire, Norfolk, Shropshire and, in 2023, from the Formby coast in South Lancashire. I have not come across any unrecognised specimens of this species in the older British collections of museums around the country, so it seems likely that *T smithi* is a recent addition to the British fauna, either by natural colonisation or, perhaps more likely, through introduction with imported trees, and that it is currently



A mating pair of *Tachydromia smithi* © Sue Taylor

expanding its range here. Most British records are from trees on the margins of water bodies in flooded gravel pits and quarries, although I have also found this species on the trunks of river-side trees in Spain (and it has been found by the Monnow of course!). Sue Taylor has carried out a detailed study of this species at College Lake, Pitstone, Buckinghamshire where she has recorded adults from May through to December and has been able to video fascinating courtship and mating behaviour. Flight period: May-December.

Tachydromia umbrarum Haliday, 1833

At 2-2.5mm long this species is the same size and appearance as *T smithi* but can be distinguished by the number of scutellar setae mentioned above. *T umbrarum* also has the last two pairs of dorocentrals equally large and strong whilst in *T smithi* the penultimate pair are only half as long as the posterior pair. *T umbrarum* occurs widely throughout Britain and is usually found running on tree trunks and fence posts but is not so strongly associated with water margins as is *T smithi*. I have found it on the trunks of trees planted along a suburban road as well as in wood pasture, wet woodland and on riparian tree trunks and fence posts. Flight period: May-September.

Tachydromia umbrarum



Tachydromia woodi (Collin, 1926)

This species lacks the strong spinose setae of *T smithi* and *umbrarum* and also the large, shovel-like ventral projection to the tip of the mid-tibia that those two species share. At 1.9-2.25mm long it is also rather smaller. *T woodi* is not frequently recorded. It is mostly reported from riparian situations and shows an association with exposed riverine sediments. I have previously found individuals on fence posts on a wooded riverbank and the rails of a wooden footbridge over a woodland stream. However, I have recently captured this species in some numbers in soil emergence traps set on flood-deposited sand on riverbanks in Cumbria and Perthshire. This is a distinct but allied habitat to the in-channel sand and shingle bars required by some other *Tachydromia* species. Flight period: May-August.

Tachydromia woodi



Ornatipes Group species

This group is defined by the combined characters of a silver-dusted episternum, yellow palpi, black legs, two dark bands across the wings, fore femora without a double row of short black setae and male genitalia small and relatively simple. *T halidayi* is the only British representative of this group.

***Tachydromia halidayi* (Collin, 1926)**

At about 1.5 mm long, this is the smallest British species. It has a black body and legs with just the basitarsi and the palps yellow. The whole of the occiput, the episternum and the anterior face of the front coxae are silver-grey dusted. *T halidayi* is restricted to the north and west of Britain where the topography and climate provide suitable conditions. It is an obligate species of ERS, showing a distinct preference for unvegetated deposits of coarse shingle. It is therefore found on flashier and stonier stretches of river than most other *Tachydromia* species. It has a later season than other ERS specialist *Tachydromia*, with numbers peaking in July. Flight period: May-September.



Tachydromia halidayi

Interrupta Group species

Chvála distinguished this group on the combined characters of the silver-grey dusted episternum, the cross-bands of the wing being joined in cell R₅ and in the fore femora being 'whitish pubescent beneath and armed only with whitish anteroventral hairs'. The wing of *T calcarata*, the only British representative of the group, is anomalous in having the cross-bands also connected in cell R₁ with only a hint of a pale area in cell R₃. In 2018, Grootaert and Shamshev proposed placing the *interrupta* group within the *arrogans* lineage.

***Tachydromia calcarata* (Strobl, 1910)**

The wing pattern of this fly is similar to that of species in the *connexa* group but male *T calcarata* lack the modified mid-femora and large genitalia of that group. A specialist of ERS, *T calcarata* was found new to Britain in 2004 on the rivers Irthing and King Water in northeast Cumbria. It was then found by Ian McLean on the River Tees near Bowlees, County Durham in 2010. I found it again in 2019 on Bollihope Burn in Weardale, Durham. *T calcarata* occurs on partially vegetated,



Tachydromia calcarata

low-lying, damp river-edge sand and shingle. Outside the north Pennines, this species is only reported from the Austrian Alps and the Dolomites. Flight period: June-July.

Connexa Group species

The group is characterised by species with rather broad, blunt-tipped wings, the dark cross-bands on the wing are broadly connected in cells R₁ and R₃ at least, a relatively short arista and silver-grey dusted episternum. The males have modified mid-femora and large, globular genitalia.

***Tachydromia acklandi* Chvála, 1973**

This small species has only faintly marked wings but is easily recognised by the short, pale palps with several long pale setae. Also, the fore femur possesses a row of long fine ventral setae. Males are further differentiated by the modified mid-femur and the very large globular genitalia. *T acklandi* is an obligate ERS species, occurring on sandy shingle deposits in spring and early summer. It was first described from specimens collected by Mike Ackland by the Dorback Burn in Strath Spey in 1967 and has since been found on spate rivers with a significant sand fraction elsewhere in Scotland, northern England and south Wales. There is also a curious intertidal record from St Audrie's Bay, South Somerset in 2005. Flight period: May-August.

Tachydromia acklandi



***Tachydromia connexa* (Meigen, 1822)**

Specimens labelled as this species in museum collections often turn out to be *T morio*, which has the same wing pattern and similarly modified legs. However, *T connexa* has paler legs and the base of the hind femur is yellow rather than black. *T connexa* is a scarce southern species with thinly scattered records extending from East Kent as far north as Derbyshire and South West Yorkshire. It is a spring species of sandy substrates and although it has occasionally been found on sandy riverbanks it is more often recorded from sparsely vegetated quarries and sandpits. Flight period: May-July.

***Tachydromia costalis* (von Roser, 1840)**

Unlike *T connexa* and *morio*, *T costalis* has no pale area within cell R₃ of the wing. It is further distinguished from *T morio* by the yellow base to the hind femora, a character which it shares with *T connexa*. *T costalis* is another specialist species of ERS where it is found on partially vegetated sandy deposits, both on in-channel bars and on flood-deposited sand on riverbanks. It occurs on sandy rivers, with strongholds in south Wales, Cheshire and Cumbria. There are also scattered records from

Somerset, Sussex, Surrey, northeast England and southwest Scotland. Interestingly, there are no records further north in Scotland from the ERS-rich catchments of the Tay and Spey. Flight period: May-July.



Tachydromia costalis

***Tachydromia edenensis* Hewitt & Chvála, 2002**

This species was described from specimens collected on the River Eden in Cumbria where it was first found on deposits of dry, unvegetated sand deposited on the tops of shingle bars in 2000. The clearly annulated tarsi are distinctive as are the male genitalia. This obligate ERS species has subsequently been found by Andy Godfrey on the rivers Lune in Lancashire and Swale in Yorkshire. Martin Drake has found it in south Wales and I have found it on the Till in Northumberland and in Scotland on the Nith in Dumfriesshire and the Tay in Perthshire. Flight period: June-July.



Tachydromia edenensis

***Tachydromia halterata* (Collin, 1926)**

This species shares the modified mid-femora with several other *connexa* group species but is distinct from them all in having the outer two thirds of the wing darkened right up to the tip and also in having dark halteres. This is an enigmatic species which has not been found in Britain for almost 90 years. All but one of the dozen or so records of the fly are from the fenland area of Cambridgeshire, Suffolk and Norfolk, the other report being of one found by Donisthorpe “with *Lasius fuliginosus*” at Darenth in Kent in 1909. Collin states that its short, dark legs and broad wings give it a *Drapetis*-like appearance. The only indication of substrate preference is provided by Collin’s report of a female he caught on the trunk of a tree in his Newmarket garden. The last record of the species was on the Devil’s Ditch near Burwell in 1937, when Collin found both sexes. Flight period: May-June.

***Tachydromia morio* (Zetterstedt, 1838)**

This is the most widespread of the ERS specialist species and is found widely in northern and western Britain from Ross & Cromarty south to Devon. *T morio* is less demanding in the grade of sediments it will tolerate and can be found on sandy gravels to coarser shingles. It is therefore able to extend into more upland river stretches than most other species. *T morio* is most similar to *T costalis* and *T connexa* but can be

distinguished from *costalis* in having a pale patch in the otherwise darkened cell R₃ and in having the hind femora entirely black. *T connexa* also has a pale area in cell R₃ but like *costalis* it has the base of the hind femora yellow. Flight period: May-August.

Tachydromia morio



***Tachydromia terricola* Zetterstedt, 1819**

T terricola is the only British member of Chvála’s *terricola* group, characterised by the possession of largely clear wings which are only faintly clouded along the veins and at the apex of cell R₃, largely pale legs and in the males lacking the large, globular genitalia of the *connexa* group. This species was first found in Britain in 1973, when A.A. Allen collected a single female in a sandpit near Lydd, Dungeness. Returning to the site in 1978 he found the species to be restricted to a “shallow depression in the sand not far from the edge of the lake filling the bottom of the pit” and he collected a few males and females by “grubbing at the roots of the thin herbage and in the open among fragments of plant debris etc”. There are further records for Dungeness from June 1989 and also for Rye Harbour in August 1986, but none more recently that I am aware of. Chvála reports this species to be uncommon but well distributed across northern and central Europe, in sandy coastal biotopes. I have found it in central Norway on a sandy riverbank well away from the coast. Flight period: June-August.

Hints for finding small Hybotids – *Crossopalpus*, *Platypalpus*, *Stilpon*, *Tachypeza* and *Tachydromia*

Nigel Jones

Most Hybotidae are very small flies and can quite easily be overlooked in nets that have been swept through vegetation to collect flies. When looking for Hybotids, I find a useful approach, when first getting one’s head into the net to see what lies within, is to first clear the net of distractions. This is best done by pootering up or letting escape larger flies, particularly any very active ones. Next, take plenty of time to watch for small flies climbing up the net and collect these in a pooter or direct into tubes. Once these have been collected, have a good long stare at the bottom of the net and in the crease where the edges of the net are sown together - Hybotids and other very small flies often lurk there.

Members of the same Hybotid genera wandering about within the confines of the net usually look very similar to each other, so collect a good number of them. Almost invariably a sample containing numerous, ostensibly identical specimens, will in fact contain a number of species. By way of example, I swept the foliage of some willow trees on the slopes of the

Stiperstones, Shropshire in early June and pootered up numerous *Platypalpus* which I could easily have assumed would all be members of one or two species at best. On getting the sample home and identifying the specimens, there were six species present: *Platypalpus ciliaris*, *P. cothurnatus*, *P. longicornis*, *P. longisetia*, *P. nigritarsis* and *P. verralli*.

Sweeping through and across vegetation is an excellent way to find Hybotids, particularly across tree foliage. For those with a vacuum sampler (a converted battery-powered leaf blower works a treat), prodding the sampler into the base of vegetation will garner plenty of *Crossopalpus* and sometimes the tiniest of the tiny Hybotids *Stilpon graminum* – a really smart little fly that's well worth seeking out. I've only ever found *Stilpon* (several times now) through vacuum sampling* at the bases of rushes in damp areas at the edges of standing water. Some of these flies are so small that they may not be recognised in the field as Hybotids, so it's a good idea to collect even the tiniest indistinct looking flies wandering about inside nets and in white trays that vacuum samples have been tipped into. Winter vacuum sampling is a great way to get hold of *Crossopalpus* and *Stilpon*. Cold conditions really slow them down so that they do not fly off when vacuum samples are emptied into trays.

In 2022 I went out collecting *Tachydromia* with Steve Hewitt. It was a searingly hot day and I was having hardly any joy finding *Tachydromia*, but Steve had plenty! Steve was sweeping the shady side of trees where small Hybotids move to when it gets too hot for them. I adopted this approach and immediately got better numbers. Steve also lifted leaves in contact with the ground, where *Tachydromia* also shelter from heat. The habit of *Tachydromia* of walking on posts and rails is well known and I have collected specimens by carefully direct pootering on timber surfaces. *Tachypeza* are also in the habit of wandering about on timber surfaces but tend to eschew fences in favour of tree trunks. Beech is the best place to search as these flies are easier to spot on the relatively smooth surface of this tree. *Tachypeza* are very adept at getting away from approaching pooters or tubes, but they seldom fly, preferring to run a little distance off. It's usually possible to capture specimens with persistent and stealthy use of a pooter or a glass tube placed directly over the fly. When using a tube, approach very slowly, avoid sideways movement and try to bring the tube directly, but still slowly down on the specimen. Once the tube is over the fly, it will usually run up the tube, allowing one to get a cap over the open end – to this end, keep the closed end of the tube pointing upwards until the cap is in place.

*I don't have my own vacuum sampler, but follow vacuum samplers about and ask them to sample from suitable looking places. See the Lesser Dung Fly Recording Scheme newsletter for more details.

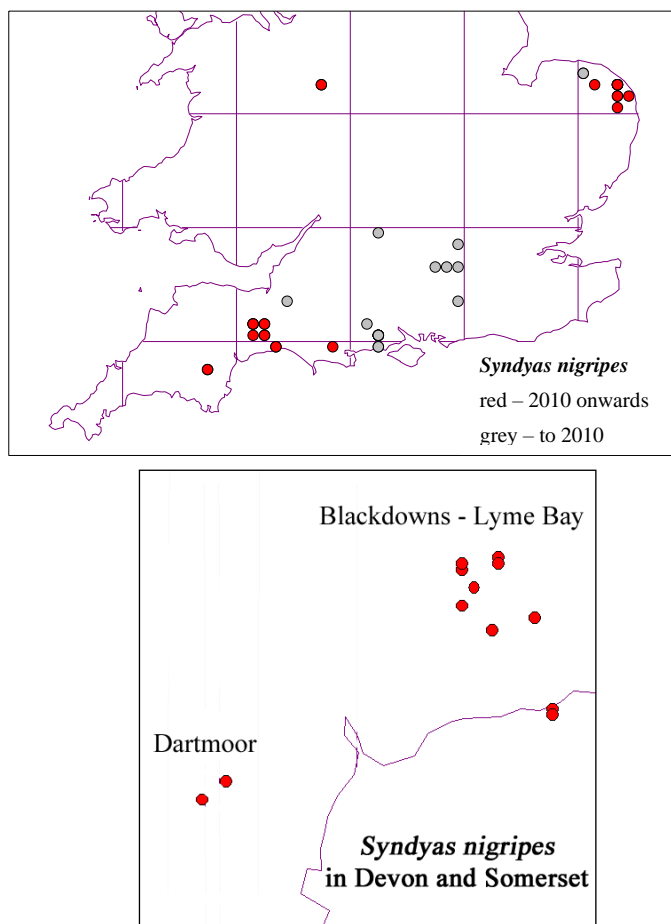
Update on *Syndyas nigripes* (Hybotidae) in the West Country

Martin Drake

A dozen years ago, I wrote about the first records of this Near Threatened fly in Devon (Drake, 2011). More records from Norfolk, mainly from the Dipterists Forum summer meeting in 2022, and from the southwest of England from my own collecting, show it to be doing well (Fig. 1). I am particularly interested in the records on my home patch in East Devon and

adjacent west Somerset, plotted here at 2km resolution. (Fig. 2). This area is on Mesozoic geology with a wide range of soil types from acidic to basic. The result is an intimate mix of habitats that range from open acid mire with runnels to tufa-depositing seepages. Nearly all the records of *S. nigripes* from this area are from acid mire, the least attractive of which is *Molinia* or *Juncus* bog and the best is runnels with bog-bean and bog asphodel. No surprises there. But I also caught it recently at two seepages on the coastal soft-rock cliffs of Lyme Bay where aquatic stratiomyids are frequent, including six species of *Oxycera* and *Vanoyia tenuicornis*. This suggests a complete muddle of requirements. The Norfolk fens also have pockets of *Sphagnum*-dominated mire in close proximity to the more widespread base-rich or neutral fen (George 1992). Perhaps *Syndyas* is capable of sniffing out the small acidic patches, both in Norfolk fens and on Devon's soft-rock cliffs. Clearly we need to add a pH meter to our field equipment. Chvála (1983, p102) describes the genus as appearing to be restricted to cold *Sphagnum* bogs; there is no *Sphagnum* on the Devon cliffs and, whether or not the seepages are acidic, these steep south-facing slopes overlooking the English Channel are very definitely not cold.

The maps were produced using DMAP using records derived from the E&D recording scheme database, iRecord and the NBN Gateway.



Interesting dolichopodids recorded at the Dipterists Forum field meeting in Norfolk, 2022

Martin Drake

We had a bumper crop of dolichopodids at this field meeting, held 2-9 July 2022, despite the rather trying dry conditions. As in recent years, many participants passed their specimens to me during the week, while other recorders identified their own catch. Jane Hewitt collated everyone's records, which amounted to 1900 for dolichopodids from 22 hectads. These included an unexpectedly high total of 141 species which is a sizable increase on the past few years when 96-121 species have been recorded (see my earlier reports in this newsletter). This is probably mainly due to many more specimens given to me, but also to Norfolk holding some prime dolichopodid habitat.

Way ahead at the top of the table were *Chrysotus gramineus* and *Gymnopternus aerosus*, both very common species, but among those most frequently found but which are not particularly common-or-garden species nationally were *Teuchophorus spinigerellus*, *Dolichopus longitarsis* and *Ethromyia chalybea* which are closely associated with fens, and, because of so many coastal visits, *Dolichopus strigipes* on the saltmarshes.

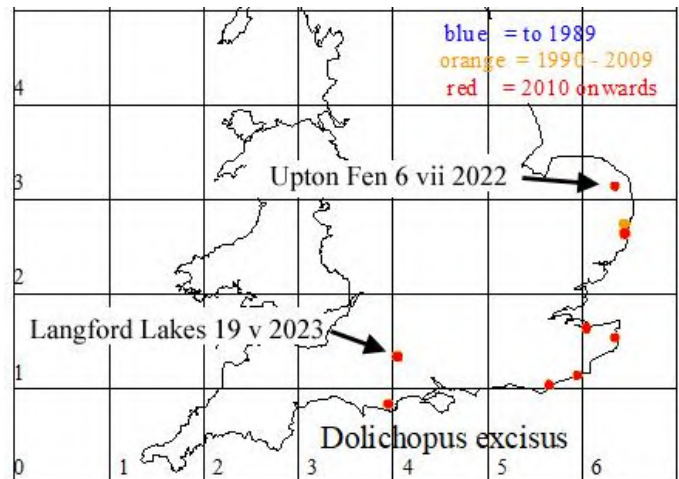
At the other end of the scale, 23 species had a conservation status. Most of these were represented by single specimens. The more frequent were *Thrypticus pollinosus* and *Telmaturgus tumidulus*, both tiny flies, and *Telmaturgus* having a very limited distribution in Britain but well known from the Norfolk fens. I was hoping we'd find more than a single specimen of the endangered *Dolichopus laticola* and two of *Thrypticus smaragdinus* as these fens are almost their only locality and both were moderately widespread here a few years ago. Seven species represented new records for Norfolk according to the E&D database but I may be overlooking iRecord and NBN records. *Dolichopus excisus* (at Upton Fen) was a good find although it has not been on the British list for long so it is still turning up at new places. This record moves its distribution well inland when previous records suggested a near-coastal distribution, but to cap this, Mike Ashworth made an exceptional record on the DF spring meeting in Wiltshire in 2023 – see map. *Argyra auricollis* (Hilly Holey) and *Sciapus zonatulus* (East Wretham Heath) were over 100km from the nearest previous records. *Systemus bipartitus* (Catfield Fen) was also a considerable way from the nearest records in Cambridgeshire. *Dolichopus nitidus* (Sutton Broad) is known from nearby at a Suffolk fen but this was the first from Norfolk. *Dolichopus virgultorum* (Thompson Common) continues its northward march, this being the most northerly on the east side of the country, and a big leap from the nearest records in the Thames basin. I did not expect to find that *Argyra ilonae* (Lower Wood, Ashwellthorpe) was not previously known from Norfolk as it is widespread and hardly uncommon over much of England.

Several of the species are geographic oddities in that their distribution is northern and western and they reach their greatest frequency in Scotland, but their outlying occurrence in the Norfolk fens is already known. This group includes *Argyra auricollis*, *A. elongata*, *Campsicnemus pusillus*, *Dolichopus caligatus*, *D. lepidus*, *D. phaeopus* (although frequent on moors in south-west England) and *Syntormon tarsatum*. These

flies presumably sniff out the patches of acid bog within the large expanses of neutral to base-rich fen.

Just mentioned in passing are some scarce or rare moderately conspicuous species that are already known in Norfolk but nice to see: *Dolichopus notatus*, *Orthoceratium sabulosum* and *Syntormon mikii*.

And *Syntormon metathesis* was recorded new to Britain after finding several males (Drake 2023). No sooner than the paper was published than Tony Irwin and Martin Greenland found more specimens. Martin's were particularly interesting as both sexes were recorded near Filby Broad in the southeast, somewhat away from the other records, and more importantly on 21 March 2023, thus making this another early-flying *Syntormon* along with *denticulatus*, *macula* and *pallipes*.



The single British record of *Campsicnemus umbripennis* (Dolichopodidae)

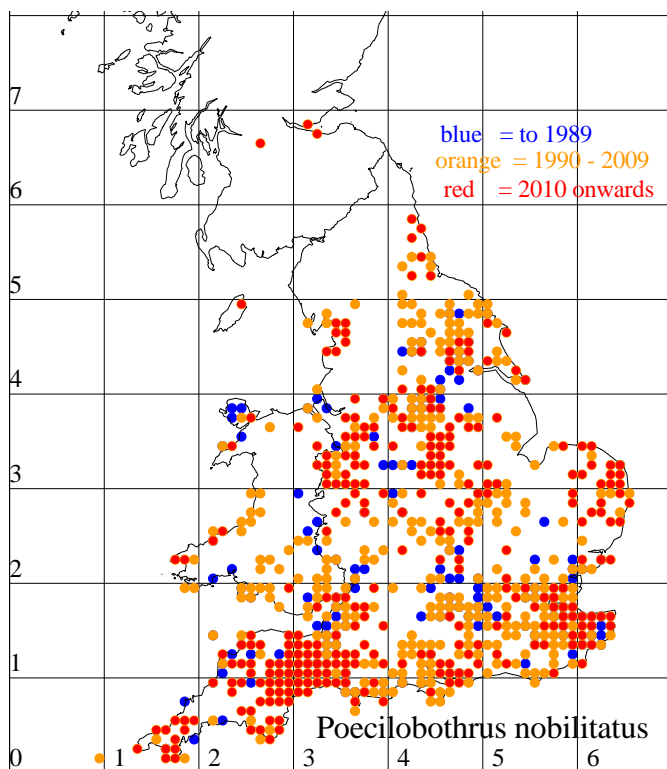
Martin Drake

Ivan Perry (1999) introduced this dolichopodid to the British list from one male found in grassland at the top of the soft-rock cliffs called The Spittals, next to Lyme Regis in Dorset. I have visited this many times in the last 20 years as it is only half an hour's drive away. My list of dolichopodids is enviable but I still have not found Ivan's *umbripennis*. More interesting than my lack of success is why this species is here at all. It is one of the few dolichopodids with accepted subspecies rank, if you think that this is a valid taxon. Strobl (1899) described *C. umbripennis* var. *hispanicus* from several males collected in northwest Spain. Parent found several more characters than Strobl used to separate the two subspecies, and the figures by Peter Chandler in Ivan's paper show most of these, so there is no doubt that the identification is correct. The distribution of subspecies *hispanicus* is just Spain and France whereas the nominal subspecies (*C. umbripennis umbripennis*) is widespread in Europe from Spain to Turkey to Poland (Pollet 2011), and clearly not uncommon, for instance, Strobl refers to his numerous central European specimens when comparing the two forms. The Dorset specimen is therefore curious for being the rare form. Does this one occurrence coincide with an influx of migrants blow north from the Pyrenees area? I will continue looking for it but I may be unlucky if it was merely swept off course.

Poecilobothrus nobilitatus is doing well

Martin Drake

Not so long ago, *Poecilobothrus nobilitatus* was a 'southern' species in Britain but a recent flow of records from central Scotland and northern England make its move northwards more obvious. It is also absurdly abundant on every scrap of water here in Devon this year. Where they congregate, they chase away all the other dolichopodids so spoiling the chance of finding more interesting species. Despite being so common, I think I'm right in saying that we do not know where its larvae live; Smith (1989) said that they were unknown. But they are almost certainly in damp soil, and use water only as a feeding and lekking area. For instance, one can find aggregations in the most inhospitable places as long as there is a puddle. I include this map based on the E&D recording scheme data to complement that on iRecord which shows more northern records, but both iRecord and NBN shower fewer of the southern records.



Dolichopodid test keys now on DF website

Martin Drake

I have uploaded my keys to dolichopodids on the Dipterists Forum website under the Resources / DF membership area / Keys. You need to be a DF member to access this page. Do please try them out and let me know what doesn't work or is unclear, or downright wrong. I will add a running update of corrections; I have some already! I have not included *Thrypticus* or *Medetera* yet as these include several 'new to Britain' species which I intend to publish formally shortly.

These keys will be published by the Royal Entomological Society in its series *Handbooks for the Identification of British Insects*. For the last two years I have missed my own deadline, so don't hold your breath.

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Recent literature (dolichopodids)

- Barták, M. & Kubík, S. 2022. Unexpected previously unknown diversity of the genus *Microphor* Macquart (Diptera: Dolichopodidae: Microphorinae) in the west Palaearctic. *Insects* **2022**, *13*, 700. <https://doi.org/10.3390/insects13080700>. [An important paper covering many species and with good genitalia figures that are now almost essential for correct identification]
- Drake, C.M. 2023. *Syntormon metathesis* (Loew) (Diptera, Dolichopodidae) new to Britain. *Dipterists Digest (Second Series)* **30**, 55-59.
- Drake, C.M. & Painter, D. 2023. *Hercostomus rusticus* (Meigen) (Diptera, Dolichopodidae) new to Britain in urban London. *Dipterists Digest (Second Series)* **30**, 70-79.
- Kejval, Z. & Pollet, M. 2023. The genus *Medetera* (Diptera: Dolichopodidae) in the Czech Republic with first records of twelve species. *Zootaxa* **5245**, 69-93. [We are overlooking many species in Britain; this paper shows just how many can be found with a close study in a central European country]
- MacGowan, I. & Drake, C.M. 2023. The correct name for the montane *Hydrophorus* species (Diptera, Dolichopodidae) occurring in the British Isles. *Dipterists Digest (Second Series)* **1**, 26 - 29
- Morris, R. 2022. The status of Diptera in VC55, Dolichopodidae. *Leicestershire & Rutland Entomological Society* **50**, 1-42.

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Hybotids & Atelestidae

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Newsletter compiled by C. Martin Drake



Lesser Dung Fly Study Group Newsletter 5

Getting to grips with Lesser Dung Flies Nigel Jones

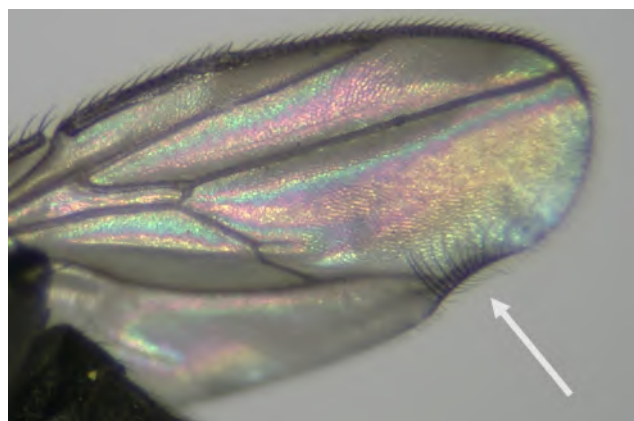
During the autumn/winter of 2022/23 I've been in the habit of joining a group of naturalists going out, on a weekly basis, to various Shropshire locations to search for and record invertebrates, fungi and plants. The group includes three members who regularly tote battery powered vacuum samplers (converted garden leaf blowers). At frequent intervals the cry "fly" goes up and that is my signal to urgently attend a small group of people staring into a white tray. The white tray will contain material tipped out of the vacuum sampler. Lots of small, and frankly, very tiny flies will be amongst the catch. Sphaeroceridae are usually the most numerous flies in the catch. The best approach for sampling these is to pooter up as many of the flies as possible, being particularly diligent about spotting the smallest specks of life, as these are often Sphaerocerids.



Nigel at the ruins of "the grandstand" at Racecourse Common, the haunt of rarely recorded LDFs such as *Pullimosina mejerei*, *Spelobia baezi* and *Rachispoda anceps*. Photo: Mark Welch, June 2023.

Having procured lots of Sphaerocerids, the next challenge is to identify species. A good place to start has been the relatively larger flies in the uncomplicated sub family Copromyzinae. Focussing on this subfamily I soon ticked off common species such as *Lotophila atra* (easily the most frequent LDF I record), *Copromyza stercoraria* and *Crumomyia* species. Amongst this latter genus the standout species is *C. pedestris*; a seemingly rather local fly with extremely distinctive wingless individuals. Members of the subfamily Sphaerocerinae are easy to spot as they have a distinctive warty appearance and stand out from the rest of the family fairly easily. Unfortunately I haven't found this subfamily very often, but I can list *Ischiolepta nitida* and *I. pusilla* as species I have managed to record. The subfamily Limosiniinae contains the majority of LDF species and includes some of the real tiddlers, clocking in at around 1-1.5mm length. These tiny species can be a rather intimidating prospect when it comes to identifying them and I have resorted to sending them on to our specialists Dave Brice and Mark Welch, who both make pretty short work of them! Encouragingly, a good number of the slightly larger Limosiniinae are readily determined. Perhaps the most easily recognised

limosiniine is the fairly large (rivaling the larger Copromyzinae) *Limosina silvatica*; the male sports mid legs with very long wavy hairs, unlike any other British LDF. The female, as does the male, obligingly features a long preapical dorsal bristle on the hind tibia which together with its large size make it easy to spot in LDF samples. Other distinctive species are *Chaetopodella scutellaris*, featuring a bright yellow front of frons; *Eulimosina ochripes*, featuring an all yellow head and frons with a contrasting black ocellar triangle; *Minilimosina vitripennis* sporting a thickened intensely black section of costa; *Coproica acutangula*, featuring a very distinct and highly unusual fan of hairs on the hind edge of the wing (photo), which strangely is not mentioned in Pitkin's 1988 RES Handbook. There are plenty of other species that can be identified without too much difficulty, so getting started with LDFs is a very worthwhile challenge to take up.



Right wing of *Coproica acutangula* showing hair fan. Photo: Nigel Jones

As mentioned above, I have sent a lot of flies to Mark Welch and Dave Brice and I have been surprised at the range of species contained in the samples. The haul from one site is particularly noteworthy; Oswestry Racecourse Common in North West Shropshire, currently stands at 32 species, and this is from just two winter visits. Mark Welch visited the site with me in June 2023, so yet more species may be added to the site list. As I write this, I am visiting Anglesey for a few days with family. Sealable plastic bags have been packed and a visit to the strandline of local beaches is called for. Doubtless the strandline samples will contain LDFs and I am looking forward to discovering species I have not yet recorded.

MW: Nigel has found some cracking LDFs at his Shropshire sites over the past 2 years. His recent purchase of a middle-of-the-range compound microscope has produced some excellent publishable images. As Nigel has demonstrated, the trick to handling (very) small fry is to be persistent, patient and dexterous. Congratulations Nigel!

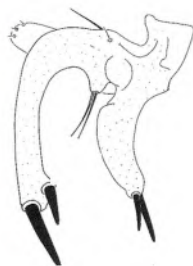
Forum News

Sphaeroceridae in your garden Andrew Cunningham
I thought it would be good to discuss tips for finding sphaeroceridae in your garden in each newsletter. Summer sees many of us mowing the grass. Grass cuttings placed in a large garden tub and filled with water for a few days produces an excellent and potent liquid manure. After draining this liquid for the vegetables, flowers, etc. the ‘mash’ can be left on the ground or in a trench. A shady spot is ideal to prevent it drying out. Keeping it moist will attract Sphaeroceridae. A recent collection of specimens using a motorised pooter produced records of *Coproica hirtula* (1m 2f), *Coproica lugubris* (1m), *Ischiolepta pusilla* (6m), *Pullimosina heteroneura* (2f) and *Spelobia clunipes* (1f).



RECENT HIGHLIGHTS

Puncticorpus cribratum Andrew Cunningham
Richard Lane regularly collects named fungi samples to place in containers for rearing diptera. The sphaeroceridae have been kindly passed on to me (Andrew Cunningham). There are still plenty yet to be identified after the field season winds down and a joint piece will be produced by both of us in due course. For now, we can report an exciting discovery. Two male specimens of the pNationally Scarce *Puncticorpus cribratum* were reared from the fungus *Macrolepiota procera* (The Parasol). The fungus was collected at Kilmington (SY260980) on 18/09/17 and the flies emerged on 19/10/17. The picture below shows the highly distinctive male genitalia (surstylus right, Pitkin 1988).



Recent paper on Sphaeroceridae published by DF members:

S. Hodge, I. Bottero, D. Brice, M. Welch, J.C. Stout (2023) Diptera collected from commercial *Bombus terrestris* (Linnaeus) colonies placed out in Irish farmland. *Dipterists Digest* 30, 166-171.

DB and MW contributed identifications of sphaerocerids and phorids, respectively. The most widespread sphaerocerids were *Spelobia luteilabris* and *Telomerina flavipes*. *Coproica hirtula* (a common species in the UK) was recorded as a first for the Irish list. From the known phenologies of the sphaerocerids found in the *Bombus* nests, it is likely that they are feeding on nest detritus rather than being directly associated with bee larvae or pupae.

Dave Brice, Andrew Cunningham and Mark Welch are happy to receive LDFs in 70% or 80% ethanol for identification. Please send specimens to MW email at m.welch@nhm.ac.uk to get his home address. He will coordinate identification with Dave and Andrew.



Chaetopodella scutellaris (Male)
Andrew's Wood DWT VC3 15/10/22
Coll/Det : A. J. Cunningham



Gigalimosina flaviceps (Female) 06/11/19
Oakfordbridge VC4 S5929218
Coll/Det : A. J. Cunningham



Eulimosina ochripes
Male 19/07/20
Tiverton VC4 S5965135
Coll/Det : A. J. Cunningham

Easy LDFs. All photos by Andrew Cunningham



Anthomyiidae Recording Scheme Newsletter No 14

Autumn 2023

Anthomyiidae Handbook Project

We have to report that work on this project has ceased. Our small Working Group made good progress in gathering information and producing a draft scope for a published Identification Handbook in the style of the RES series. This set a high bar if we were to emulate the recent volumes on Blowflies and Fungus Gnats in the series.

It had become apparent that the magnitude of the task exceeded that envisaged at the outset. This impression was reinforced when we visited the Oxford Museum of Natural History in February this year to view Michael Ackland's archive and collection. There is an impressive array of documents and papers and the specimen collection in the original boxes occupies several cabinets.



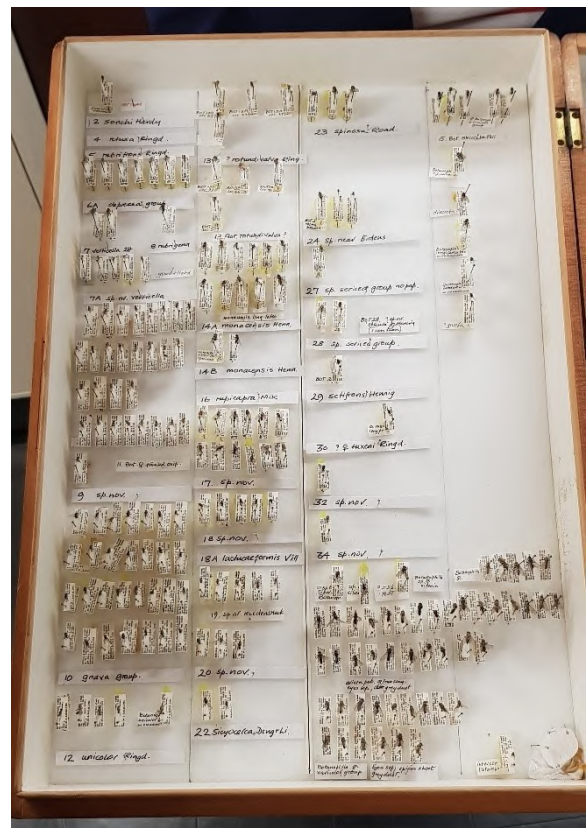
A peek inside one of these boxes containing part of the genus *Botanophila* showed several species marked as new to science. This of course reflects Michael's interest in the world-wide Anthomyiid fauna, and goes well beyond the scope of our British requirements. Nevertheless, we felt that a British handbook could not be produced without a good appreciation of the contents of the archive, not to mention frequent access to the collections to check details.

Given the size of the British Anthomyiidae family and the large range of ecological roles, this remains a large gap in the published literature, so it is to be hoped that

a project for an early-career entomologist to tackle this could sometime materialise at Oxford.

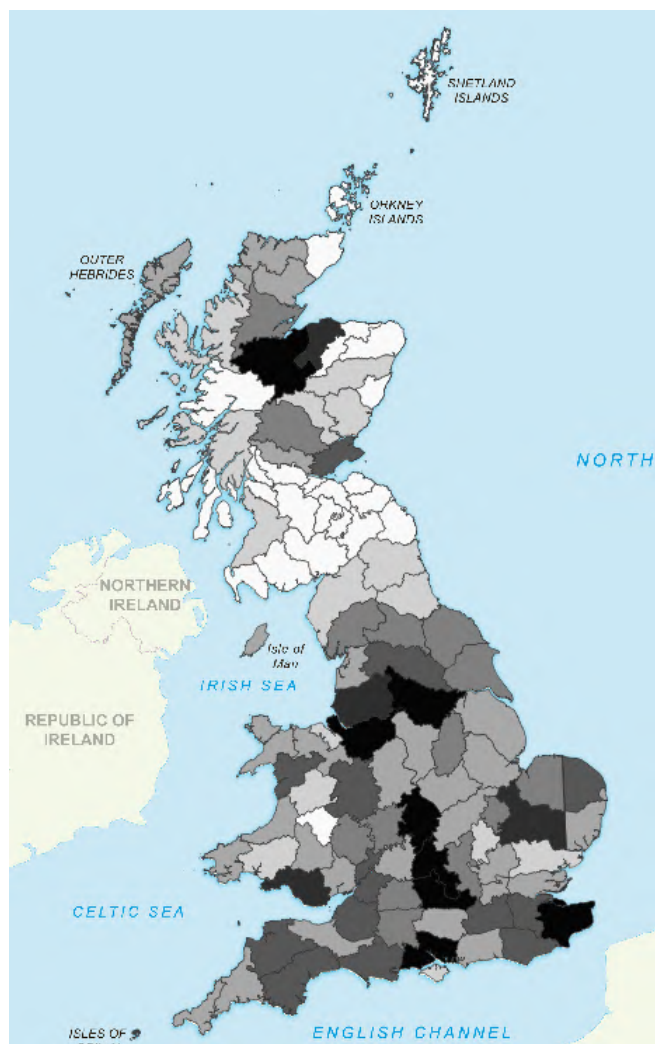
My thanks go to Steve Crellin, Gary Hedges, Siobhan Hillman, Steve Judd, Ali Shuttleworth and Sam Thomas for their help with the project, and the wider interest and encouragement shown by others. Thanks also to Zoe Simmons, Head of Life Collections at OUMNH for hosting our visit and to Gary for taking the pictures.

Michael Ackland always emphasised that the set of genitalia figures was the most important identification resource and that with experience people would usually go straight to those. We believe that the Workshop Notes remain adequate to support the Recording Scheme.

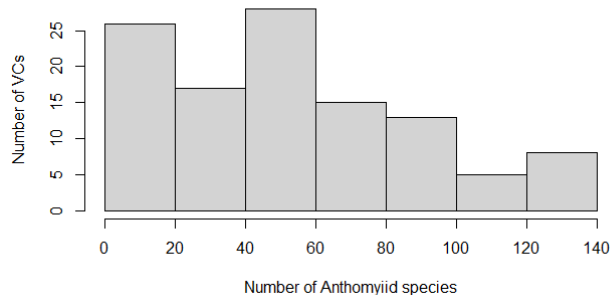


General distribution of Anthomyiidae

Part of our plan for the Handbook was an overview of recorded species distributions, perhaps along the lines of that in the Fungus Gnats handbook. There are now around 37,000 records on IRECORD, more than double the number at the end of 2019. Rather than plotting these numbers across the country, it is more revealing to look at the number of species recorded in each vice-county. This map shows the results on a scale from black for the highest to white for the lowest.



This histogram shows the numbers of vice-counties in each range.



The top ten of the 112 vice-counties are:

63	South-west Yorkshire	134
23	Oxfordshire	133
15	East Kent	130
22	Berkshire	129
38	Warwickshire	129
11	South Hampshire	126
58	Cheshire	123
96	East Inverness-shire	121
41	Glamorganshire	120
59	South Lancashire	120

These numbers show the influence of Michael Ackland's surveys in Oxfordshire and Berkshire. Laurence Clemons supplied his decades of records from Kent, and Warwickshire was covered by Steven Falk's data from the notebook transcription project. Numbers for the five Yorkshire vice-counties have been obtained from Andrew Grayson's list on the Yorkshire Naturalists website, and thanks are due to RECORD local records centre for the full Cheshire list. The last two of these sources are not yet fully reflected on IRECORD and NBN Atlas. Additional vice-county records for rare and scarce species have also been included from the status review of Falk and Pont (2017).

Putting the area of each vice-county into my species-area relation (Brighton 2023) gives expected species numbers for the top three vice-counties of 142, 132 and 137 respectively, an encouragingly close agreement. At the other end of the scale there is one VC with zero records – Selkirkshire in the generally poorly surveyed South of Scotland. Take a detour on your next trip to Scotland to get the first Anthomyiid record there!

Over in Ireland the number of species stands at 95, compared with the 93 listed by Chandler et al (2005). This compares with a species-area relationship prediction of 216, a considerably greater shortfall than for the "larger Diptera" overall.

Thanks to Gary Hedges for producing the map. Credit for the format should go to Rob Ryan (2019) whose British Heteroptera map shows a much greater bias to the south, albeit with 22 species recorded from Selkirkshire.

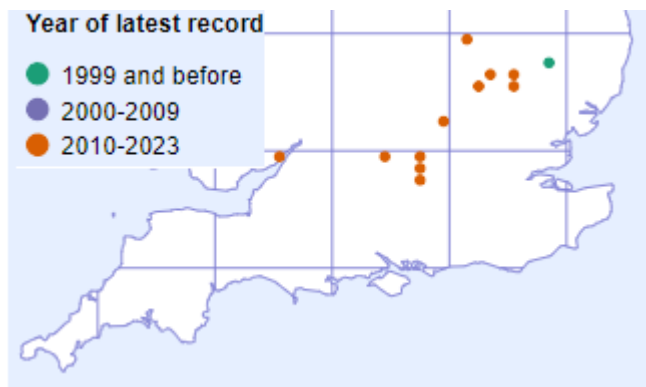
The *Anthomyia pluvialis* complex

I was very glad of the opportunity to talk to Ivan Perry at the Dipterists Day in London last November. He revealed that re-examination of his collection of the *pluvialis* section of the genus *Anthomyia* had uncovered two specimens of *A. plurinotata* from West Suffolk in

1997, over decade before our previous earliest British record (Brighton 2018). The side-pinning had obscured the distinctive pattern of two spots on the thoracic dorsum rather three in other British species (photos by Will George and Tim Cox):



This feature has produced a few more records from digital photographers on IRECORD in recently, whereas the much more frequent pictures of *procellaris* look-alikes have to be assigned to *Anthomyia* sp. (as in the delightful photo on the right by Graham Almond). There are now 17 records in an interesting swathe across Southern England.



Ivan had been re-examining his specimens because he had found two odd-looking *Anthomyia* males in his garden near Cambridge during last summer's heatwave. He identified them as *A. quinque maculata* following Michelsen (1980a), who provided keys and descriptions for the males and females of the four similar species: *bazini*, *pluvialis*, *procellaris* and *quinque maculata* (apart from female *bazini*). *A. quinque maculata* has been recorded from around the Mediterranean, so it possibly arrived with the influx of hot air from the south.

Intriguingly, an unidentified *Anthomyia* species similar to *imbrida* is listed by Chandler et al (2005) from Northern Ireland. Genitalia drawings of this are included in the Anthomyiidae workshop handout.

The Anthomyiid sugar-beet leaf miners

Congratulations to Siobhan Hillman on completing her PhD about another troublesome species complex. Following damaging outbreaks of leaf-miners on the sugar-beet crop in 2015 and 2016, she was funded to study their population genetics and ecology at the

University of East Anglia (Hillman, 2022). Michelsen (1980b) described a complex of four *Pegomya* species: *betae*, *cunicularia*, *exilis* and *hyoscyami*. Siobhan has used DNA analyses to study a range of adult specimens from various collections and larvae, or the traces of larvae, from leaves collected from both cultivated and wild plants across a wide range of locations. Phylogenetic analysis was also used to look at the relation of the beet flies to a wider range of *Pegomya* species. She also developed a rearing technique and studied parasitoids and hyperparasitoids that emerged.

Overall a complex picture is presented with the possibility of cryptic species being involved.



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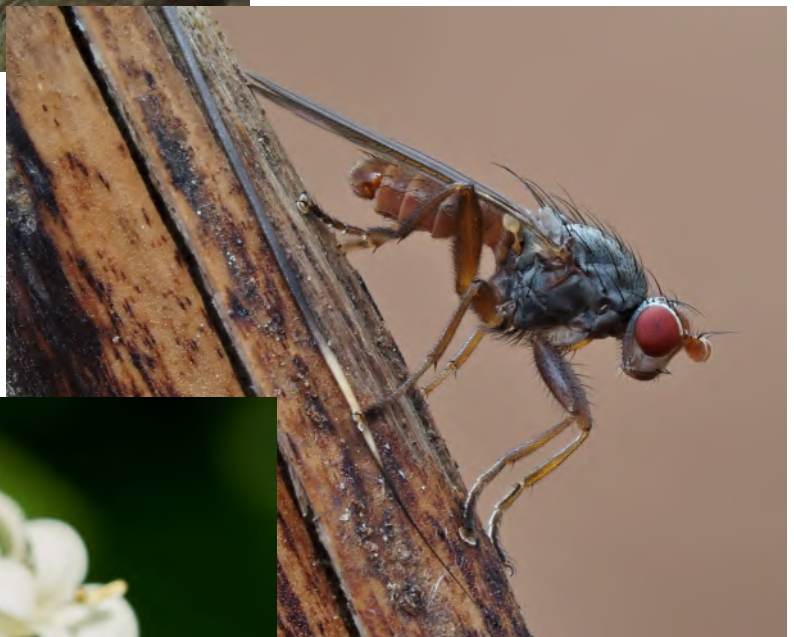
Phil Brighton (helophilus@hotmail.co.uk)





Dioctria linearis
Ian Andrews
Olympus OM1 - Mk III
Zuiko 60mm macro

Neoleria propinqua
Ian Andrews
Olympus OM1 - Mk III
Zuiko 60mm macro



Didea fasciata
John Showers
Sony ILCE-7M3

Oxycera pardalina
Sam Thomas
TG-5





Oxycera trilineata
Darwyn Sumner
Nikon Z6 + macro flash (R1C1)

Physocephala rufipes
Sam Thomas
TG-5



Cistogaster globosa
Nigel Jones
TG-5



Nephrotoma submaculosa
Sam Thomas
TG-5

