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Forum

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the golden moments fly



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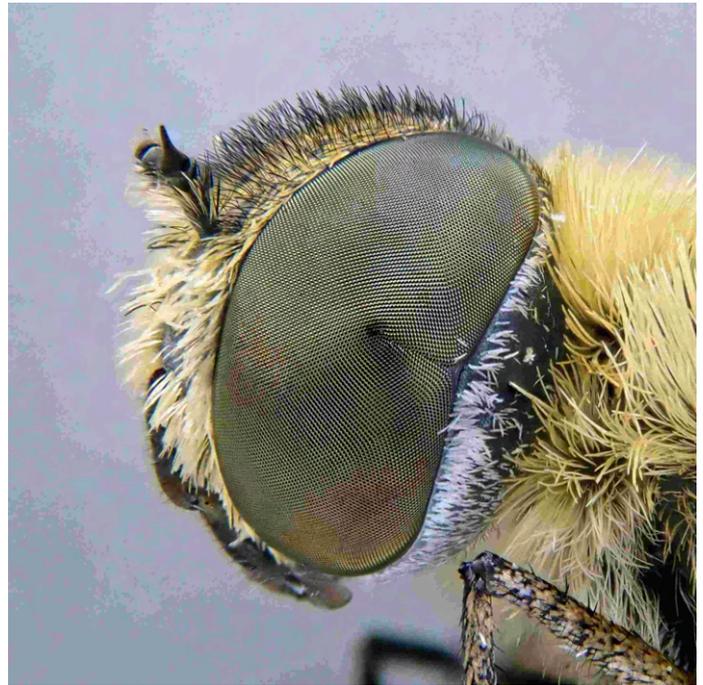
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Please use the Booking Form downloadable from our website

Field Meetings

Now organised by several different contributors, contact the Secretary.

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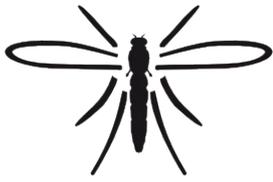
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Images selected from our Dipterists Forum Flickr group. Other photographs as supplied by the authors or the editorial panel who would be pleased to receive illustrations for general purposes - many thanks for those already sent. Front cover must be upright (portrait) and have an aspect ratio of 6:7 (or be croppable to that ratio)



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Digital versions

Some of the above contain hyperlinks so you'll need to download the digital versions to save you having to type them out. Obtain them in 3 parts:

1. The above Bulletin Contents

Available as pdf to all members via our website at the time of publication Back issues may also be obtained from our website

2. Newsletters (no hyperlinks) free pdf regardless of membership status

<https://www.micropezids.myspecies.info/node/301> or our website

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The back pages brochure is an interactive pdf which links all the schemes to their various activities, projects and websites. Download it and click on the icons.

iNaturalistUK projects to Diptera Recording Schemes <https://tinyurl.com/yrd28des>

Copies of this Bulletin are mailed to Dipterists Forum members if they have chosen that subscription option

Naturalist's collections

The proportion of new readers of this Bulletin is difficult to gauge, you'll perhaps get a bit of an idea if you read John Showers membership account below. If that's you then welcome to the club. Stalwarts will know this already but if you want to see the range of topics we've covered then you should check out the archive of the last few copies either on our website or at <https://micropezids.myspecies.info/node/301> where the Bulletin editors have stored them. The last time we'll be able to upload to the latter as it freezes up in June.

So what is in that range of topics to interest you? Like all popular magazines you might have to hunt back through a few previous issues for something in particular. It would be nice if we were able to assemble an index to help with this like the Dipterists Digest editors have done with theirs but I fear that's a task for some willing volunteer in the future.

One particular range of topics that has arisen in recent discussions is recording methodology. There are several ways of doing it and each Recording Scheme has their preferred methods; the back covers of this Bulletin indicating what those are.

Recording for yourself

Most important is your observations and choosing a method that suits you best, just make sure you record all the four "W"s (who, what, where, when.) If you're a new reader then this list of methods might help:

- **Notebook**, mini tape recorder, mobile phone, tablet, camera
- Spreadsheet (MS Onenote is also an invaluable notepad)
- Personal photo collection (iMatch) making sure to download from cameras and phones and add geospatial coordinates
- Personal specimen collection: go to one of our workshops (see bursaries) or obtain *A Dipterists Handbook*
- Biological recording software: Recorder, Mapmate

Beyond that you're then looking at the most suitable ways to pass that information on to others.

Feedback

My late boss Derek Lott used to delight in announcing the number of emails he'd received in the morning, an indication of the popularity of our department I suppose. He'd then return to his office to answer them all. This Bulletin is similarly popular, by late January I'm still working my way through some 170 incoming messages. A whole range of topics, amongst them a number of encouraging responses to the last Bulletin:

congratulations on another excellent Bulletin ... 50 editions are a commendable achievement and it would be a lot thinner without your contributions.

Congratulations on another bumper festival of flies Bulletin

Indeed it was a bumper edition, which doesn't occur very often.

Our thanks to all the contributors, we're always on the lookout for more articles; topics we'd like to see include anything iRecordy, Recorder & MapMate, techniques, expeditions and good reads. Sadly we've not the resources to actually commission material but fortunately we know many who are happy to devote their valuable time to help keep us informed. Notably the Recording Schemes with their newsletters and other stories; and if you've a tale to tell ...

One or two blurred copies did escape the checks, many thanks to Jane, Mark and Tony for chasing this issue. If yours was one too then don't forget that Anthony Bainbridge holds all our spare copies and will be happy to replace it.

The Ides of March

Emerging from hibernation after the long winter's sleep, naturalists and others begin to collect their wits and start their activities again. The first of the year's four rambles by the United Field Naturalists was a favourite, usually a cold start but plenty of encouraging signs of spring to build up the enthusiasm for the forthcoming season. So too with many other organisations in the country, traditionally gathering on this second weekend in March each year.

Along the Open Data trail

BRC's invitation to an "Olympic" Recording Schemes meeting that weekend gave rise to a marathon task for yours truly in January as there are many tales to tell. The meeting was just for the Recording Schemes so you may not have heard of it.

Though Dipterists Forum is a small pond in our sector we've the highest diversity of Recording Schemes so the variety of tales is high and the assortment of hats worn by our organisers and contributors quite extensive.

BRC asked Recording Schemes for contributions so I compiled an Open Data poster, dusting off an old NBN hat to do so. That hat was described by NBN's Jim Munford back in 2006 (see Bulletin #72) as worn by "movers and shakers" and was led by RSPB's Mark Avery (who still moves and shakes in British Wildlife.) A more recent GBIF hat takes in a number of broader international issues too, my scheme having a European scope (as in DF objective g.)

Open Data is clearly a topic of great interest to all involved, NBN's Mandy Henshall asks for a blog on the issues raised in the poster and NFBR's Chair Sarah Whild opined "*I agree with your stance re open data*". GBIF of course is particularly keen to see it used. All of these organisations place particular value on the efforts of all us recording naturalists.

After my submitting the presentation BRC responded with details of their event. Data Flow from NE's Mike Prince, BSBI Atlas (Oli Prescott), statistical modelling from Gary Powney & Rob Boyd, visualising records and engaging recorders from Simon Rolph & Rich Burkmar, an iRecord helpdesk, a Butterfly Conservation presentation, something on Red Lists and finally AI image recognition.

No doubt BRC will be writing up a full account of the meeting like they did for the last one but in the meantime if you're a Recording Scheme organiser able to attend then Bulletin editors would appreciate a brief paragraph of your impressions. I'll be happy to receive responses across the wider fauna & flora groups arising from any issues raised that are relevant to us and perhaps tell you about the Newark Wood Show that weekend.

Darwyn Sumner

If you're invested in security and certainty, you are on the wrong planet. Pema Chodron

Dipterists Forum objectives

- To foster the study of Diptera, including linking with other disciplines where there is a relationship with other animals and plants.
- To promote the recording of all aspects of the natural history of Diptera, including the advancement of distribution mapping.
- To promote the conservation of Diptera.
- To encourage and support amateurs in harmony with professionals in museums, institutes and universities.
- To organise indoor meetings, workshops, field meetings and other relevant events.
- To disseminate information through newsletters and publications.
- To focus on the Diptera of the British Isles whilst maintaining an interest in those of continental Europe and elsewhere.

Web matters

Recording Scheme brochure

The interactive version of this, the back pages of this Bulletin, can be obtained at <https://micropezids.myspecies.info/node/301> click on any of the icons in the pdf and you'll be taken to each of the Recording Scheme's initiatives. Thanks to the readers who spotted errors, now corrected. On the same page you can obtain pdfs of previous Bulletins covering all my 50 as editor as well as those by Martin Drake and Alan Stubbs.



That website is due to be frozen in June due to the withdrawal of an international service by the Natural History Museum. Hopefully you'll be able to access the materials that are there now. I won't be able to add anything more though, so unless someone comes up with £3k+ to replace the site along the lines that Barry Warrington has done with his then that's the end of an era. No more space for the hundreds of distribution maps, images and articles and an end to the production of a wide range of Bulletin-related guides and archives uploaded there. Fingers crossed existing ones will still be accessible. There's a need too to find the same kind of time that Barry Warrington put in to restructuring his site and transferring his thousands of hours' work. *Si officium operae pretium est facere bis operae pretium est.*

Science publishing in crisis

Seems that others share concerns over issues surrounding Science publishing that we've raised in the Bulletin recently. The Guardian (3 Feb) raised the topic, being heavily critical of the inadequacies of the peer review system. The tens of thousands of papers having to be withdrawn by academic journals are reckoned to be just the tip of the iceberg of scientific fraud. Read about it at <http://tinyurl.com/mtyn9kh5> and in Nature at <http://tinyurl.com/3967xujh> It seems to boil down to a battle between AIs which both create the problem and try to fix it. Our best defense before it swamps publishing in our sector too seems to be Open Data, a summary of our take on that is in our poster below. You'll know it's too late for us once you see a paper reporting a sighting of the Loch Ness Monster.

Europe

There are reports of Fauna Europaea being unavailable since the start of the year. Normally a useful site to check on what we've got in Europe; many eminent taxonomists put a lot of effort into the original site.

Its country-presence claims however were not supported by any references leading to reviewers of papers asking authors not to claim country-presence of a taxon based on FE alone but rather to cite Open Data or specific papers. One fine example of the hard task faced by reviewers who voluntarily do that job for us all.

Hopefully it will re-emerge later in the year, allowing reviewers to at least tick that off their to-do list.

Darwyn Sumner

GBIF Biodiversity Open Data Ambassador

Networking Naturalists

There are several organisations of general interest to us naturalists that are worth paying attention to. They all do great work on our behalf, the majority of them less specific than just diptera but then who amongst us isn't interested in other fauna & flora as well?

National Biodiversity Network

Dipterist Forum are members of this of course. Amongst a host of other things the NBNt maintain the UK's NBN Atlas and help us upload Open Data there. Sophia Ratcliffe was our contact for that task but after many years of fantastic help she's now moved on, thanks Sophie. The new NBN Atlas Biodiversity Data Officer is Will Millard. He's been in contact with Phil Brighton and I've written to him on behalf of Dipterists Forum regarding our partner page and all the recording scheme, projects and expedition datasets we maintain there (<https://registry.nbnatlas.org/public/show/dp172>). Other members of their team we keep in touch with are their Communications and Engagement Manager, Mandy Henshall and Giselle Sterry who also looks after their iNaturalist stuff.

Look for their latest news stories at <http://tinyurl.com/3anzbjeh> and sign up for their newsletter.

National Forum for Biological Recording

A widely respected organisation who have been keeping their eye on the biological recording ball for many years. BRC boss Paul Harding was secretary when I joined 20 years ago. An independent organisation: "*We seek to promote and influence the development of biological recording and the use, management and dissemination of biodiversity information*" Find them at <https://nfb.org.uk/?q=home> where you'll discover details of their annual conference/expedition (Pontypridd, 9/10 May) and pick up their newsletters.

Countryside access



There's a "Rights of way" officer in every local council who is responsible for keeping our footpaths open.

Every now and then we should pay attention to our access to the countryside, blockages can be very frustrating. We've a member who used to carry around a fencing tool to remove barbed wire from public footpaths.

A recent mention on the wireless caused me to check out the Ramblers Association site at <https://www.ramblers.org.uk/> such a great site, maybe would could get them to add a "chasing flies" topic to their front page.

They've a few interesting news items, in one the BBC found 32,000 blockages. Whilst you are out and about then, use your mobile phone to snap and report to the local authority, just like you can for dog shit. Full instructions on the Ramblers site.

Having “fun” with *Hylemya*

by Donald Smith

I thought that a good place to start tackling my horrifying anthomyiid backlog would be the genus *Hylemya*, which has three species (*H. urbica* (van der Wulp, 1896), *H. vagans* (Panzer, [1798], *H. variata* (Fallén, 1823)) in the top 20 most common anthomyiids recorded in the UK. Males of *vagans* and *H. nigrimana* (Meigen, 1826) are relatively large, have aristas that are extravagantly, though sparsely plumose, and a small lower calypter. Their legs are not entirely dark, the tibia being yellow for *vagans*, while for *nigrimana* the middle and hind femora are also yellow. Easy enough distinctions for a beginner. Annoyingly though, according to the DF Anthomyiidae Handout (Ackland, Bentley and Brighton, 2018), *vagans* and *nigrimana* can't be separated for females, and so I was left with more than 40 unidentified specimens.

What if I could find some feature apart from leg colour that distinguished the males of the two species – I could then see if the same character was variable among the females. Choosing a male of each species at random, I found several minor differences in thoracic bristling and several other characters. But of a dozen possibilities, only two held up for the other specimens – almost all male *nigrimana* had a tuft of orangey hairs at the anterior side of the posterior thoracic spiracle and most also had paired white marks behind the ocelli, these being absent in male *vagans*. But when I checked the *nigrimana/vagans* females, all but three of them had the orange tuft and none had the white marks.



Hylemya vagans

It isn't unusual for one sex to be more difficult to recognise than the other (*H. urbica* and *H. variata* being another example), but it got me thinking – could it be that *vagans* and *nigrimana* were actually varieties of the same species, the male leg colour just being a polymorphism within a single species? The UK distribution of *nigrimana* is similar but more sparse than that of *vagans* (NBN: 466 v. 3519 records; DF handout: 62 v. 260; my specimens 10 v. 21, *nigrimana* being 11%, 19% and 32% of the respective total of the two species). Neither species is shown on NBN as recorded on Orkney or Shetland, in Scotland south of the Forth or the far north of England, and records of both species are relatively sparse on the east coast of England, though these are probably recording biases. Both species are found from April to October, but from the NBN data *nigrimana* has perhaps become less common since 2015.

Going back to the original description by Meigen (1826), a translation (by Stuart Siddell) reads:

88. *Anth. nigrimana*

Ash-grey: thorax with three black stripes: rear body elongated with black central stripe; Legs, rusty yellow, front femur black. Male: the male appears similar to the previous "species" [*H. strigosa*, a synonym for *H. vagans*], and differs only by the rusty yellow legs, where only the front femur and feet are black ... Female: not known to me.

The keys of Séguy (Diptères Anthomyiides, 1923) and Bei-Benko (Vol V. of Keys to the Insects of the European Part of the USSR, 1989) only mention the leg character for males, Bei-Benko saying that *nigrimana* is close to *strigosa*. Hennig (Anthomyiidae, 1976), again uses only the leg character in the key for males but gives a fuller description of *nigrimana* (translation, Stuart Siddell):

Male: Exactly equivalent to the given description for *strenua* [another synonym for *H. vagans*], apart from f2 and f3 are yellow, meaning only f1 are dark. Since there are clear and constant differences on the 5th sternite and on the surstyli (compare figures in the tables), *nigrimana* is surely to be considered as a separate species and not as a variant of *strenua*, as has been assumed (for example by Ringdahl 1959, 1960) ... Length of the body: 6,5 – 9 mm ... The geographic spread of this species is, as far as known, less wide than that of *strenua*. This could be an erroneous assumption however because of the relative scarcity of *nigrimana*.



Hylemya nigrimana

This reveals that Ringdahl was doubtful that *nigrimana* was a separate species, but on the other hand, if there were differences between the male genitalia, that would clinch the question. However, referring to the Hennig figures, it wasn't clear to my inexperienced eyes what the “clear and constant differences” might be. Any minor differences I could see were not mirrored in Michael Ackland's figures for the two species, nor in my own specimens. Neither could I see that any of the subtle differences between the two species for the Ackland figures matched my own specimens, although I have to admit that I have not dissected out their fiddly bits (gonites, phallosophore, aedeagus etc.).

For females, Séguy offers a distinction between the species based on sternopleurals being 1:2 and there being no prealar (*strigosa*) or else sternopleurals 2:2 and a prealar present (*nigrimana*). However, all my *vagans/nigrimana* females have sternopleurals 2:2 and a prealar. Hennig's description of female *nigrimana* has more suggestions:

Female: With regards to the female, a difference between *strenua* and *nigrimana* is not always possible. The f1 are totally red-yellow (all posterior with the exception of the tarsi are also red-yellow), while those from the female of *strenua* are more or less darkened. According to Villeneuve (see Dulac 1960), the wings should be lightly yellow, those of *strenua*, however, should be hyaline. The feature described by Karl (1928) regarding the colouring of the “Stirnstrieme” [frons?] (completely red-yellow in *nigrimana*, only red-yellow at the front, otherwise black by *strenua*), cannot be used.

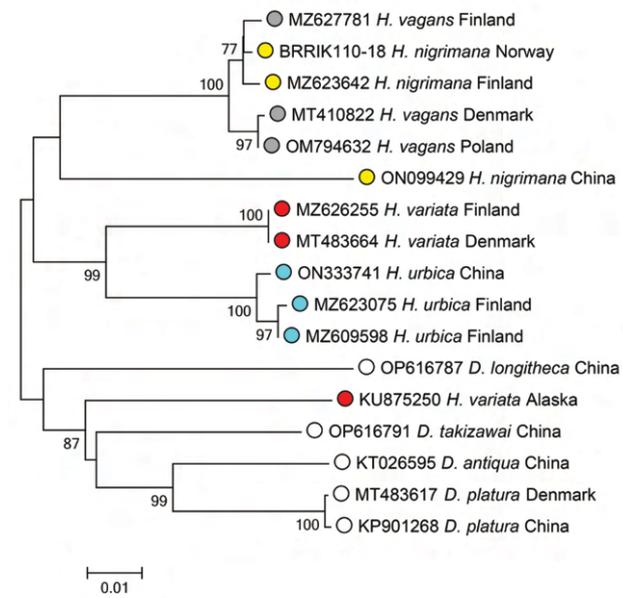
Of my *vagans/nigrimana* females, the front femurs were completely dark for 16, partially darkened for 15 and yellow for 12. If *vagans* are those with at least some darkening, that would leave 28% of the total being *nigrimana*, similar to the proportion of male *nigrimana* (32%) among my specimens. However, this could just mean that a leg colour polymorphism occurs in both males and females of *vagans*. I couldn't see any consistent difference in frons colour pattern. All three leg colour groups had a few with yellowish wings, though I find this a

difficult character to use despite my recent cataract surgery.

Knowing something of molecular biology, my next thought was to see what genome sequences might be available for the two species. Searching Genbank and the Barcode of Life Database (BOLD) revealed that mitochondrial sequences are available for both species. A phylogenetic analysis of part of one mitochondrial gene (cytochrome oxidase subunit 1 5'-region), is shown in the figure for several species in the genera *Hylemya* and *Delia*. Sequences from two male *nigrimana* from Scandinavia group closely with sequences from *vagans*; pictures of the *nigrimana* specimens on BOLD confirm the identifications. More than 200 further *vagans* cytochrome oxidase sequences are available on BOLD, and these group together but fall into two subgroups, one of which corresponds to the *vagans* Finland / *nigrimana* group, and the other to the *vagans* Denmark / Poland group. Of these additional sequences, photographs are available only for two females, one from each subgroup, both with ambiguous leg colour. However, several of the BOLD sequences that grouped with the Scandinavian *nigrimana* sequences were from males, so misidentification is unlikely.

A third *nigrimana* sequence from China is distinct from all other *Hylemya* sequences; no photograph is available for this specimen, and it could be from an entirely different species. Note that *H. variata* is also ambiguous with one of the two sequences grouping with those from the genus *Delia*. These confusing results are a reminder that sequence analysis relies on the accurate identification of specimens as well as lack of cross-contamination of samples or confusion in subsequent annotation and analysis.

Further sequencing should provide a clearer picture – I have suggested that *nigrimana* is added to the Darwin Tree of Life project. Until then, my challenge to all anthomyiid enthusiasts is: can anyone find characters, apart from leg colour, that separate their male specimens of *vagans* and *nigrimana*? Has anyone pairs taken in copula so that females, presumably then of a known species, can be described and compared? Has anyone breeding records of either species? Or should we trust that Meigen had a good eye for a species and that Hennig knew what he was talking about! Perhaps I am fussing over nothing as a way of avoiding tackling even more difficult genera in the family? I am really looking forward to getting to grips with *Pegomya* ...



Phylogenetic analysis of *Hylemya* and *Delia* cytochrome oxidase subunit 1 5'-region nucleotide sequences. A neighbour joining tree was produced using MEGA7. Numbers at nodes indicate bootstrap support where this was > 70%.

Conservation

Conservation Officer report

Coul Links - approval granted but awaiting ratification by the Scottish parliament

On 6th December the Highland Council approved planning permission for the proposed golf course at Coul Links, despite a recommendation to refuse permission given by the Highland Council North Planning Applications Committee. This approval is awaiting ratification by the Scottish parliament. A good critique of the state-of play is given by Andrew Weston via the 38degreesupport@38degrees.org.uk campaign site. He represented Ramblers Scotland in the consultation process.

The RSPB is running an online e-action campaign to petition Scottish ministers to refuse to ratify the recommendation. Visit action.rspb.org.uk/coullinks to sign this petition.

For those of our members who are not familiar with the invertebrate value of this exceptional dune system, Coul Links and adjacent Embo sites contain the only population of the endemic anthomyiid *Botanophila fonsecai*. A survey of this site in 2013 aimed specifically at studying this fly is given in Scottish Natural Heritage Commissioned Report No. 618 (cited at end). Below is the latest letter of objection to the golf course that I submitted to the Highland Council on behalf of DF.

The Highland Council
Glenburgh Road
Inverness
IV3 5NX

25th October 2023

23/00580/FUL Development of an 18-hole golf course at Coul Links

Dipterists Forum (dipterists.org.uk) hereby formally objects to this proposal.

The exceptionally rare Fonseca's Seed Fly *Botanophila fonsecai* is endemic to a short stretch of coastal dunes at Coul Links SSSI, Dornoch, Scotland. It is not known from anywhere else in the World. This species has an international conservation status of Endangered (IUCN) and is on the Scottish Biodiversity List. It is recognized by the Scottish Government as being of principal importance for biodiversity conservation in Scotland.

The latest proposal for the construction of a golf course at Coul Links SSSI follows rejection of the original 2017 proposal by the Scottish Government in 2020. An important reason for its rejection was the lack of detailed knowledge of the fly's habitat requirements. The developer has not used the intervening years (2020-2022) to commission such a survey. The onus and financial burden to do so lie with the developer, not with conservation organizations or societies. The absence of such a survey should, we suggest, be the basis for rejecting the proposal once again. Furthermore, the proposed mitigation measures are likely to be inadequate to ensure the continued survival of this species, risking its extinction. Apart from the addition of avoiding Juniper removal, the new proposal is essentially the same as the last one and as such remains unacceptable.

The phenology of Fonseca's Seed Fly is still unknown, and as such its habitat requirements remain very uncertain. The survey commissioned by Scottish Natural Heritage in 2013 (Gibbs, 2013; report #618) found 4 sites along 8 km of coastline at Coul/Dornoch. Gibbs (2013) indicated that further detailed survey work at different times of the year (spring, summer, autumn) is needed to get a much clearer picture of this species' needs, e.g. oviposition sites, larval development and adult behaviour. Without a more recent thorough survey we do not even know the distribution and relative population strengths within Coul Links, let alone the rest of the 8 km. Ignorance of such critical information is not grounds for going ahead with the proposed golf course.

The claim that 'only' 1 ha of habitat within the SSSI will be totally modified (as seeded artificial grassland etc) carries no reassurance, since the selected area may also coincide with an important breeding site for the endemic fly, or indeed some species or community of species; there is no evidence either way, so the precautionary principle should be paramount.

We note that two other flies having high international conservation status also occur at Coul Links: the siltstone fly *Theressa isorivata* (IUCN Endangered) and the muscid *Helina isorivata* (IUCN Near Threatened). Both species are only found at four sites in the UK. A number of other flies with Nationally Scarce status also occur at Coul Links.

We urge Highland Council to reject this new proposal on the grounds that it does not show that the developers have made any meaningful effort to evaluate the impact of their proposed construction of a golf course at Coul Links.

Dr Mark Welch (Conservation Officer, Dipterists Forum)
Natural History Museum, London

Gibbs, D. 2013. Survey and ecology of *Botanophila fonsecai* Acland (Diptera, Anthomyiidae), a seed-fly endemic to Scotland. SNH Commissioned Report No. 618

Mark Welch

Adopt-a-Species

Skins for strats - Judy Webb

This conservation news item concerns the results of the grapefruit skin bait-trap (Stubbs, 1987) I have been trialling for soldierfly larvae in Cothill Fen NNR and in Lye Valley fen SSSI fen in Oxfordshire. Rare species are found at Cothill, commoner ones in Lye Valley. In my last conservation news piece, I listed some questions I had posed about this method. I now have a few answers as below (in italics) to these questions but there is much more to find out. In this preliminary study, only the larger larvae were identified and only to genus. Which species might be represented?

From observations of adult flies in previous years at Cothill, *Odontomyia* sp. type larvae would most likely be **Orange-horned Green Colonel** *O. angulata*, with the rare possibility of **Silver Colonel** *O. argentata* and **Ornate Brigadier** *O. ornata*. *Stratiomys* sp at this site could be **Flecked General** *S. singularior*, **Banded General** *S. potamida*, **Long-horned General** *S. longicornis* or **Clubbed General Soldierfly** *S. chamaeleon*. At Lye Valley *Stratiomys* sp. are almost certainly **Banded General** *S. potamida* or **Flecked General** *S. singularior*. Larger *Oxycera* sp. larvae at all sites seen are most likely **Four-barred Major** *O. rara* or **Three-lined Soldier** *O. trilineata*.

Skins were checked weekly, alongside other recording duties and conservation management activities on site.



Stratiomys sp larvae from pond edge. Lye Valley 25.10.2023

In this method cleaned out grapefruit skins are placed in wet runnels or shallow pool margins like mini-igloos. As the white inner parenchyma layer gradually rots, it becomes attractive to amphibious larvae of Soldierflies, which accumulate under the skins to feed, presumably on bacteria..

Questions about the technique I had were as follows, with some early answers in italics after the question:

i. What species range of soldierfly larvae are attracted to the skins in any one site?

At Cothill Fen skins were extremely popular with Odontomyia sp and the occasional Stratiomys sp., no Oxycera.

In Lye Valley mainly Stratiomys sp. with rare Oxycera sp were seen. At nearby Chilswell Fen there are many Stratiomys sp. and Oxycera sp. (see results of a separate study in the Soldierflies and Allies newsletter).

ii. How quickly do the grapefruit skins rot enough to become attractive to soldierfly and other larvae? (what other larvae are attracted?).

Depends on temperature, skins usually take a week in summer to

begin to rot enough to be attractive, longer in cooler conditions. Skins need to be replenished with fresh ones at two week intervals. Other larvae attracted include some water beetle larvae, Tabanid larvae, rat tailed maggots (hoverfly larvae) and occasional cranefly larvae suspected to be Ptychoptera sp. Also small pond snails, Gammarus shrimps, a cased caddisfly, slugs and worms.

iii. How long before the skins become too rotten to be attractive and need replacing with fresh skins?

Depends on the temperature, in summer, they might be too rotted by week three, disintegrated, sludgy and black.



Stratiomys sp larvae under rotted skin. Lye Valley 28.05.2023

iv. What is the peak time of year for numbers of larvae under and feeding on skins – (expected to be June and July as in these months larvae reach full size, pupate and emerge as adult flies).

The best time for starting this recording of larvae seems to be beginning of May (over 30 Stratiomys larvae were found in Lye Valley under one skin on 28th May) and yes good numbers in June with a drop during July, as adults emerge. Numbers were lower after this but Odontomyia sp. noted occasionally under skins at Cothill into late October and Stratiomys sp. under skins in Lye Valley until the end of October. Water level increased so much at Cothill after this that the grapefruit skins were inundated and floated away.

v. Is grapefruit trapping a reasonable way of population estimation of any one soldierfly species?

*Seems good for the larvae of larger Soldierflies, but specific identification difficult on live larvae (some might have to be killed for keying out) and some cannot be identified beyond genus. Usefulness for larvae of small Soldierflies needs study. For Stratiomys sp. there is no way of knowing if all species are attracted equally to skins or whether for example it is the mostly the commoner ones that are attracted instead of the rare *S. chamaeleon*.*

vi. How does temperature of surface water film affect number of larvae under the skins?

On the very hot day of 7th July no larvae of any sort found under skins and the skins were warm to the touch, possibly now too warm for comfort. It would definitely seem temperature is important but it was not recorded. Something for a more detailed study.

vii. How does height of vegetation or amount of bare peat/tufa affect number of larvae under skins? Not really tackled in this preliminary study, something for a more detailed study.

After a year's recording I have some further questions that can be incorporated into a future study plan:

- To what extent are larvae accumulating under the skins just as a cover object to be a safe place to hide away from predation during day time? (see if a grapefruit sized disc of wood put next

to the skin accumulates as many larvae as a grapefruit skin?).

- Is making a hole in the top of the skin and putting a bamboo stake through it (to peg it in place) useful or should the skins be left as unpunctured ‘igloos’?
- Is it more productive to clean out the skin thoroughly, or leave as many of the white partitions intact as possible to give greater surface area for feeding?
- What happens at night? – are the larvae still under the skin or do they leave and wander more widely, returning to the skin during day time?

Reference:

Stubbs, A. E (1987) A stampede of Strat Larvae - to Grapefruit Skins. Larger Brachycera Recording Scheme Newsletter 4 (pages 4–5).



Grapefruit skin with partitions left in and *Stratiomys sp.* larvae 25.10.2023

Judy Webb

(I've tried this in my garden Judy. How do you stop the blackbirds and robins turning them over and eating all the contents? (ed) Judy says pin it down with a pointy stick)

Site-seeing iNaturalistUK

Without any kind of designation some of our most valuable sites are at risk. Even the lowest tier, Local Wildlife Sites, may have only been designated on the basis of brief botanical surveys. If they even fail to meet that grade they may still be of considerable invertebrate interest.

Perhaps we can add the idea of “undesignated sites of invertebrate interest” to our Bulletin shopping list. Technology offers some good tools to share location details, SatNav data points can be exchanged as we’ve discussed before in this Bulletin but iNaturalist site-based projects can help a good deal more by providing maps. On my list for revisiting this year:

- **Norfolk:** Burgh-next-Aylsham (<http://tinyurl.com/2dhusm55>) LWS in process
- **Cheshire:** Worthington Flash (<http://tinyurl.com/3vrpk2w7>) for *Neria femoralis*
- **Leicestershire:** Cloud Wood (<http://tinyurl.com/3259wy7m>) county favourite
- **Lancashire:** several sites (<http://tinyurl.com/bdfa5pvf>) historical hotspots

Thus doubling the value obtainable from iNaturalist because it can be used to share site information too.

Maybe you know of some good sites in your area that are worth visits by other dipterists, do let us editors have links to ones you’ve created. It’s such an easy thing to make those site maps using iNaturalist + Google Earth to draw shapes. Once you’ve done that and set up an iNaturalist project as a container for them there’s space too for any amount of text descriptions about the site such as parking spots etc.

Like our blocked footpaths we’ll lose them if we don’t investigate them (BNG doesn’t currently cover invertebrate interest though.)

Darwyn Sumner

[The most effective way of ensuring you don’t drive past a stonking site on your way through an unfamiliar county is to have Alan Stubbs in the car with you]

Fly-fishing



“Did you remember to send that photograph of our Isle of Egg trip to the Bulletin editors Donald?”

“Yes, but if it comes out wrong I’m sure Darwyn will find a suitable replacement picture”

Scotland takes many of the prizes for contributions in this issue. Zoe assembling a great set of speakers for our Edinburgh Annual Meeting and then organising a team from those attending to write about all their presentations.

Donald Smith and his Malloch Society friends tell of an expedition and Andy Godfrey tells us he’s got the Buglife contract for the Cairngorms study regarding which Rob Wolton has previously made appeals in this Bulletin.

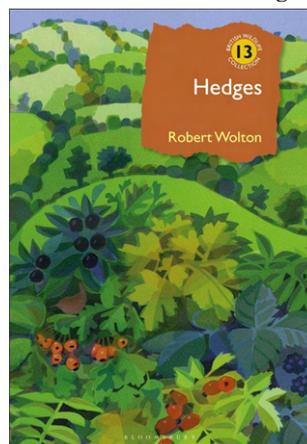
Add to that all the rearing and other techniques and that’s several items ticked off our usual shopping list.

A few more regions have joined our two formal regional groups in this issue. Hopefully that suggests there’s a good deal of interest in this kind of article. A full set of iNaturalist sites visited by our Devon crew would be really valuable.

Reviews

A popular section but one which has proved somewhat expensive and time-consuming for just one writer. The editors could really use your contributions. Ideas for the next issue:

1. Diptera articles seen in journals and on ResearchGate
2. Dipterists Digest
3. Otherlands by Thomas Halliday (palaeobiology)
4. *The new “locust years” of ancient-woodland destruction.* Ian Rotherham (British Wildlife Vol 35 #4)
5. Rob Wolton’s book **Hedges**



The host of tales and tips to be found in this Bulletin come from across our membership. We could always use more no matter how complex or trivial and we’d like to hear from you.

Do contact us if you are engaged in projects of interest to you or simply if you have something to tell. Help create our next “excellent” issue.

Darwyn Sumner, Editor

Recording

The main features in this Bulletin are:

- Support for Recording Schemes
- Recording Sites
- Open Data
- iNaturalistUK reports
- News from various Recording Schemes
- Summary of Expeditions & Projects

Recording Scheme support

With such a diverse range of approaches and focusses adopted by the Recording Schemes and Study Groups it's unsurprising that a consensus over general support strategies cannot easily be achieved.

Rest assured though that we're able to deploy what support we can amongst all the other activities that are carried out by the incredible volunteer efforts of Dipterists Forum.

The two main support arms are the story-telling in this Bulletin and any advice that may be offered by the editors and fellow Recording Scheme organisers and enthusiasts and the general Recording Scheme support offered by BRC.

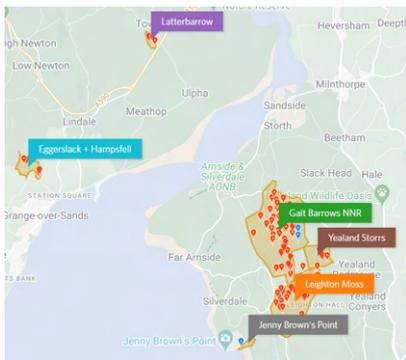
Feedback to the Recording Schemes is important. The organisers have put an immense amount of effort into their specialist groups and they rely on responses from those with similar interests to respond to them in various ways.

So if you've an interest in a group, particular skills to offer, tales to tell or problems needed to be solved and a wish to get involved then contact them or Bulletin editors or BRC. Helping the Recording Schemes do their stuff is what Dipterists Forum is best at.

Site Recording

This has always been a tricky area for naturalists. Historically you'd have used maps and grid references and hope someone in the party knew their way around the reserve. Nowadays frequently less than that, just text descriptions on how to get there, some even forgetting how to use OSGRs.

Technology came to our aid with GIS and if you know how you can find some super maps online or develop biogeographical ones yourself. It has also become a lot simpler to share site information amongst ourselves, simply by combining the easy tools of Google Earth with an iNaturalist Umbrella project like this. Each one hand drawn and each can have text notes of site details.



Sharing sites with Google Earth



Users of Google Earth will be familiar with using it to keep a record of places they've visited, all neatly organised by Vice Counties. Mainly as points as they are easy to pin onto a map. Move on to the "Add polygon" tool though and you can define a site by drawing around an area. Just one tip for this is to ensure the Fill is mostly transparent as you draw. In this way you can build a very useful collection for yourself (provided you never forget to File| Save| Save my places.)

Everything you have can also be shared with others if you save them as kml files, we've done this with some of our Field Weeks so that folk can bung them into their SatNavs.

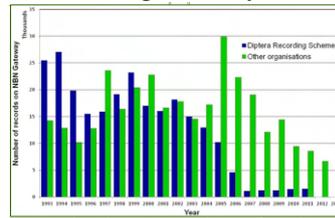
Draw some site shapes now, especially for those regions mentioned below, and send them to us so that we can share them via the site-based iNaturalist projects that have been set up. (Eds.)

Tip: Take a hand-held GPS with you in the field this year and record tracks. We plan a navigation feature for the next Bulletin, contributions welcomed.



Open Data - 10 years after

In 2014, at a meeting arranged especially for us by BRC & NBN at the Natural History Museum we were presented with the following summary of our Open Data efforts:



At around 2009 the cumulative sum looked rather impressive but in 2014 our efforts occasioned the comment "Diptera schemes were not really pulling their weight on the NBN". (Lightfoot in Drake, 2016) Since then the vast majority of those records didn't make it across from Gateway to Atlas so those blue bars shrank by 90%

The recording efforts of most members aim for Open Data so the subject inevitably arises quite frequently as we recount our successes. The valiant efforts of our Recording Schemes (<1/2 currently) plus those working on our expeditions and projects are shown in the green doughnut below.

Attempts to stimulate debate on the topic of increasing diptera Open Data records and supporting Recording Schemes are directed at a key function (objective b.) of Dipterists Forum.

Following several articles on Open Data in this Bulletin and elsewhere I've been asked to make another presentation.

The scale of the Open Data topic of course would occupy much more even than many conferences, well beyond the scope of a single presentation. Indeed there have been several such conferences since the topic is at the core of major organisations devoted to the task such as NFBR, NBN and BRC who support them.

Historically Dipterists Forum members have been deeply involved in these conferences, a keynote one for us was at the NHM in 2014, organised specifically for us. A particularly memorable one involved a presentation by Derek Whiteley & Steve Garland at a Lancaster NFBR conference (for Recording Schemes) in 2016 whilst both Martin Harvey and Chris Raper have been regular presenters at nearly all of them; even I've done a short one.

Such conferences and debates continue to this day:

1. **NFBR 2022** Curating the Past, Creating the Future: Legacies in Biological Recording

Report at <http://www.nfbr.org.uk/?q=conference>

2. **NBN Conference 2023** Making data work for nature on 23 November at the National Museums Scotland in Edinburgh

Full report at <https://tinyurl.com/2pvrrre8>

3. **BRC 2024** National Recording Schemes Meeting 9th March, Wallingford

2020 Report at <https://www.brc.ac.uk/brc-scheme-meeting-2020>
The BRC organisers have requested submissions to this meeting, hence the poster overleaf summarised as a request for:

A quantitative review of unpublished data conducted by BRC & NBN estimating the location and extent of all non-Open Data datasets from all sources, including museums, LRCs, Recording Schemes etc. (a similar review was conducted by Paula Lightfoot in 2014, see Bulletin #81, p11)

Do try to involve yourself with the above conferences and similar if you want to be better informed. Take some of the requests from the poster below if you do attend and want some specific topics to raise. Join us in pulling some weight.

Darwyn Sumner

NBN Awards for Wildlife Recording 2024

Nominations for the 2024 Awards opened in January and runs until mid-March 2024. Keep an eye out for more information in their Network News

<https://bit.ly/Subscribe-NetworkNews>

Open Data

A presentation from the "Technical & resources" section of the NBN Data Standards & Tools Steering Group (2006*) for the BRC 2024 National Recording Schemes Meeting *DF Bulletin #72

"There are known knowns, things we know that we know; and there are known unknowns, things that we know we don't know. But there are also unknown unknowns, things we do not know we don't know." [Rumsfeld]

Known knowns

Widely known about in our sector of science of course due to the work by NBN, BRC and newsletters by NFBR, GIGL & TVERC etc.. Not so much outside it; New Scientist never but British Wildlife are crying out for new writers if anyone's game.

Open Data in other sectors is a popular subject, read Ritchie's "Science Fictions" and mentally add a chapter from our sector.

Known unknowns

Online Open Data publishing is an aspiration, it's far from comprehensive though. The gaps are widespread and huge, they need comprehensively reviewing so as to clarify our objectives:

Recording Schemes

Half of our Diptera schemes publish Open Data, amounting to ~15% of total available digitised species occurrences.

- Buglife analysed 45M invertebrate records from Recording Schemes, way more than the combined silos of BRC & NBN (which overlap.)
- What arrangements to support archive and security have been made for all the unFAIR data?

Journals

Not many journals or reports in our sector embrace the Open Data principle by specifying an OD source of occurrences in articles. Only PlosOne includes it in their guidelines for authors, Zootaxa doesn't demand it. Smaller journals may sometimes attempt FAIR principles but they are very rarely encountered in ento journals. We're decades behind the medical sector. Guidance can be found at <http://tinyurl.com/5f9bz2m8>

- Since we advocate the scientific value of OD and do most of its gathering then shouldn't we be pressuring all journals to mandate its use in published articles?

Local Recording

What's the proportion of records that are retained locally and not submitted to NBN Atlas? There used to be a financial incentive from English Nature for LRCs to upload. Charles Roper detailed data flows and I reported to ALERC on RS some years ago,

- What's the data flow picture now?
- What's the current status of our biological recording software?

Collections

Lifetime works by naturalists end up in museums (or skips in at least one famous case.) Some of this may have achieved Open Data status during the collector's lifetimes but a good proportion has not. Collection datasets can be found on NBN Atlas, Derek Lott's coleoptera is an example, but all collections should be uploaded. This process began in earnest in 2023 with the DISSCO project (see comment by Open Data Institute at <http://tinyurl.com/4hb3872t>)

- A summary of uploaded Open Data datasets across the entire museum sector and an indication of progress
- A review/catalogue of collections awaiting or undergoing processing

Countries are thirsty for summarized data and insights for policy-making but we are running short of tools (Martinez, 2023)

The Naturalist's Toolkit

The following processes are pretty much common to all naturalists, the latter half of them in particular by those organising Recording Schemes.

Collection	Traditional + iRecord & iNaturalist. At least 8 different methods
Collation	Desktop applications: QC issues & verification
Management	Desktop applications such as iMatch, Recorder versions, MapMate
Analysis	various such as Biogeography, Phenology, use of R.
Dissemination	websites with ID keys, guides etc.
Publication	includes both journals & open data publishing + DwC issues

Most of the tools we use find their way into that list somewhere so it could be used as the basis of a RS survey. Online systems have achieved inroads into some of them but by no means all. For example not your image collection or biogeographical, trend and other analyses.

- Huge rise in website costs to Recording Schemes (£3,000+ each) following the Natural History Museum's freezing of an enterprise scale (~£3M) service (Scratchpads <http://tinyurl.com/2u95hstb>) No marketplace equivalents or alternatives available. Loss of valuable online storage space for guides and no funding.
- We've also lost the FSC Biodiversity Forum which supported their online Identikit key system (which still works)
- Incoherent taxonomic support once you stray out of the UK
- Darwin Core utility allowing conversion from spreadsheets available to professionals or R6 users, not to most RS organisers though. (see Mesibov on GBIF, e.g. at <http://tinyurl.com/bdzdajca>)
- No dedicated or suitable Electronic Document Management Systems or Citation Managers

Expeditions

From brief rambles by Natural History Societies, through surveys conducted by LRCs and Recording Scheme groups to international expeditions organised by UK museums.

- Can we locate the museum expedition Open Data datasets?

Dipterists Forum have published numerous Open Data datasets from annual expeditions (<http://tinyurl.com/5n7wdx4k>) since 1998, with BRC help the latest few are down to a fine art.

FAIR Badges = accreditation?

Love badges? There's a system for obtaining those, detailed by Jorrit Poelen at <http://tinyurl.com/aw4znkeu> Test it on your datasets to get them for your website etc. (sample mine.) Perhaps the NBN partner pages could display those for our datasets.

Unknown unknowns

Engage the recording interests of naturalists via the Recording Schemes and we'll find out (iRecord, iNaturalist, desktop systems etc.)

Open Data advocacy has been the subject of numerous articles in various forums over the past 25 years. The above summarises several of the most recent issues relating to Recording Schemes and Field Expeditions.

Darwyn Sumner: GBIF Biodiversity Open Data Ambassador
[Organiser of three Recording Schemes]

"UK has a quarter of all Diptera records on GBIF"
Chris Thompson (Smithsonian), 2009

With thanks to Chris Thompson (Smithsonian), Giselle Steery (NBN), Sophie Ratcliffe (NBN), Sarah Whild (NBR), Phil Brighton, Robert Mesibov & Jorrit Poelen



NBN Atlas - Open Data

Recording progress



Open Data Diptera records on Dipterists Forum's partner page on the NBN Atlas finally passed the 100k target soon after the last Bulletin and by the end of 2023 stood at **113,882**. The additional 14,181 were a mixture of sources, one batch of Sciomyzids, two larger uploads from our two Field Weeks, the MES project plus perhaps a small trickle from Recording Schemes (which cannot be tracked.)

Many records pass from BRC's iRecord silo to the NBN Atlas (their major system overhaul now being completed) once they've been verified on iRecord.

The rise in numbers is attributable to two sets of activities, firstly the Recording Scheme organisers who are carrying out verifications on iRecord (though not all of that work passes through) and the team responsible for the Field Weeks; currently Jane and Martin - and of course all the dipterists who attend those expeditions and submit iRecord records; again not quite all of those get included because we've yet to work out how to include those from the growing number of photographers recording exclusively to iNaturalist.

You can monitor the progress of Open Data on our Dipterists Forum partner page at

<https://registry.nbnatlas.org/public/show/dp172>

Open Data growth potential 2024

Numerous suggestions have been made as to how we might boost those numbers, these suggestions are frequently to be found in recent Bulletins and are summarised here as a kind of shopping list:

1. A big boost could be achieved simply by transferring other popular datasets onto our Dipterist Forum partner page (e.g. Craneflies: historic dataset 137,495; current 38,610 or Soldierflies with over 150k), NBN tell me this is perfectly feasible.
2. More verifiers to help Recording Scheme organisers
3. More Recording Scheme organisers to set up datasets by making arrangements with BRC. A good deal of iRecord verification work doesn't currently get uploaded to Open Data (e.g. Conopidae (5230 awaiting), Muscidae, Bibionidae, Scathophagidae, Tephritidae.)
4. Less than half of our Recording Schemes deliver Open Data (see Recording Schemes booklet - Bulletin back pages.) DF committee have deferred discussion on this issue. If others share Open Data concerns amongst our Recording Schemes perhaps they would be good enough to add to that discussion when it begins.
5. More practical and technical help for Recording Scheme organisers to upload datasets to NBN Atlas
6. More reassurances from NBN (and BRC) regarding Quality Control issues and mechanisms
7. More from the missing Field Weeks (see below)
8. Datasets from Spring and Autumn Field Meetings
9. Data extraction projects (see below)

Next target: 150,000

A **FAIR** growth rate, estimated from the graph on p10 would be in the region of 10,000 to 15,000 per year. Much easier to achieve these days than ten years ago.

General support for Recording Schemes

Scheme-specific websites have proved invaluable in promoting their activities in recent years. The now-discontinued Scratchpads having proved highly successful. Support for replacements have proved either expensive or impossible. Barry Warrington's solution was to seek funding elsewhere than NHM who dropped their support. We need more support.

Darwyn Sumner

iNaturalistUK

 Schemes in the following accounts with the green birdie symbol have iNaturalistUK projects at the following site:



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

In addition to **Recording Scheme projects**, (23/30) all the **Dipterists Forum Expedition projects** are linked on one of the Journal pages. Membership is gradually increasing - do join us. The site augments the information on the Bulletin back covers.

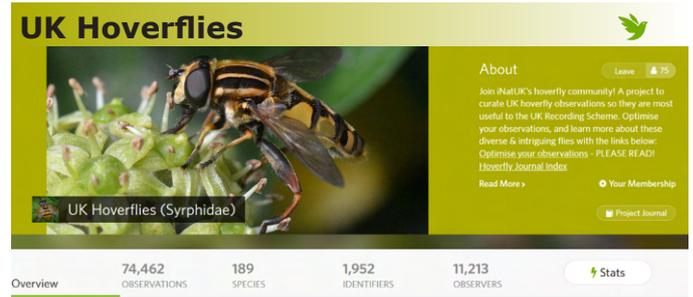
Growth

Now with 73,000+ records across 25 Recording Schemes. Very similar to the numbers in the separate Hoverflies project.

Joining iNaturalist projects

Signed up members now number 57, these folk can monitor their contribution to our recording schemes because most of the fly pictures they post will now show a link to our Dipterists Forum project.

Recording Scheme organisers are urged to join their own project. A representative image on each individual project would be nice too.



<https://www.inaturalist.org/projects/uk-hoverflies-syrphidae>

Matthew Vosper is now highly active in this iNaturalist project for our Hoverflies set up by A Emmerson in 2020. Matthew has added a huge number of useful identification guides and recording analyses to the Project Journal. A sort of blog I suppose, so be warned, it'll keep you busy reading for the best part of a morning.

By the end of 2023 there were 75 signed up members and the successful ID rate was a whopping 79% thanks to their efforts.

Expedition iNat Projects

The journal on our Dipterists Forum page has the links to all the expedition projects (and others) that we've set up -

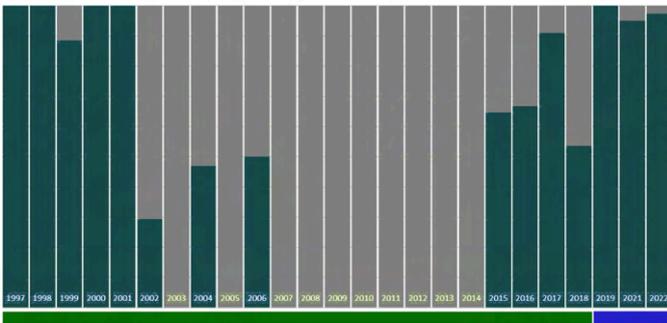
<https://www.inaturalist.org/projects/dipterists-forum/journal>



Filter tips

An ideal way to start looking at a group not covered by Recording Schemes or in an area of your own (VC perhaps) is to set up an iNaturalist filter yourself. No need to share until you're ready (or at all) but after that we'll be happy to publicise in this Bulletin. Dipterists Forum is here to help and places no bureaucracy barriers or hurdles - all the way up to a full Recording Scheme.

Field Week Expeditions



Field Week Open Data status based on numbers of participants:

Dark green bars: data has been uploaded to NBN Atlas (=Open Data)
Grey bars: data not yet submitted to NBN Atlas

Epoch 3

Some small backlogs, from just a couple of participants, are currently in the pipeline for the Field Weeks 2003 to 2014. These will have to wait until the autumn due to a heavy workload, by which time it is hoped that NBN have implemented an improved data partner page (separating Recording Schemes, Expeditions & Projects.) In the meantime, if you've any datasets from this Epoch that you cannot locate as Open Data on the NBN Atlas, do send them to me and I'll be happy to process them. BRC have also kindly offered to help with that task.

NBN also provide full instructions on how to upload to the Atlas at <https://tinyurl.com/46uhas2x> please ensure they are added to our Dipterists Forum partner page (<https://registry.nbnatlas.org/public/show/dp172>) if you do it yourself.

Epoch 4

The status of these datasets has improved considerably since the last Bulletin. The first batch of the Epoch 4 Field Week datasets, Stirling 2019, Cornwall 2021 and Norfolk 2022 are all on the NBN Atlas now that it has become available for new data.

None are overdue except our spring Oxford 2022 meeting though we've yet to consider spring and autumn meetings. The summer 2023 dataset is still accepting iRecord records and will be processed in the spring of 2024.

Darwyn Sumner

Recording Scheme News

Small Acalypterates Recording Scheme

Currently little to tell, iNaturalist has 856 records at

<https://www.inaturalist.org/projects/smaller-acalypterate-families> and when BRC set me up as verifier to the other families perhaps we'll be able to summarise iRecord figures. Maybe we can then grow our NBN Atlas dataset (779 records) at

<https://registry.nbnatlas.org/public/show/dr2747>

Darwyn Sumner, Nigel Jones & Steve Falk

Agromyzidae Recording Scheme

Agromyzidae of
Great Britain
and Ireland

Everything you need to know about
Agromyzidae (Diptera) species recorded
in Great Britain & Ireland



Barry Warrington has now transferred all the material from his Scratchpad website which was severely impacted by the Natural History Museum freezing to a new site at

<https://agromyzidae.co.uk/>

His crowdsourcing efforts proved successful thanks to BENHS and YNU.

Soldierfly Recording Scheme



The iNaturalist project is capturing a lot of interesting records, amounting to 12,699 now with 7 members. The scheme's NBN Atlas Open Data dataset is freestanding at

<https://registry.nbnatlas.org/public/show/dp37>

and shows 151,525 records, whilst the website at

<https://soldierflies.brc.ac.uk/>

is packed with other resources

Newsletter #10 in this Bulletin

Hoverfly Recording Scheme

Newsletter #75 in this Bulletin

David Iliff davidiliff@talk21.com

Stilt & Stalk Fly Recording Scheme



The freezing of this scheme's website by the Natural History Museum was rescheduled for June, it remains functional at

<https://micropezids.myspecies.info/>

Curiously the Newsletter issue 5, uploaded to ResearchGate at

<http://dx.doi.org/10.13140/RG.2.2.25601.84325>

reached 100 reads just before the UK launch via its inclusion in the last Bulletin, after which it rose to only 106 by the end of the year. Suggesting perhaps that there's a lot more interest worldwide in what we get up to.

The European iNaturalist site now has 26 members and 2,924 records; fun to monitor frequently during the flying season but declining to a trickle outside that. The UK site has 7 members and 389 records, There are a further 69 sets of images on iRecord but as I explained, there's no-one to verify those. The rest of the iRecord records number 180 now, I verified some during last year but it's clear from some odd names assigned that some of those uploading records are using outdated keys and taxa from ~80 years ago rather than the current recognised keys & taxa. The Open Data on NBN Atlas remains stuck at 6,409 (23-04) despite my iRecord verification efforts. Again I shall combine an iRecord download with other contributor's spreadsheets and submit directly to NBN Atlas this year in order to fix this glitch.

Darwyn Sumner www.inaturalist.org/people/202372

Crane fly Recording Scheme



Newsletter #42 in this Bulletin

John Kramer john.kramer@btinternet.com

Sciomyzidae Recording Scheme 🦟

When I started at the end of March the **Open Data** dataset at <https://registry.nbnatlas.org/public/show/dr2518> stood at 3165, this rose to 4568 following my spring **iRecord** verification efforts once NBN had addressed their database infrastructure and BRC's submissions to them were able to continue.

There still remains a lot of verifying to do, all last season's **iRecords** plus those I left. If you've an eye for Sciomyzidae then get in touch and we'll arrange for you to verify some.



Coremacera marginata (female) [Sam Thomas from the DF Flickr group]

The **iNaturalistUK** project with 598 records has only 4 members which is surprising given the interest shown over the years in this group.

<https://www.inaturalist.org/projects/sciomyzids-uk>

Newsletter #7 was added as a preprint to **Researchgate** on 4th August. Add to the 44 reads by downloading it at

<http://dx.doi.org/10.13140/RG.2.2.35768.11528>

If you've a resolution to get more involved in a fascinating group in which you can actually find stuff fairly frequently then this is the one. We've got big guns deployed if you need them, Steve Falk has a comprehensive guide on his Flickr site (all linked in that Newsletter) and Stuart Ball has a superb key to download from our website. In fact Stuart is due to give another workshop as part of the Tanyptera project this year.

Finally my apologies to Mike Paskin who sent me a bundle of hand-written records. I will get around to digitising them once the typing injury goes away, think yourself lucky you don't type Mike (or saw and chisel English oak I guess.)

Europe

From the Corsica expedition recounted in previous Bulletins we now have a report on the Sciomyzidae from Jonas Mortelmans & Mark Pollett

Mortelmans J. & Pollett M. 2023. Sciomyzidae of the Our Planet Reviewed in Corsica 2019-2021 expeditions (Diptera). Bulletin de la Société entomologique de France 128: 597-604.

Published on Researchgate at <https://tinyurl.com/4edkvxxv>

The expedition found 21 species, doubling the checklist for the island and found many fascinating species.

Darwyn Sumner

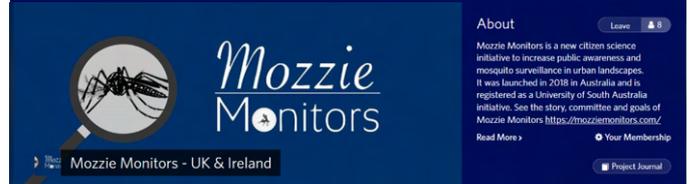
Ian McLean is now ianfgmclean@gmail.com

Empid & Dolichopodid

Your call to arms in the bulletin motivated me to try and do something about the nearly 6,000 Empid records awaiting verification. I've reviewed around 4,000 now and moved many to the stage where they can become open data

Nigel Jones (pers. comm.)

Mosquitoes 🦟



I discovered this iNaturalist project by chance when one of their expert team kindly identified one of my posted images.

<https://www.inaturalist.org/projects/mozzie-monitors-uk-ireland>
Set up last June by a Brazilian living in South Australia as part of a wider scheme, this UK project is attracting members like flies. Amongst regular UK iNat contributors is medical



entomologist Dr Ben Cull who specialises in our European fauna and tops the list of identifiers here.

Focus on the top six in 2024 if you want to race Sam Rees, Ian Andrews and Matt Vosper to the top of the "Most species" list. Species to target are *Culiseta annulata*, *Culex pipiens*, *Aedes geniculatus*, *A. annulipes*, *A. cantans* & *A. detritus* they can be found quietly hanging about on vegetation if you're

careful, like *A. annulipes* illustrated.

Confusingly there are now three separate initiatives, this one, a formal UK Gov. one and Jolyon Medlock's Mosquito Recording Scheme.

Recording Scheme Newsletters

Having raised the idea of uploading Recording Scheme newsletters as **ResearchGate preprints** in the last Bulletin, you'll be interested perhaps in progress there.

I added two, my Micropezids & Tanyptezids and the Sciomyzids (detailed above.) The site tells you the number of reads each has had: by the end of the year, 113 & 33 respectively. That's one amazingly good response for a tiny obscure group. By those measures Donald's Kelp Flies would do well, maybe we can persuade the little'uns to give ResearchGate a shot. One great outcome is that they get read by folk from all over the world

In this issue we've the big three plus a few notes in this section. If you have news and haven't enough for a newsletter then drop a line to the Bulletin editors and we'll add your piece here. Some we've not heard from in a while.

As for recording, please take note of the preferred system of each Recording Scheme, help keep them happy as they do an amazing job.

Other Projects

Steve Falk project

Plenty of valuable data from Steve's pre-2014 prolific surveying are still available if you've an interest. Extraction methodology, detailed instructions and source files are at <https://micropezids.myspecies.info/node/307>

Darwyn Sumner

Techniques

Necessity - the Mother of Invention: My lockdown projects



by Boyd Barr b340barr@btinternet.com

Inspired by incredible photographs in the Dipterists Forum bulletin, I decided during “lockdown” to develop ideas for entomological equipment not readily available and to build them using my engineering skills. In this article I describe a range of equipment and accessory kit that I displayed at the Dipterists Forum meeting at Edinburgh in November 2023. Please contact me (email above) to ask about fabrication of bespoke kit and any ideas you have for innovative designs.

The configuration shown in **Figure 1** is the result of an evolving design process and enabled me to become involved in the world of photo stacking, a system called “Zerene”, attempting to achieve high-quality images intended for publication. First, I had to find an existing microscope capable of modification and possessing other unique features. I eventually chose the M15, a model produced in York by Cooke, Troughton and Simms. It met all the requirements but, crucially, was built with a clutch mechanism on the rack and pinion stage movement. The clutch eliminates the risk of gear damage when motor-driven. The ability to attach several stage designs, including rotary and other mechanical stages, was another advantage.

The modified M15 incorporates a stepper motor/gear system, the drive motor situated in a way as to enable engagement/disengagement from the main gear using a rack and pinion system. **Figure 1** shows a simple stage modified with a new transmitted LED lighting unit, with its own iris diaphragm and filtration system and using neutral density filters. The configuration shown is a Canon 1000D with a Pentax Tak 50mm lens, and a Canon extension plus LED ring light. The lens configuration is capable of using existing microscope objectives with purpose-built lighting units. The remote-controlled electronic drive system is capable of 7 speeds. Speed 0 equates to 0.00063mm/sec; speed 7 gives 0.03879mm/sec. The speed ranges linearly between 0 to 7 with an interval of 0.00063mm/sec.. The photo of *Chrysotoxum arcuatum* shown above was taken using this image stacking system.

Using a programmable electronic timer for the camera set at 5 frames per minute gives 0.003165 mm/frame. Speed 7 gives 0.19395mm/frame. I am using old Canon 1000D cameras and only 10 mega-pixel sensors. My imagination runs riot when

looking at modern mirrorless Canon 40 mega-pixel, 30FPS. Expensive! At slow speeds this camera could achieve frames at less than one tenth of a micron. A small TFT screen is required to see frames during exposures; the video lead from the camera can be inserted into a larger screen.

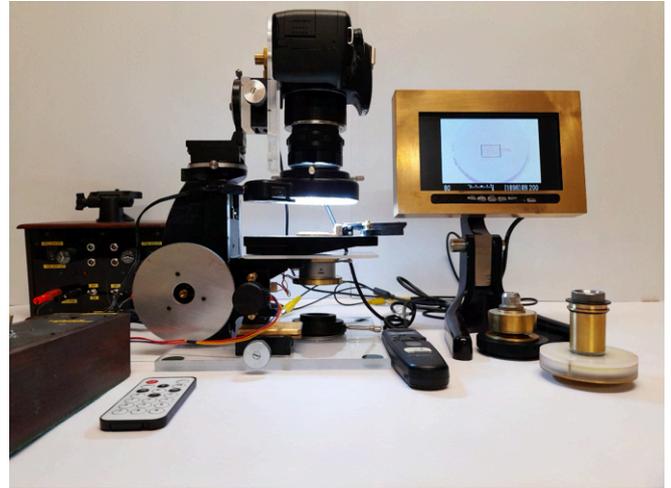


FIGURE 1. The modified M15 microscope (side view)

Adjustable Linear Rail System. A linear rail system (Fig. 2) has the advantage of photographing insects of different sizes. The camera and stage are independently capable of being moved to desired positions to enable a wide variety of interchangeable lenses. Pictured is an inverted Bronica 75mm lens with Canon extension and adaptor rings. The camera lens can be quickly changed for STD microscope objectives, or others. The arrangement for necessary drive is a 12v programmable stepper motor drive, via lead screw connected to the mechanical stage/ specimen block, again using CTS, interchangeable staging. The slowest drive speed (1.8) gives 0.0044mm/sec travel. With the programmable camera timer set at 5 frames/minute this equates to 0.0528mm/frame. A high speed of “80” gives 0.2085mm/sec resulting in 2.5mm/frame. An optional additional gearbox (not pictured) can be added to the stepper motor/lead screw to reduce the speed, giving capability of increments well below 0.001mm/frame. The current linear system requires a lot of desktop space, so I am working on modifications to allow this set up to be reconfigured in a vertical format.

Comparator Camera Unit. Another related piece of equipment (Fig. 3) was designed to enable the comparison of two specimens simultaneously – basically a comparator camera – again with multi-lens/lighting options. The advantages I have found extremely useful are examination of wing cell/microtrichia; antennae segments and many other morphometric characteristics. Pictured are two small TFT screens - the video camera outputs also plug into a “screen splitter”, providing two separate images on a large single screen. The two mechanical stages incorporate transmitted LED lighting with independent iris diaphragm and filter tray for neutral density filters etc.

Tethering

If you’re a Nikon user who likes to shoot in a studio with your camera linked to your PC then you may have bought their Camera Control Pro tethering software. Great for stacking and demonstrating. It’s been updated now and it’s free, look for **NX Tether**.
(ed)

[Canon equivalent has always been free]



FIGURE 2. Linear rail system

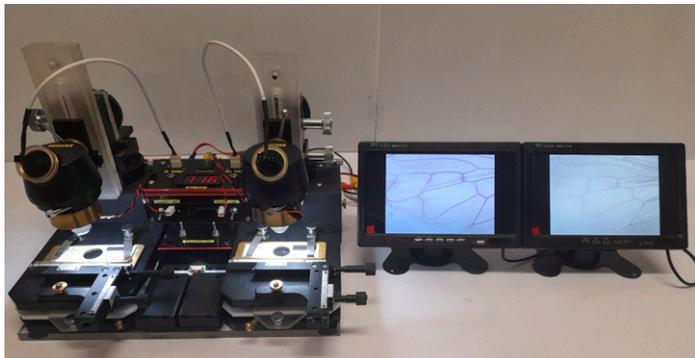


FIGURE 3. Comparator camera system

Genitalia preparation, imaging and dissection. The comparator camera design led to the fabrication of a simple camera system to trial various dissection requirements, again by using a light transmission stage with all the usual LED/ diaphragm/filter system. The stage (**Fig. 5**) is fitted with a recessed, 6-position,

rotatable platform which holds 6 shallow crystal watch glasses. This allows for quick and safer transfer of genitalia or other small body parts from one reagent to another. Again, image shows a small screen; when video signal is used with a larger screen the magnification increases enormously. I lose fewer genitalia using this than by the standard use of a stereo microscope! Furthermore, this system is well-suited to imaging genitalia and preimaginal stages.

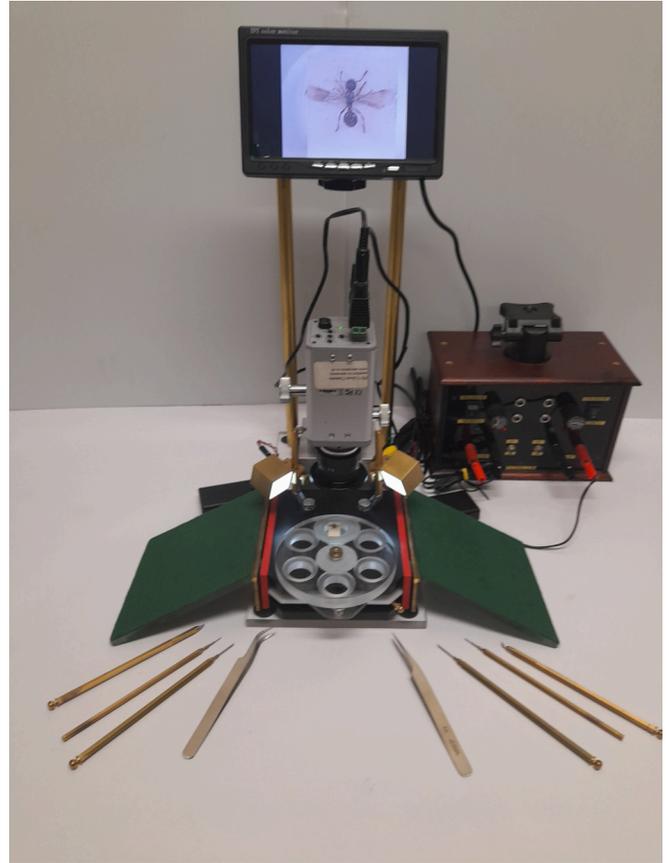


FIGURE 5. Rotatable platform for preparation of genitalia.

Pooters - for life I began designing various pooters with screwed brass fittings and glass tubes, as I dislike cork or rubber bungs inserted into glass. My pooters (**Fig. 4**) are designed to be unscrewed from both ends, allowing easy cleaning; they also incorporate a stainless-steel gauze in the suction end. The larger diameter “dumpy” types shown are very useful when your head is in the sweep net! Looked after they should last a lifetime.



FIGURE 4: A selection of pooters.

Accessory equipment. **Figure 6** shows a variety of examination stages, very useful under long-arm stereoscopic microscopes. The larger unit in the centre is a multi-gimble unit which is rotatable, indexable in x - y axes for mechanisation and has the capacity to be fitted to the linear rail system and others.



FIGURE 6. Gimbal stages with potential for mechanisation.

Members

Membership Matters

By mid-December 2023 we had 494 paid-up members and 413 subscribing to the Dipterists Digest. We have received new subscriptions from 42 people and 14 resignations. 67 members are based outside the UK. It is hoped that the new pdf membership category will encourage more overseas members. Reminder e-mails about the new rates for 2024 were sent to those members with registered email addresses. If you did not receive one it is probably because:

- we don't have your email address
- the email address we do have is out of date
- the email is sitting in your spam folder.

Communication by email is by far the easiest way to contact me regarding membership matters and for me to send notices about DF matters.

All subscriptions, changes of address and membership queries should be directed to John Showers at:

103, Desborough Road,
Rothwell,
KETTERING,
Northants,
NN14 6JQ
Tel.: 01536 710831
E-mail: showersjohn@gmail.com

Membership and Subscription Rates for 2024 have changed from 2023.

Members and Subscribers are reminded that subscriptions are due on 1st January each year. The rates are as follows:

Dipterists Forum Subscription Rates 2024

Regrettably, we have had to increase our subscription rates from the 2024 subscription year. This is necessary to cover increased printing and posting charges. The last rate increase was in 2014. We recognise at a time of high inflation that members do not need another price increase and we have decided that we will offer pdf files for the Bulletin at the current rate. The rates for 2023 will remain unchanged.

Members and Subscribers are reminded that subscriptions are due on 1st January each year. Our new rates will be:

2024

UK rates:

Membership + hardcopy Bulletin	£12 pa
Membership + pdf Bulletin	£8 pa
Membership + hardcopy Bulletin and Dipterists Digest	£26 pa
Membership + pdf Bulletin + hardcopy Dipterists Digest	£22 pa

Overseas rates

Membership + hardcopy Bulletin	£18 pa
Membership + pdf Bulletin	£8 pa
Membership + hardcopy Bulletin and Dipterists Digest	£30 pa
Membership + pdf Bulletin + hardcopy Dipterists Digest	£26 pa

We have decided to have an overseas Dipterists Forum membership without having to subscribe to the Dipterists Digest as well, as we have had a number of queries about this from overseas.

At present we are not offering the Dipterists Digest in pdf format

At a glance - (Ed.)

Membership inc.	Bulletin	Dipterists Digest	2024	
UK	Hardcopy	No	£12	
	pdf	No	£8	
	Hardcopy	Yes	£26	
	pdf	Yes	£22	
Overseas	Hardcopy	No	£18	
	pdf	No	£8	
	Hardcopy	Yes	£30	
	pdf	Yes	£26	

Subscribers who opt for pdf versions of the Bulletin will be able to download their copy from dipterists.org.uk when it becomes available. (approximately mid-March and mid-September) Pdf files will not be emailed to subscribers but a notice of publication will be placed on the website

Members who pay by standing order will have to amend their bank instructions to pay the new rate for 2024. If you do not wish to change your bank instructions via online banking, a pdf file of instructions can be downloaded from the website. Please sign it and send directly to your bank.

BANKERS ORDER PAYMENTS

You can set up a banker's order or bank transfer to pay the subscription via online banking using the following details:

Dipterists Forum
NatWest Bank
Sort code 60-60-08
Account no. 48054615

Please **add your name to the payment reference** or we will not know from whom the payment was made.

International payments should use:

IBAN: GB56NWBK60600848054615
SWIFT: NWBKGB2L

Alternatively you can send your bank the banker's order mandate form, which can be found on the DF website. This form explicitly states that it cancels previous payments to Dipterists Forum.

OTHER PAYMENT METHODS

Cheques should be made payable to: "Dipterists Forum" and sent to the address above.

John Showers

New Membership Secretary needed for 2025

I would like to stand down as Membership Secretary at the end of 2024 so we are looking for one or two volunteers to take over. I am willing to help a new Membership Secretary find their feet. It would be possible to split the job into two roles:

- Handling payments, queries and maintaining the membership spreadsheet
- Producing mailing lists for both email and postal communications

Both roles would require use of spreadsheet software (either Microsoft Excel or LibreOffice Calc). The latter software is free to download and works exactly like classic Microsoft Office. All expenses can be claimed back from DF.

If anyone is interested please contact me. I can send more details if required.

Membership benefits

All clubs have some costs, cast your eye over our last financial statement for details where you'll see what they are and how your subscription covers them. The kindness of others also means we've some income to augment those costs. Businesses, charities and community interest companies incur costs, we minimise these by being a club - no paid employees, just volunteers.

The main benefit you receive as a member of Dipterists Forum is the latest newsletter (this Bulletin) which tells you about everything we are currently doing i.e. all the other benefits. Older Bulletins are available to anybody - Open Access.

To keep your costs down we are currently offering a “**torn and soggy**” discount on the Bulletin (that's how Adrian Plant gets his copy in Thailand), you can save us an envelope, BRC a stamp and you £4 by specifying pdf only for your Bulletin.

Subscribers who opt for pdf versions of the Bulletin will be able to download their copy from dipterists.org.uk when each issue becomes available.

We can't say exactly when that will be, Jane observes “*electronic versions should be available on the members-only area of the website in mid-February and mid-September and that members should check the website around then*”. We have also modified the News section on the opening page of our website to advertise its availability promptly.

Ed

Fly zone

Contacting us

The inside front cover of this Bulletin has all the contact details you should need.

Members

See John Showers instructions above if you want to join and support us (**and get copies of this Bulletin.**) Don't forget we've also a Forum on our website where you can raise topics.

Logging on to the DF website

To log onto our website for the first time you need to use your e-mail address as the login username. The site will then send you a temporary password that you can use to log in. Once logged in you should change your password.

If you do not have an email address or if the one we hold is now out of date you will need to email me or Martin Harvey to set it up for you.

John Showers

Meetings

Watch for announcements on our website. In particular, since some of them are to be held online, look for details of how to participate.

www.dipterists.org.uk/

We invariably organise both a workshop in February and a Summer Field meeting each year. Occasionally, shorter Spring and Autumn meetings may be held too.

Meeting participants will be emailed with details once booked.

Bulletin

Contributing

For Bulletin related matters, information or sending articles for the next issue, then

email both Darwyn Sumner & Judy Webb

[Include “bulletin” in the title so's we don't lose them]

We'd also much appreciate your feedback.

Mark Welch wants to know about anything **conservation** related and Jane Hewitt needs to be kept informed about

Diptera related issues in order to do her Secretary stuff.

Deadlines

Spring Bulletin - 31st December

Autumn Bulletin - 31st July

Newsletters: Camera-ready copy only please

Downloading

Bulletin is in 3 parts: **Contents** are membership-only, **Newsletters** and **Recording Schemes brochure** are free. Details on contents page.

Note that the Contents section is interactive, no need to type out urls.

Dipterists Digest

Contact Peter Chandler

Recording Schemes

As for flies in particular, bring those to the attention of the Recording Schemes. Contact details are on the back pages which can also be downloaded as an interactive pdf so that you can follow all their links to websites, recording initiatives and newsletters. For more recent Recording Schemes see recent Bulletins, the iNaturalist site below or our website.

Photographs

Photographers may participate by uploading their images either as records to the sites preferred by each Recording Scheme or as set up for our expeditions or simply to our Flickr group. Our additional iNaturalistUK initiatives are summarised at

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

Bursaries

The Dipterists Forum holds an annual weekend course, covering a specific family of flies in detail, at the Preston Montford field studies centre near Shrewsbury. The 2024 course will be about Tachinid flies. It will run from Friday 9th to Sunday 11th February.

The Forum also has annual residential Summer field meetings lasting for one week. The 2024 meeting will be based in Lancaster from the 22nd to the 29th June. Attendees spend their days in the field collecting and observing flies and evenings in a laboratory where they can identify their catches alongside other dipterists. Beginners are made very welcome and can gain valuable knowledge from more experienced members.

We offer a small number of bursaries for each of these events, awarded on a competitive basis. Bursaries cover half the total cost of the course/meeting (full board for the Preston Montford meeting and half-board for Lancaster). If you would like to apply for a bursary for either (or both) of these events please send your application by e-mail to me, John Mousley, at john-sally.mousley@ntlworld.com.

Your application should say what you hope to gain from attending, how you would expect to contribute to the Forum's aims of the study, recording and conservation of Diptera, and why you would benefit from financial assistance. If you are currently involved in a research programme, please include brief details. We will be looking for evidence of enthusiasm and interest in flies. Preference may be given to those who have not received a bursary previously. Applications should not exceed 300 words. Successful applicants will be expected to write a short account of their experience for publication in the Forum's Bulletin.

Applicants must be members of the Dipterists Forum at the time of their application. The closing dates for applications are Friday 1st December 2023 for the Preston Montford course and Friday 16th February 2024 for the Lancaster Summer field meeting.

John Mousley

Eulogies

Mike Pugh

17TH JANUARY 1928 – 16TH DECEMBER 2023



Mike Pugh at the St Agnes, Cornwall, field meeting, July 1983 (photo Austin Brackenbury; Fig. 4 in 2nd edition of *A Dipterist's Handbook*; Mike is also in the group photos in Figs 1 and 2).

Mike was a member of the Forum since its inception. He attended most events throughout this time, including summer and autumn field meetings, annual dipterists days and workshops at Preston Montford, so was well known to many members. The photo on page 22 of the autumn 2022 Bulletin, taken by Mike, shows the other 8 who took part in the second autumn field meeting in 1976 at Ashdown Forest, Sussex and who were, with Mike, the nucleus of subsequent autumn meetings for many years. Mike collected Diptera generally but was most interested in calyptrates, especially Muscidae and Anthomyiidae. He lived at Solihull in the West Midlands and collected locally, building a good species list for Clowes Wood, one of the sites we visited during the very successful 1984 autumn meeting, which otherwise concentrated mainly on Wyre Forest. As we didn't have the numbers at the autumn meetings to warrant using field centres, we usually adapted our guest houses for evening sorting of catches, but on this occasion Mike arranged for us to use the local Bishops Wood field centre near Stourport-on-Severn. He related that he had recently booked lunch at a local pub for a party of 14 visiting the centre, when there was confusion on arrival at the pub as they had been expecting a party of clergymen – Bishop Wood and 14 parsons. Mike passed to me any fungus gnats he caught and I was

pleased to name one new to science that he found at Chudleigh Rocks in Devon on the October 1980 field meeting as *Sceptonia pughi*; this is still a rarely recorded species. When I became editor of *Dipterists Digest* Mike volunteered to do proof reading of the text, and he continued to do this efficiently for more than 20 years – he was also always ready to help with advice on any problems related to computers. As long ago as 2012 Mike, having given up active work on Diptera, decided to dispose of his entomological library, which was dispersed to Forum members, and offered his collection to the BENHS. This offer was accepted and I picked up most of it when we were in Birmingham for the 2015 AGM; the exception was the Muscidae, which were given to James McGill to assist with his work on that family. Nevertheless, Mike remained a Forum member and continued to attend some events – he was at the Drosophilid/Sciomyzid Workshop in 2017 and continued with the proof reading until 2020. I was in touch with him by email as recently as 13th December – he told me that 2 weeks previously he had enjoyed a zoom meeting with Roy Crossley and Roger Morris. When telling me the sad news, his daughter Sue said how much he had valued keeping in touch with his old friends in the Forum. Mike was an excellent companion in the field and will be greatly missed.



Mike Pugh at acalyptrate workshop, Preston Montford, February 2015.

Reference

Chandler, P.J. 1991. New species and additions to the British list of the fungus gnat genera *Zygomyia* Winnertz and *Sceptonia* Winnertz (Diptera, Mycetophilidae). *British Journal of Entomology and Natural History* 4: 143-155.

Peter Chandler

Bernhard Merz

29TH JULY 1963 – 14TH FEBRUARY 2023



Bernhard Merz in his office at the Natural History Museum in Geneva on July 30, 2005 (from Cuccodoro & Landry 2023, with permission of the publishers)

Bernhard was a Swiss dipterist who specialised in acalyprates, including Pallopteridae and Lauxaniidae, but his particular focus was the Tephritidae, the subject of his doctoral thesis. Tephritid enthusiasts will note that the genus *Merzomyia*, coined by the Ukrainian tephritid specialist Valery Korneyev, bears his name. He is a great loss to dipterology internationally; we first experienced this loss ten years ago when he had to give up active work on Diptera, but ill health had already begun to impact him by 2008. He will perhaps best be remembered by those of our members who attended the Spring Weekend indoor meeting at Cardiff on 8th May 2004 (see Bulletin No 58, Autumn 2004, page 15), where Bernhard gave a talk on the development of dipterology in Switzerland. The situation there sounded encouraging until he said that, now aged 40, he was the youngest dipterist in that country – hopefully others have been recruited since. A recent obituary (Cuccodoro & Landry 2023)

provides details of his career. He was based at Zürich as a museum curator and lecturer until 1998; he then moved to Geneva, to become curator at the Natural History Museum there, where he remained until his untimely need to retire in 2014.

My recollections of him are mainly from a visit to Switzerland in 1997, when I stayed at Bernhard's flat for a week while checking the fungus gnats and flat-footed flies in the museum collection at Zürich, before travelling to Neuchâtel to do the same there; this was for contributions to the Swiss checklist, then in preparation at the same time as ours. During that visit we had a day off for fieldwork, and after doing well at a wooded site near Zürich, Bernhard said we should go to the nearest alpine meadow. I was driving and we made our way up into the hills. On arrival we found cows, hundreds of them, with bells around their necks, jingling away; with the vegetation chewed down to the ground there were no flowers or insects, so we drove down again. On the way down through forest we spotted a roadside bonfire. Bernhard said "I must catch some of your smoke flies". We rapidly pulled up and he jumped out of the car to sweep his net through the smoke, gleefully returning with *Microsania*. It was later identified as *M. vrydaghi*, an addition to the Swiss list and the first national record for the genus, so the day was redeemed. I saw Bernhard again at the International Congress of Dipterology at Oxford in the following year. He also came with the coach party to the post-congress field meeting at Wychwood in Oxfordshire; this wasn't well chosen for a visit at this time of year as all the rides separating mostly impenetrable blocks of coppice had been recently mown and insects were sparse, almost a repeat of the alpine meadow incident. The obituary also mentions that he had a passion for tea, "which he could discuss for hours". Bernhard produced a large amount of valuable work on Diptera, and his loss is particularly felt now that his former colleagues among the Swiss dipterists are preparing an update to their national checklist.

Reference

Cuccodoro, G. & Landry, B. 2023. Bernhard Merz (29.VII.1963–14.II.2023). *Alpine Entomology* 7: 275-277.

Peter Chandler



Lispe tentaculata [Ian Andrews]



Anomoia purmunda [John Showers]

Meetings

Reports

Regional Groups

Other regional reports

We'd be happy to feature reports from other regions, you needn't be so well coordinated as the Devon Fly Group nor even ramble together.

Leicestershire Rambles

There are at least four keen dipterists in VC55: me, John Kramer and Ray Morris. Not an organised team of rambblers like the other two regional groups though I do bump into John Mousley in the field on occasion. Two of us are kept busy on other writing tasks but I'll not miss a chance to tell a tale or two.

🌿 First from me is the iNaturalist site-based project detailing several locations in VC55, find it at

<https://www.inaturalist.org/projects/vc-55-leicester>

where you'll find my local snapping in favourite local spots. An unrestricted range of taxa of course, appealing to general naturalists; we all photograph dragonflies too so those records are very interesting. It serves to answer the question of the whereabouts of my local records since I retired from managing the local records centre. If you're visiting, you'll find some nice spots - as Matt Vosper has done; if you're local then join the project and ask me to add other favourite sites.

John Kramer of course edits the Cranefly newsletter and Ray Morris' story is below

Darwyn Sumner

Ephydriidae in the Leicestershire county collections

Whilst researching this interesting group of little flies in VC55 (Leicestershire & Rutland) as part of a project to establish baseline data for future recording effort, I have been cataloguing the Diptera collections held at the County Resources Centre at Barrow on Soar. I was not surprised, but a little disappointed, when I found that there were no local specimens and only examples of six species from elsewhere. I thought it might be useful for those interested in the family to be aware of these latter specimens. Whilst species identity and locations have been given on labels it seems that there are no records of the actual recorders.

- *Notiphila cinerea* (ref CRC 42/10/1C) – Clevedon, Somerset 27/05/(19)47, three specimens
- *Parydra coarctata* (ref CRC 429/6B) – Filton, Somerset 10/09/(19)48, 1 specimen
- *Ochthera mantis* (ref CRC42/10/10B) – Sharpam Moor, Somerset 28/08/(19)48, three specimens
- *Pelina nitens* (ref CRC 42/10/2A) – Ham Green Marsh, Somerset 19/04/(19)47, one specimen
- *Scatella silacea* (ref CRC 42/10/1A) – Ashurstwood, East Sussex 01/07/(19)07, seven specimens
- *Setocera micans* (ref CRC 42/9/6A) - ?Sharpam, Somerset 28/08/(19)48, 1 specimen

If anyone has records of the family originating from VC55 I'd be very happy to receive them!

Ray Morris ray@cactusbob.net

Northants Diptera Group

A combination of unavailability and poor weather conditions curtailed the group's meetings but individuals continued to record diptera into the Autumn. Preliminary visits were made to the re-wilding site near Corby and to a country park/nature reserve in the Nene Valley. Neither site has produced anything unusual but small areas in each look promising.

Less common hoverflies reported during the second half of the season included *Xanthandrus comtus* and *Scaeva selenitica* from Yardley Chase and *Didea fasciata* from a private garden in the North-west of the county.

Few flies were retained from the moth traps at Pitsford Water Nature Reserve, but a batch in December produced the county's first *Sylvicola fuscatus*.

John Showers

🌿 A start has been made on a VC32 iNaturalist site-based project at <https://www.inaturalist.org/projects/vc-32-northampton>

Devon Fly Group



Another year flies by but 2023 is special since we came into existence ten years ago. As always, things began with our annual indoor meeting at Woodah Farm thanks to the kindness of the Devon Wildlife Trust. After a long gap since the last field meeting the previous October, it is always good to meet each other again. Eleven of us turned up and enjoyed a wide range of presentations including slow motion videos using the Olympus TG-6 camera, flies visiting a flowering ivy hedge, the taxonomic trouble with *Medetera*, horsefly eyes, rot-hole fly research as well as the traditional DFG Fly Bingo which was won by Geoff Foale. The field season programme was also discussed.



Meetings

The first field meeting of the season was the shingle beach and soft cliffs at Branscombe Mouth on the East Devon coast. There was a strong and cold wind on the day but we did rather well, heading east of the car park to investigate the tide wrack as well the vegetation/seepages at the base of the cliffs. The tide wrack consisted chiefly of small dried clumps of seaweed which were shaken inside a sweep net as well as searched with a hand vacuum. This produced a typical assemblage including *Coelopa frigida*, *C. pilipes*, *Malacomyia sciomyzina*, *Orygma luctuosum*, *Thoracochaeta brachystoma*, *T. erectiseta* and *T. zosteriae*. Other noteworthy species found through various methods were *Bibio johannis*, *B. reticulatus*, *Dilophus febrilis*, *Dolichocephala ocellata*, *Dicranomyia lackschewitzi* and *Thaumalea verralli*. We were glad to get out of the cold wind and enjoy a hot drink, cake and banter in the beach café!

Unsurprisingly, a large number turned up for the May meeting at Brimpt's Farm & Babeney Mire since the rare Bog Hoverfly (*Eristalis cryptarum*) was the target species. It was an explorative meeting as the location was a possible site for this species. The weather was perfectly ideal but the habitat did not look right. Therefore, we did not find a new site for it. However, it was still a productive meeting with plenty of spring species being found including *Alliopsis billbergi*, *Cheilisia bergenstammi*, *C. fraterna* and *C. nebulosa*. A couple of other notable species found were *Pipunculus fonscai* and *Platypalpus caroli*. Sweep netting and a hand vacuum scored a nice set of sphaeroceridae with the notables being *Opalimosina denticulata* and *Phthitia longisetosa*. All in, a hundred and seventeen species were recorded.



For our June field meeting we did the unprecedented by going into a neighbouring county, Somerset, to visit Steart Marshes which is run by the WWT. This is an extensive grazing marsh on a spit sandwiched between the River Parrett and the Bristol Channel. There was a heatwave on but the coastal breeze made things bearable.

The undoubtable highlight was finding plenty of the large tabanid, *Atylotus rusticus*. A couple of other uncommon species that delighted us were *Sphaerophoria rueppellii*, *Sarcophaga sinuata* and *Melieria picta*. Steart certainly was good for soldierflies such as *Oplodontha viridula*, *Oxycera trilineata*, *Stratiomys singularior*, *Nemotelus notatus* and *N. uliginosus*. I have a feeling we might visit this place again.

As for July, we had a field meeting at Exminster & Matford Marshes delayed by a few days due to inclement weather. The



Atylotus rusticus (Female)
Steart Marshes VC5 ST258434
17/06/23 Coll/Det : A. J. Cunningham

rain still played a part on the day and just three of us turned up to explore the RSPB reserves at the northern end of the Exe Estuary. The weather cut our meeting short but our efforts still produced a hundred and forty-seven records of exactly a hundred species. The rarities were *Sarcophaga villeneuvei* from Exminster Marshes and *Sarcophaga sinuata* from Matford Marshes. Other notables included *Zaphne ambigua* and *Lonchaea mallochi* from Exminster whilst Matford added *Oxycera rara*, *Dorylomorpha hungarica* and *Colobaea punctata*.

During discussions at our indoor meeting earlier in the year, we learnt there was a decent population of *Asilus crabroniformis* (Hornet Robberfly) on Bicton Common, so that's where we visited in August. Another species to be looked out for was the small hoverfly, *Pelecocera tricincta* with its distinctive paddle shaped antennae. We were fortunate to find a single male of the robberfly on our way back to the car park near the end of the meeting! Sweeping the yellow flowers of Tormentil on the edges of the paths for the hoverfly was in vain, or so we thought. Back home, inspection of the catch revealed several specimens. It really is a tiny species! There were a few other rare flies found such as *Tachytrechus consobrinus*, *Campsicnemus compeditus* (Dolichopodidae) and *Blaesoxipha rossica* (Sarcophagidae) to cap off an interesting day in which eighty-one species have been recorded or submitted so far.



Ashclyst Forest provided the setting for our September field meeting. The rain had already shifted the meeting from Saturday to the Sunday and was still doubtful. A last-minute call to go ahead proved a wise bet as we managed to catch some bits in between showers. Five of us turned up and enjoyed some good banter before rain ended play after lunch. With our nets getting wet anyway, Richard Lane decided to use his as a pond dipping net for aquatic larvae. The catch provided for fascinating discussion. Nothing exceptional was found which isn't a surprise considering the wet vegetation but it was good to find *Rhingia rostrata* and *Lipoptena cervi*.



Oxycera trilineata



The final meeting of the year took place at Harpford Wood near Newton Poppleford in October. Again, the weather threatened to put the kibosh on things but it turned out really nice on the day. We were even able to enjoy watching many flies coming to flowering Ivy before entering the wood. It was a rewarding site with seventy-five species so far. An effort to find platypezidae (flat footed flies) on leaf surfaces yielded just two, *Agathomyia unicolor* and *Platypeza aterrma*. Another focus of attention were leaf miners with nine species recorded and the highlight was *Liriomyza pascuum* on Wood Spurge leaves.

There were several extracurricular midweek meetings so our collective accumulation of records will testify to the benefits of forming a local or regional group. We will formally celebrate our tenth anniversary with cake and fizzy at our next indoor meeting next March. As always, everyone is welcome to join the group by signing up to our newsgroup. If you happen to be on holiday in or visiting Devon you are most welcome to join one of our field meetings too.

Andrew Cunningham

 VC3/4 The number of sites on the DFG map project is steadily growing as Andrew & I continue to add them:

<https://www.inaturalist.org/projects/devon-fly-group>

<https://www.flickr.com/photos/ajc321/sets/72177720313704665/>

Malloch Society



Malloch Society visit to the Isle of Eigg June 2023

Because it seemed like an interesting place to visit, four Malloch Society members (Geoff Hancock, Steve Hewitt, Ashleigh Whiffin and Donald Smith) spent five days on the Isle of Eigg from 26th-30th June 2023, staying in the comfortable hostel-type accommodation of the Glebe Barn.

The uphill walk to the hostel from the ferry began promisingly with flies brazenly showing themselves on the roadside flowers in the morning sun, relatively undisturbed by net or pooter – we were weighed down by a large number of bags.

One of these encumbrances, lashed for ease of carrying to the rack of a bicycle, turned out to be a binocular microscope, a very useful thing to have along.

The first afternoon the party joined Norah Barnes, the Scottish Wildlife Trust warden, to visit the south coast of the island to count transparent burnet moths (*Zygaena purpuralis* (Brünnich, 1763)), which were abundantly sporting on the sunny thyme-dotted sward near Massacre Cave, and also spotted later in the week on the more remote eastern slopes of Struidh. The next day was more taxing with persistent drizzle, and collecting was restricted to the mixed woodland around Galmisdale, and uninspiring searches for insect corpses on the window ledges of the church, museum and swap-shop. Clearer weather in the remainder of the week saw the party brave the steep eastern slopes with its promising wet flushes beneath towering geological splendours (dipterists), and quad-bike assisted searches for pesticide-free cattle

dung on the slopes below An Sgurr (coleopterist), the Sgurr being the geological pin-up for the island. The final day saw the party exploring boggy woodland at Blar Dubh, the beautiful glacially-sculpted lochan below and the tempting waters of Laig Bay with its narrow strip of dunes.



Word seemed to get around quickly that there were strange people with nets on the island, so that we didn't always have to explain what we were up to, though that was not quite so easy in the Glebe Barn. Other parties arriving late in the week were disgruntled, affronted, bemused etc. to find chilled or frozen insects in the kitchen fridge-freezer, as well as one of the two dining tables fully occupied with insect boxes, tubes, pins and a daunting microscope. We held our nerve, but were forced to take dinner on our own, slightly tidied, specimen table.

The previous history of recording on the island can be told fairly quickly. A visit to the island in July 1939 by biology students from Edinburgh University resulted in a list of 80 species of diptera (D.K.M.Kevan (1941) *The insect fauna of the Isle of Eigg*, *Entomologist* 74:247-254). There were visits to the island by A.M.Hutson in June 1969 and May 1970 (details of his fungus gnat specimens in the Natural History museum collection were kindly provided by Duncan Sivell), and by Peter Skidmore in July 1981 (two additional dolichopodid records kindly provided by Laura Trinogga, Doncaster museum). When P. Skidmore published his monumental survey *A review of the Diptera of the Western Isles of Scotland* (*Dipterists Digest* (2008) 15:99-194), he was then able to list 175 species from 42 families as occurring on Eigg. Observations by John Chester, Scottish Wildlife Trust warden on the island contributed observations of 20 species between 2004 and 2015, and a few additional records are available on NBN and iRecord, or were kindly provided by David Horsfield, Kenn Watt (Scottish hoverfly database) and Iain MacGowan (Skidmore dolichopodid records).

Putting all these sources together, we have now compiled a spreadsheet that includes 309 species in 53 families. Amongst the findings were a second record for the island (the first being the previous year) of *Sicus ferrugineus* (Linnaeus, 1761) (Conopidae) at Massacre Cave, and a female *Spiriverpa lumulata* (Zerterstedt, 1838) (Therevidae) in the dunes at Laig Bay, an unusual habitat for this typically riverine species.

Craneflies were extremely low in numbers which was probably due to a prolonged period of dry and hot weather prior to our arrival. Several common species expected to occur were not found, for example *Eriocconopa trivialis*, *Rhipidia maculata*, *Dicranomyia* spp., *Molophilus appendiculatus* and *Tipula oleracea*. Only after a short rainfall did *Limonia nubeculosa* appear in very small numbers. These were all found on previous entomologists' visits. Nevertheless, ten limoniids and two tipulids were added to the Eigg list. One historical record of interest is *Tipula griseescens* collected by A.M. (Tony) Hutson in April, 1969. A northern and western montane species normally found over 600m but not known to occur at sea level.

We intend to publish a full list, but before we do this, request that anyone with personal records from Eigg, or who knows of other sources of records, contact the authors.

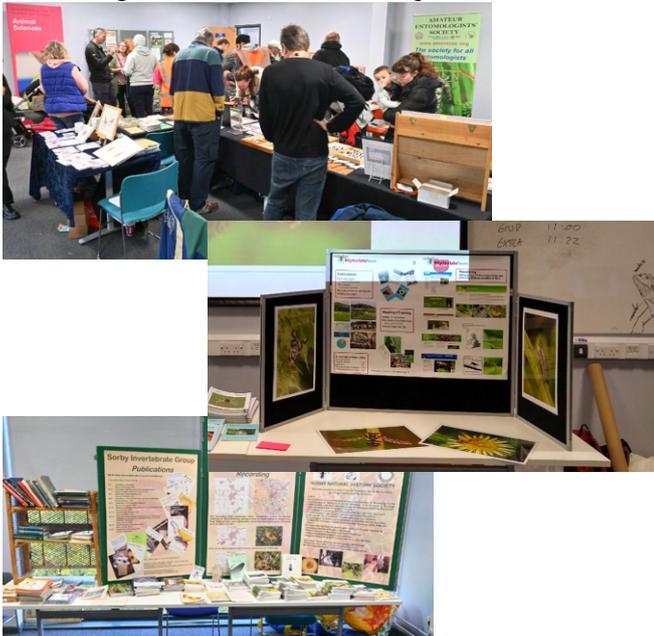
Geoff Hancock, Steve Hewitt, Ashleigh Whiffin and Donald Smith

Exhibitions & Fairs

Derbyshire and Nottinghamshire Entomological Society

Dipterists Forum at the DaNES Insect Show

After a COVID-enforced break of several years, on Saturday 11th November the Derbyshire and Nottinghamshire Entomological Society (DaNES) held its annual Insect Show at Nottingham Trent University Brackenhurst campus near Southwell. I took the DF stand and had an excellent day at the event. There were a large number of local and national societies represented as well as a series of talks about local projects. It was great to meet DF members from the eastern side of England - including our Lincolnshire correspondent. A box of fly



specimens proved very popular with those visiting the stand. In the event feedback, one attendee reported that their favourite insect of the day was the Bee-fly. Few of us would argue with that! Assuming the event doesn't clash with our AGM, I shall make the early morning trip across Derbyshire again next year.

Jane Hewitt

Staffordshire Invertebrate Science Fair

March 2nd 2024

Staffordshire University

Leek Rd Campus, Stoke-on-Trent ST4 2DF



Annual General Meeting

Minutes of the Annual General Meeting of the Dipterists Forum, 18th November 2023

National Museums Scotland, Edinburgh

1. Apologies

Received from John & Barbara Ismay, Peter Chandler.

2. Minutes of the 2022 AGM.

It was proposed that the minutes of the 2022 AGM be accepted: proposer, Zoë Adams; seconder Rob Wolton. The minutes were duly accepted.

3. Chair's Report.

The chair then presented her report on the Forum's activities during the last year.

I started last years report talking about how bad global news had been and I feel that this past year may have eclipsed that. The State of Nature report painted a bleak picture and that was without including many species of Diptera due to a lack of data on range, habitat, or change - this is not due to the efforts of all who record flies but mostly due to the lack of serious investment in long term monitoring and assessment. We also heard of that once again Coul Links was being targeted for development to name but one of the many pressures that UK Diptera are facing. But thankfully there are many incredibly talented and dedicated individuals to help accumulate and disseminate information about these rather lovely creatures. Mark Welch and Judy Webb continue to keep an eye on matters of conservation importance for the DF with regular updates in the Bulletin.

I would like to thank all those on the DF committee. This year has been as active as the last in terms of field visits, training courses and recording. I would very much like to thank Rob Wolton for his continuous efforts. Rob, as well as being a steady hand to my wobbly ship, instigated the Speyside Diptera Review and has contributed much to the day to day running of the organisation, including just this week, sorting the insurance. A necessary piece of admin completed for a group of folks who swing nets precariously and seek out flies in many a tricky location!

Once more I would like to highlight the work of both our treasurer, Phil Brighton – a dab hand with keeping our accounts up-to-date but also for producing accessible reports and graphs, and our membership secretary, John Showers, who has the unenviable task of keeping abreast of the membership's comings and goings. Much debate was had on the committee about increasing the membership rates due to a rise in pretty much everything and thankfully these two have been able to organize the upcoming changes in 2024. Zoe Adams organised a very successful hybrid AGM and Dipterists Day last year at the Natural History Museum, London: all of the presentations are available, alongside many more, on the DF YouTube Channel. And for the second year in a row the Spring workshop was organised by Zoe to celebrate the publication of a long-awaited book. This year's training course was on Fungus gnats with Peter Chandler being ably assisted by Vladimir Blagoderov - please buy the book, it is fabulous. Sadly, I was not able to attend much to my annoyance but many of my unidentified material came back with names, so I was very happy, as I heard that the actual participants were. Here's to a successful Tachinidae Course next year.

Again a very successful Spring meet up was organised and much thanks to the Wiltshire Wildlife Trust, Anthony Bainbridge, Rob Wolton, George Prior-Palmer as well as Jane Hewitt and Marc Taylor (who weren't able to attend). Having field sites that warned of bombings added a certain amount of jeopardy to the proceedings.

Jane went on to organise a summer meeting in the Gower, South Wales, where over 30 people attended, and our thanks are extended to Professor Mary Gagan and her team for hosting the DF at the University of Swansea. The DF also helped collect material for Darwin Tree of Life and UK Bar tree of Life during both the spring and summer meetings - from the summer meeting 463 specimens (326 species) were frozen of which 158 specimens (119 species) were Diptera with 50 species new to the project! A great response from all those who attended this field meeting in what has been described as periodic (and unforgiving) showers. Various other field meetings were

organised by members of the Dipterists Forum - the weather at Roger Morris's autumn meet up apparently made the Swansea trip seem like a sunny beach holiday.

Darwyn Sumner has continued to produce the Bulletin, covering a range of Dipterological topics. Again, I request more contributions from all DF members to keep this Bulletin interesting and refreshing; the more flies the better. Peter Chandler remains as editor for the Digest and receives enough varied content from members to produce a stimulating read. This well edited journal continues to highly informative pieces including articles on new species to the British Isles. Martin Harvey continues to maintain and update the website. Thanks also go to all who add content to our site – images, news, reviews and so much more.

Lastly, a special thanks to Jane, whose title as Secretary does not convey how much work she undertakes for the Society. On behalf of the committee, the members, and especially me who knows how much work you undertake, please accept our thanks.

And thank you to all of you, whether on the committee or not, that have provided support to the Dipterists Forum throughout the year. This society is only as successful as its members, and although biased I feel that ours are rather good.

Finally, our congratulations go to Alan Stubbs on being awarded an MBE for services to invertebrate conservation. Alan, you continue to be an inspiration for us all. We also give our best wishes to Malcolm Smart who, along with his wife, has relocated to Australia to be closer to family. We are grateful to Malcolm for everything that he contributed to the DF and for being a source of entertaining stories, many of which seemed to involve him falling into ditches!

4. Treasurer's Report

The Treasurer, Phil Brighton, presented the accounts for the year ending 31st Dec 2022 (see Bulletin 96 p27 for his full report). The Treasurer reminded members about the increase in subscription rates for 2024. The accounts were duly accepted (proposer, Mark Welch; seconder Martin Drake).

5. Dipterists Digest Editor's Report

(provided in advance by Peter Chandler and read out to the meeting by the Chair).

Compared to 2022, when the publication of both issues of the Digest was relatively early, in January and July, this year's issues were published on 14th March and 31st October. The first issue was apparently still too early for many to have paid their subscriptions for 2023 and the same principle was followed as in 2022 in sending that issue to everyone who had subscribed in the previous year. This is clearly unsatisfactory in determining print runs, which have fluctuated between issues. Printed copies of the first issue have, nevertheless, run out due to the need to supply it to new subscribers, while a smaller print run of the second issue resulted from a lower number of subscribers (406) by October, compared to the final total for 2022 (431). To attempt to resolve this problem I have been asked to delay publication of the first 2024 issue to a later date, yet to be determined in consultation with the membership secretary.

The 2023 issues both had the maximum number of 126 pages. Articles and notes are continuing to be submitted at a steady rate. There are presently 18 items in various stages of editing, review and revision. These amount to about 180 pages of text so, as was the case this time last year, there is already more than enough to fill an issue. They include some longer items, which have been accepted, but in order to reduce delays in publication of shorter items in future acceptance of longer papers will be dependent on what is already awaiting publication.

I thank all those who continue to support the journal with a wide range of contributions, and in particular the new authors who have appeared in this year's issues. I am also grateful to Julie Locke and Tony Irwin for proof reading and to Andrew Halstead for efficient distribution.

6. Any Other Business

No other business was raised.

7. Election of Officers and ordinary members to committee

The Officers and Ordinary Members proposed for re-election or election this year.

Officers

Chair
Vice Chairman
Secretary
Treasurer
Membership Secretary
Indoor Meetings Secretary
Bulletin Editor
Assistant Bulletin Editor
Digest Editor
Publicity Officer
Website Manager
Conservation Officer
Training Coordinator*

Erica McAlister
Rob Wolton
Jane Hewitt
Phil Brighton
John Showers
Zoe Adams
Darwyn Sumner
Judy Webb
Peter Chandler
Erica McAlister
Martin Harvey
Mark Welch
Vacancy

Ordinary Members for re-election (elected 2020)

Tony Irwin John Mousley Marc Taylor

Already elected (elected 2022)

Victoria Burton Chris Raper

The meeting voted unanimously to elect the officers and members of the Committee (proposer Martin Drake; seconder Louise Hislop).

9. Thanks to our hosts.

The Chair thanked the National Museums Scotland for hosting the meeting and the Malloch Society, Vladimir Blagoderov and Ashleigh Whiffin for their very efficient help in organisation of the day.

The meeting closed at 12:40pm

Annual Meeting

Saturday 18th November 2023

National Museums of Scotland, Edinburgh

Dipterists Day with the Malloch Society

By all accounts a highly successful meeting. We've received the following reports from those attending and collated them all into a comprehensive account (Eds.)

The following thanks from Ian Strachan of the Malloch Society were passed to Zoe Adams who organised the event and Victoria Burton who managed the online technology.:

Hello! It was very nice to meet you too, and other Dipterists from south of the border, the whole event was very inspiring for me. I have to say that the Dipterists Forum is a great organisation from my viewpoint, especially the Bulletin, also the Recording Schemes, online keys, videos, Dipterists Digest etc. I really appreciate all the work that goes on to make it all happen - including the meetings of course



Montane Diptera

Iain MacGowan (NMS & Malloch Society)

Montane Diptera (Iain MacGowan)

Only higher Diptera were considered in the presentation. “Montane” refers to terrain lying above the potential treeline. These montane habitats include *Racomitrium* heaths, pools and flushes, upland fens with basic flushes, dwarf shrub heaths, river and loch shores. In his talk Iain provided a UK-wide context for the Scottish studies: montane terrains occur in NW Highlands, Grampian, Southern Uplands, Snowdonia and Cambrians, Pennines. He recognized three groupings of Diptera:



Montane habitat in the Cairngorms;

- I.A “Widespread Group”: 10 species occurring in at least three of these UK montane regions: *Rhamphomyia morio* (Empididae), *Platycheirus melanopsis* (Syrphidae), *Scoliocentra scutellaris* (Heleomyzidae), *Calliphora stelviana* (Calliphoridae), *Gonatherus planiceps* (Scathophagidae), *Alliopsis atronitens* (Anthomyiidae) and four muscids *Thricops aculeipes*, *Thricops hirtulus*, *Phaonia meigeni*, *Phaonia subfuscinervis*.
- II. A “Highland Group”: 8 species confined to the Scottish Highlands including the dolichopodids *Dolichopus maculipennis* and *Hydrophorus pilipes*, and the empid *Clinocera nivalis*.
- III. A “Grampian Group”: 7 high-altitude species restricted to the high mountains of the central Grampians, with several species occurring above 1000m altitude, e.g. *Cheilosia sahlbergi* (Syrphidae), *Rhamphomyia hirtula* (Empididae), *Wiedemannia simplex* (Empididae), *Okeniella caudata* (Scathophagidae) and *Zaphne spiniculus* (Anthomyiidae).

In 1982, David Horsfield started a systematic study of montane Diptera in Scotland, primarily focused on the Cairngorms region. Since then, regular sampling of flies for a range of montane habitats has been carried out continuously by members of the Malloch Society. Their studies have provided an important temporal baseline for recognizing longer-term faunal variations that correlate with environmental changes. In 1997 the Malloch Society published a report authored by David Horsfield and Iain MacGowan:

A Preliminary Assessment Of The Distribution And Status Of Montane Brachycera And Cyclorrhapha (Diptera) In Scotland.

This report can be downloaded from Iain’s ResearchGate pages. It covered the period 1982-1997 and is a valuable baseline set for before the period of rapid warming in the early 1990s. Iain showed a graph of the 10-year average UK temperature from 1920-2022: a long-term stable value up to 1990 of 8°C rising sharply to 9.5°C by 2022 at a steady rate of 0.5°/decade. By revisiting these original sites Malloch Society members have found provisional evidence for altitudinal shifts of several montane species over the past 40 years.

Iain gave examples of montane specialists that are likely to be sensitive

to a warming climate. His recent studies of the empid *Wiedemannia simplex* (see his 2018 and 2021 papers in *Dipterists Digest* 25:179-184 and 28:103-104) show how unpredictable and challenging monitoring some montane specialists can be. This fly was originally found at a single site in the Cairngorms in July-August 1936 and 1937, then in August 1984, and by Iain in 2018 and again in 2020-2022 at just two high-altitude lochs (~730m and ~930m) but it was not found in 2023 despite thorough searches at one of these sites.



Iain searching for the dolichopodid *Hydrophorus pilipes* at Callater in Aberdeenshire where Verrall had found it 150 years before

The rarely recorded dolichopodid *Hydrophorus pilipes* was originally found at Glen Callater, Aberdeenshire (photo), by Verrall in July 1873 at an altitude of ~500m. In June 1934 Collin found it at Pools of Dee (~800m) also in the Cairngorms. Now, at least in the Cairngorms, this species appears to be restricted to upland flushes and pools at altitudes above 900m in the Cairngorms. At most sites across Scotland the common and widespread *Hydrophorus albiceps* is sympatric with *H. pilipes* but has a much greater altitudinal range. Understanding the different phenologies, ecology and (micro-)habitat requirements of sympatric populations of these dolichopodids could reveal interesting insights into how environmental drivers affect them differentially.



The spectacular scathophagid *Okeniella caudata* (photo) added to the British List by Iain in 2015 (*Dipterists Digest* 22:1-3) is a highly restricted species with a distribution limited to ~ 5 km² of rich upland fen with basic flushes between The Cairnwell and The Mounth at altitudes of 750-850m.

The research carried out by the Malloch Society has provided a unique database for montane Diptera in the UK and shows the value of focused longitudinal studies that target critical “indicator” assemblages to answer important questions relating to climate change. In UK terms these species, especially those in the Grampian group, are at the highest risk of local or national extinction. As such we should continue to highlight the impacts of climate change on our biodiversity through the fate of these Diptera species.

by Mark Welch

Insect pathogens

Darren Obbard [Edinburgh Uni & DF]

Dr Darren Obbard [https://obbard.bio.ed.ac.uk/] – Pathogens of Diptera: what do flies die of?

In reviewing my notes made during this talk I had scribbled the throwaway line – ‘They burnt through a lot of PhD students to conduct all of these experiments’. For the subject of this talk given by Obbard was on everyone’s favourite lab animal *Drosophila* and the study of their viruses, mostly undertaken in a lab, and mostly by the aforementioned students. Obbard first introduced us to what pathogens are and why *Drosophila*. To the majority of Biologists this family are 3mm long orange species with (mostly) red eyes, but Obbard states that is just not the case (check out *D. grimshawi* to see how stunning they can be). It was nice to hear someone wax lyrical about the charismatic species that do exist outside of universities...

But darlings of the genomic world they are, with over 400 species with completed genome sequences – that’s nearly 9% of the described species in this family. And its not just one species that frequents labs, there are roughly 250 species in culture. A lot therefore can be learnt from the different species as well as the interactions between them.

And this is what virologists are looking at. For example, 51 species were injected with pathogens and across multispecies experiments, they found that closer relatives are more similar in their susceptibility to a new virus. Sound familiar?

Viruses are the most abundant parasites on the planet, and they work by hijacking your cells. ‘They are as different from each as we are from them’ states Obbard – some are RNA whilst others DNA and there are thought to be 5 species per mammal. That doesn’t seem a lot, but every human contains 300 trillion viruses, mostly inside their gut. And researchers have been looking at the *Drosophila* ‘virosphere’ since 1937 and local epidemics of viruses act in a very similar fashion to human viruses.

All fascinating but this was a Dipterists Forum audience not a bunch of epidemiologists. So, let’s ignore the pesky humans for a second and find out what are all of these viruses doing to the flies.

Obbard describes an experiment that mixed wild and lab (no virus) species and exposed them for three days. The females were separated and introduced to new males to get to know each other and do what flies do best – reproduce. These females were followed through their life, where upon death an autopsy was performed to see whether she had a virus. A simple experiment to look at the susceptibility and transmissibility of certain viruses. This was but one of the many experiments on different viruses where many of the wild viruses were isolated and injected into the lab species to further understanding of what they were doing to the flies.

One such virus *Kallithea Nudivirus* - the *Nudivirus* is a family of rod-shaped DNA viruses that only infect Crustacea and insects - is quite common in the wild species, but what does it do to them? Well sadly for the males they bit the biscuit earlier than the non-infected males and the females. But within the infected females egg laying stops. The females seemed to be reabsorbing them and gaining nutrients from them. Obbard and fellow researchers therefore suspect this is a gut virus and the males starve but the females have eggs to eat. Grim but fascinating.

To date more than 150 viruses have been identified associated with *Drosophilidae*, some are common whilst others rare, some infect many species, and some flies can suffer from multiple infections. Again, this sounds awfully familiar. Viruses are bad for us, and they are bad for flies. Let’s hope that *Drosophila* keeps helping us understand more about ourselves and of course, the more important flies!

by Erica McAlister

Sensory Pegs in Prionocera (Tipulidae) larvae.

Geoffrey Hancock

This talk demonstrated how a seemingly simple project could lead in all sorts of unexpected directions. Like many of us during COVID lockdown, Geoff Hancock’s ‘Dipterising’ was largely confined his garden. He observed a number of *Tipulidae* larvae living in an overgrown old cattle trough repurposed as a mini water garden and set about identifying the species. Initially he studied the dorsal lobes finding them to be typical of *Prionocera turcica*. His excellent photos of these amazing structures were much appreciated by some in the audience. Delving into old literature for other diagnostic characteristics led Geoff to make morphological studies of other larval structures such as the arrangement of chaetae. As a result of this he found that the larvae contained structures known as sensory pegs on each of their segments. Although such sensory pegs are common in higher Diptera, among the *Tipuloidae* the only other report of these structures is from larval specimens belonging to the genus *Angarotipula*. What their function is and why only a small subset of *Tipuloid* species apparently contains them is not known.

by Zoe Adams

Diptera in the Arkaig native pinewood

Ian Strachan (Malloch Society)

Ian Strachan presented results from a comprehensive invertebrate survey in the Arkaig Community Forest. This is located (NN18) on the south shore of the eponymous loch in West Inverness-shire (vice-county 97) just north of Fort William. There are two blocks of forest covering over 1000 hectares, acquired from the Forestry Commission in 2016 in partnership with the Woodland Trust. Both contain remnants of Caledonian pine forest, birch woods, blanket bogs, freshwater habitats and extensive areas of non-native conifers including *Sitka spruce* and *lodge-pole pine*.



Ian explained that man’s impact on this ancient landscape has been significant. A fire, started in the glen by commando training operations during World War II, severely damaged large swathes of forest, leaving behind hundreds of charred pine skeletons that still dominate the landscape. The historic exploitation of timber, planting of non-native trees, and overgrazing by deer and sheep have all left Loch Arkaig pine forest degraded and the remaining fragments in decline.

Meetings

At the outset of a long-term restoration plan, the Woodland Trust commissioned Ian to carry out this survey as a base-line study. Throughout 2018 a Malaise trap was run in the middle of each block, and in 2021 a Malaise and other traps were run nearer the loch. The process of identification has been proceeding ever since with the help of several specialist dipterists. Ian's current total for all insects and a few other invertebrates is 813 species in 219 families. The lion's share of these are indeed the Diptera with 394 species and 60 families.



As with all entomological sampling, there was a vast disparity in numbers between the most and least abundant species. Seven families have yielded over 1000 specimens apiece: apart from the Mycetophilidae now that Peter Chandler's handbook has been published, these are families that most of us are reluctant to engage with – Sciaridae, Psychodidae, Ceratopogonidae, Chironomidae, Cecidomyiidae and Phoridae. Most of these still await identification to species. At the other end of the scale 12 families have yielded 3 or fewer specimens, including such familiar ones as Opomyzidae and Tephritidae.

Ian highlighted some of the notable Diptera species, of which 29 have a Red Data Book or Nationally Scarce status. Highlights of these highlights were a fungus gnat new to Britain, *Boletina gusakovae*, a very small Acalyprate apparently new to science in the genus *Oldenbergiella* (Heleomyzidae) and the two recent additions to the British fauna in the metallic green tachinid genus *Gymnochaeta*, *magna* and *lucida* (see Dipterists Digest 30(2023)145-146 & 218-225). But the most amazing find was 48 male specimens of the stylopid *Elenchus tenuicornis* in one Malaise trap sample. These minute insects are members of the little-known order Strepsiptera. They are parasites on other insects (Delphacid bugs in this case); only the males are free-flying, and that for a few hours only.

Ian concluded that this project has demonstrated the effectiveness of Malaise trapping as a sampling method for Diptera and other orders but has also highlighted the general neglect of the most abundant families. How to use these baseline data to monitor effects of the long-term restoration remains an open question.

by Phil Brighton

The Pine Hoverfly captive breeding programme

Helen Taylor [RZSS]

Breeding and reintroducing pine hoverflies to Cairngorms National Park.

Dr Helen Taylor, Conservation Programme Manager, Royal Zoological Society of Scotland (RZSS).

The pine hoverfly, *Blera fallax*, is Critically Endangered and now known only from a single site in Speyside – it used to occur more widely here, and in Deeside too. An attractive species with a red-tipped abdomen, it requires old-growth pine forest where the heart-rot fungus *Phaeolus schweinitzii* creates rot holes, the larval habitat. The larvae are of the 'rat-tailed' type, their long breathing tubes being highly telescopic, adapted to cope with fluctuating water levels.



Given the highly precarious status of the hoverfly, and the improbability that it would naturally colonise new sites, in 2015 the RZSS were asked to attempt captive breeding with a view to (re)introduction to suitable pinewoods in Speyside. 25 larvae were collected from the remaining site and reared in artificial rot holes in a shed, water-filled jars containing Scots pine woodchips and sawdust. Moss plugs provided suitable conditions for pupation. Larvae survived to produce adults: these were placed in flight cages with a plentiful choice of both flowers, for nectar and pollen, and of egg-laying sites.

By 2019 techniques for successfully taking the captive population through the entire life cycle had been perfected. In 2020 170 larvae were produced, the following year no less than



8,000! Photos Helen showed us of the rearing shed full of jars packed with larvae reveal an operation of prodigious proportions. Release into the wild was now a practical proposition.

Three release locations were selected, woods with the requisite old growth pine but also with rowan – captive adults showed a strong preference for the flowers of this tree. The three sites, Garten Woods, Bognacruie and Ryvoan (Glenmore), are all in stable long-term ownership. They lie between 7km and 10km apart. Between October 2021 and the following March 6,000 larvae were released across the three sites into man-made rot-holes. These rot holes were of two types: stumps with holes excavated in their tops and troughs dug out of logs. The holes were filled with woodchips and covered, leaving sufficient gaps for them to collect rainwater. Between 25 and 50 larvae were placed in each.

That summer of 2022 an adult was seen at one release site, the first seen in the wild for eight years! Even better, in September larvae were found in the rot holes at all three sites (along with those of *Callicera rufa*, *Myathropa florea* and *Xylota* species). Much positive media attention followed, and local communities and volunteers engaged.

The following winter a further 6,000 larvae were released at the three sites. This autumn, 2023, 3,000 more have been released, some into a new, fourth site, but none into the Garten Wood, the most successful one of the three original sites, to see whether a self-sustaining population had been established there. For unknown reasons, stumps roles are preferentially used rather than troughs – an unfortunate result from a practical perspective since troughs are much easier to make.

The signs are very promising that captive breeding and release will result in new self-sustaining populations in the wild, greatly increasing the chance that the pine hoverfly will survive in the British Isles. If so not only will this be a huge achievement, but it will also be the first successful captive rearing and release for any invertebrate in Europe.

Meanwhile, work is underway by RZSS to investigate the genetic variation within the Scottish population and to compare this with populations in Scandinavia. Will it prove desirable to increase the diversity of the Scottish population by introducing individuals from Scandinavia? Is the Scottish population genetically distinct?

Many thanks to Helen for a fascinating, enthusiastic and energetic talk - despite jet lag, having returned from New Zealand just the day before!

by Rob Wolton

Recording Diptera in Highland

Murdo MacDonald [HBRG]

Recording Diptera in Highland

If Ian Strachan had shown how challenging it is to record a single 10-hectad site, Murdo McDonald has been tackling Diptera recording across the 25,657 hectads of the Highland Region. This is the area of a single local authority and comprises 9 vice-counties (95-97 and 104-109) extending from Inverness-shire to the northern and western extremities, including Skye and neighbouring islands. It is one-third the area of Scotland and bigger than Wales, and has extensive lowlands as well as the hills.

Murdo modestly disclaimed the title of “dipterist”, describing himself as a general naturalist climbing the hills, kayaking amongst the inlets and drinking beer in the garden, but always on the outlook for all sorts of wildlife. This contributes to the database of the Highland Biological Recording Group (hbrg.org.uk), currently containing 350,000 records with biannual updates to the NBN Atlas. Records are regarded as a means to an end of turning data into information. Accounts have been published of fungi, butterflies, beetles, aculeates, and even some flies.

There is a very different dipterous fauna to be found in Highland, and HBRG, together with its sister recording groups in the Outer Hebrides (ohbr.org.uk) and in Argyll (abrec.org.uk), is now the main source of diptera data in the region, as Murdo illustrated. For instance, the Scottish speciality *Calliphora uralensis* (Calliphoridae) has 187 NBN records of which 140 are from HBRG and 40 from OHBR. Even for the cuddly orange-bearded blue-bottle (*C. vomitoria*) HBRG has contributed 244 of the 394 Scottish records.



As well as immense unexplored spaces, spring and autumn offer exciting opportunities for finding supposedly rare species, having been neglected by past generations of dipterists visiting from the South. Murdo gave the examples of *Atylotus fulvus* (Tabanidae - illustrated)

Lispocephala pallipalpis (Muscidae), *Botria subalpina* (Tachinidae) (added to the British list by Murdo in 2012), *Prionocera pubescens* and *Tipula cava* (Tipulidae), and *Cordilura ustulata* (Scathophagidae). Many of these records came from casual observations near Murdo's home.



Contact with people with different interests has paid dividends. A good proportion of records of the deer warble fly *Hypoderma diana* (Oestridae - illustrated) has come from deer-stalkers seeing the larvae in the carcasses – Murdo warned that his illustration of an

infected haunch might horrify any venison-eaters. A special study of *Protocalliphora azurea* (Calliphoridae), parasites in bird nests as larvae, was greatly assisted by local ornithologists

Murdo encouraged prospective visitors to look beyond the well-known areas of Strathspey and Deeside. Many of the best places are not designated sites. Go earlier or later in the year and expect the unexpected, such as *Stomorhina lunata* (Rhiniidae) recorded by the late Abbie Rhodes at two separate locations on the North coast two years apart.

And if you can't go there in person, at least be sure to visit the HBRG website!

by Phil Brighton

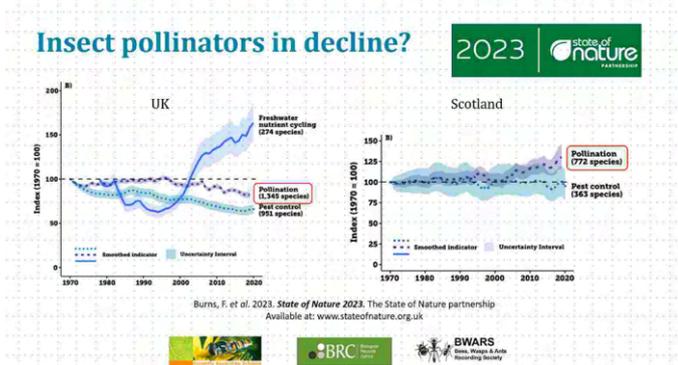
Pollinator Monitoring Scheme

Martin Harvey/Claire Carvell [BRC/CEH]

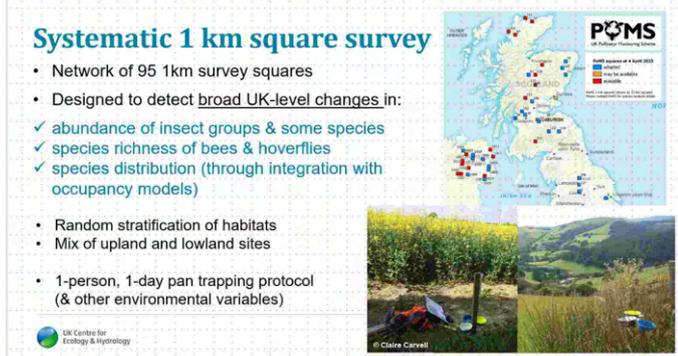
The UK Pollinator Monitoring Scheme in Scotland

Miranda Bane, Martin Harvey, Claire Carvell & Robin Hutchinson

Our last talk in Edinburgh was on the UK Pollinator monitoring scheme in Scotland. Sadly, Martin Harvey was unable to make the trip north, so the talk was delivered by Miranda Bane from CEH, with Robin Hutchinson in the audience. Miranda opened with some recent data on Pollinator numbers across the UK, showing two plots for data taken from the 2023 State of Nature report. The plot for the whole of the UK shows a slow decline in pollinators from the mid 90's on, however the plot for Scotland alone reveals a steady gentle increase in pollinator numbers from the early 2000's onwards.



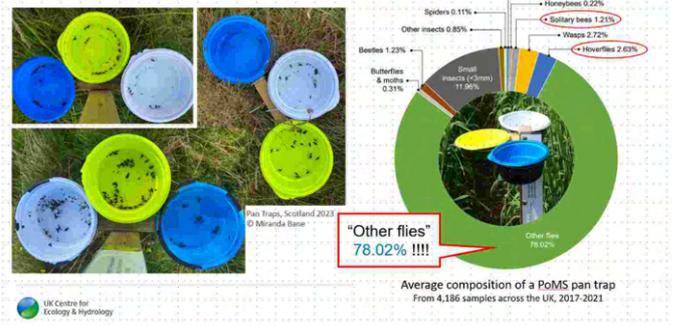
For those not familiar with it, the UK Pollinator monitoring scheme (often referred to as PoMS) has two arms, the Flower-Insect timed counts (FIT counts), and the Systematic 1 km square survey. FIT counts were launched back in 2017 with citizen scientists in mind, they take 10 mins, and can be done by anyone, anywhere with the appropriate flowers in bloom between April and September. Instructions are available from the PoMS website, or the smartphone App. This data has enabled the CEH team to compare different habitat types, and Miranda presented a comparison for gardens and agricultural sites. In gardens approximate numbers are around 25% of flower visits from Bumblebees, 20% Honeybees, 15% for Hoverflies & other flies, and 10% from small insects. For agricultural land Bumblebee flower visits drop right down below 10%, replaced largely by the small insects category at around 25%, Honeybees also drop to a little over 10%, Hoverflies are constant at 15%, and other flies increase to around 20%. Encouragingly the number of FIT counts submitted has increased year on year since their launch, with a peak in 2023, of 4,129 counts from 618 recorders.



The Systematic 1 km square survey comprises 95 1km survey squares across the UK, selected through random stratification

of sites to give a mix of upland and lowland sites. Each square is adopted by a recorder who commits to carry out a standardised one-day pan trapping protocol throughout the sampling period. PoMS provide recorders with equipment, access permission and sample ID training, as well as an initial site visit with PoMS staff to ensure familiarity with the sites access points and trap locations. These pan-trap surveys provide data on abundance of insect groups & some species, species richness for bees & hoverflies, and information on species distribution via integration with occupancy models. Between 2017 and 2021 over 335,000 insects have been sampled and processed for the survey. At the top of the Hoverfly abundance league table for Scotland is the ever-present *Episyrphus balteatus*, followed by *Syrphus ribesii*, *Helophilus pendulus*, *Eristalis pertinax*, and *Sericomyia silentis*. Interesting records for Scotland include *Dasysyrphus neovenustus* (recent addition to species lists, known from Scottish pinewoods, PoMS records in 2021 and 2022), *Anasimyia contracta* (a declining species, scarce in Scotland, PoMS in 2019), *Eristalis rupium* (northern species declining in England and Wales, PoMS in 2019 and 2022), and a PoMS 2022 record of *Xylota tarda* (Nationally Scarce), widespread in the UK but rarely encountered, associated with sap runs on Aspen tree trunks.

Typical composition of a PoMS pan trap



Miranda concluded with an enticing advert for the UK's most Northerly PoMS square which is currently up for adoption. The square is close to the village of Talmine in Sutherland and comes complete with seawards views out over the Kyle of Tongue with its golden sands and numerous islands. Interested volunteers should contact poms@ceh.ac.uk

Further reading:

- The UK PoMS Annual report 2022. UK Centre for Ecology & Hydrology and Joint Nature Conservation Committee. Available at: ukpoms.org.uk/reports
- Burns, F. et al. 2023. State of Nature 2023. The State of Nature partnership. Available at: www.stateofnature.org.uk
- Pocock, M. J. O., Hamlin, I., Christelow, J., Passmore, H.-A., & Richardson, M. (2023). The benefits of citizen science and nature-noticing activities for well-being, nature connectedness and pro-nature conservation behaviours. *People and Nature*, 5, 591–606. <https://doi.org/10.1002/pan3.10432>

Many thanks to the Wiltshire Wildlife Trust, Anthony Bainbridge, Rob Walton, George, as well as Jane Hewitt and Marc Taylor (who weren't able to attend) for the organisation of the sites, permits and much more, and to all the many individuals that helped make the weekend a huge success – I will sign off with the wonderful words of Una Garland as I think that they were most apt 'Had a wonderful time with wonderful people in wonderful weather'

Erica MacAlister

Bulletin Editor's Note: The next 2024 Annual Meeting account will be compiled and collated by a different team. Expect to find it treated just like our Newsletters. The above should be a fair guide for how to present it.

Forthcoming

Spring Field Meeting 2024

Radnorshire – mid Wales

Saturday 18th May to Sunday 19th May

The base for our 2024 Spring Field Meeting will be Llandrindod Wells in the Vice County of Radnorshire. This field meeting is being organised in liaison with the “Natur Am Byth! Saving Wales’ threatened species” National Lottery supported project. One of the flies we will hope to find for Natur Am Byth! is the cranefly *Ctenophora flaveolata* (Wasp-banded Comb-horn Cranefly), for which records from several sites in the target area are known. This is a relatively under recorded part of the UK, so there should be plenty of scope for discoveries of new species for the area. The meeting leader will be Nigel Jones.

The usual arrangement for the spring field meeting will apply, where attendees book their own accommodation. If you are interested in attending, please contact the DF secretary (jane.e.hewitt@gmail.com) and she will keep you informed of plans, meet-up points etc.

Jane Hewitt

BENHS Field Meeting

West Sussex

Knepp Estate

1st June to 2nd June 2024

Ray Barnett

President British Entomological & Natural History Society
(*Tree’s new book might be out by then* Ed)

Summer Field Meeting 2024

Lancashire

Lancaster University

22nd June to 29th June 2024



The 2024 summer field meeting will be based at Lancaster University, June 22nd-29th. Lancaster is a good base for exploring north Lancashire, the southern Lake District and the Forest of Bowland. We have reserved 30 en-suite rooms, which are a mixture of single and twin. For single rooms, the cost of half-board (which includes a two course evening meal with tea or coffee) will be £460.81 for 7 nights, while B&B only will cost £355.81. For two people sharing a twin room, the cost per person will be £309.16 for half board and £204.16 for B&B. Booking information may be found in Bulletin 96 p38 and on our website. There were some rooms remaining at the end of December (copy deadline for this Bulletin), but please check with the Treasurer that this is still the case before transferring your deposit

Any DF members who are local to the area and would like to

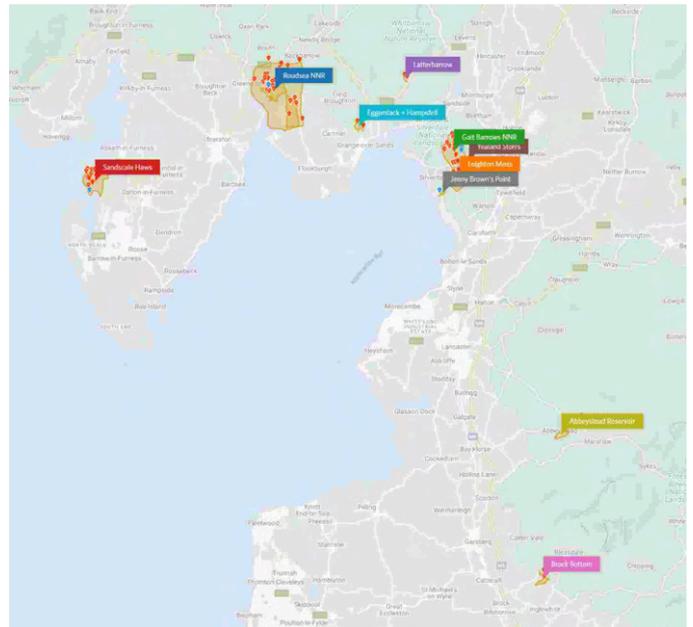
attend field days will be very welcome to join us and should contact the Secretary

DF Secretary, Jane Hewitt (jane.e.hewitt@gmail.com)

A famous stamping ground for us Lancastrians and visited by Dipterists Forum in 2013 (Lancaster) and 1999 (Grange-o-Sands). Steve Garland is part of the team currently working on organising site permits. In the meantime if you want an idea of some nice spots, I’ve set up an iNaturalist site project for the area at

<https://www.inaturalist.org/projects/north-west-england>

where you’ll find a handy map detailing ten good sites. Based on photographs of course (see p10) but if you want species lists we’ve uploaded huge numbers as Open Data on NBN Atlas, notably the historic Manchester Entomological Society dataset.



Steve of course wrote the excellent iRecord guide and I’ll be hoping to add more snaps to iNaturalist. Interrogate us both if you want tips regarding either platform. Target species too as we both know the area well (is *Doros* still around?, which *Microdon* is on Lettbarrow, is it worth a long trip to Sandscale Haws for *Pamponurus germanicus*? Can I find *Cnodacophora sellata* at Abbotsstead again?[no nets please])

Darwyn Sumner

12th International Symposium on Syrphids

Czech Republic

in Pruhonice castle near Prague

2nd to 7th September 2024

<https://web.natur.cuni.cz/zoologie/syrphidae/>



12th International Symposium on Syrphidae
Pruhonice, Czech Republic
2-7 September 2024

AES Annual Exhibition and Trade Fair 2024

Kempton Park Racecourse,
Sunbury-on-Thames, TW16 5AQ

28 September 2024

County Recorders

Dipterists Forum



Scotland	
Dumfries & Galloway ERC	
Fife Nature Records Centre	
Lothian Wildlife Information Centre	
Glasgow	
Highlands & Islands	
North East Scotland	
unassigned	
Outer Hebrides	
Shetlands BRC	
Orkney BRC	

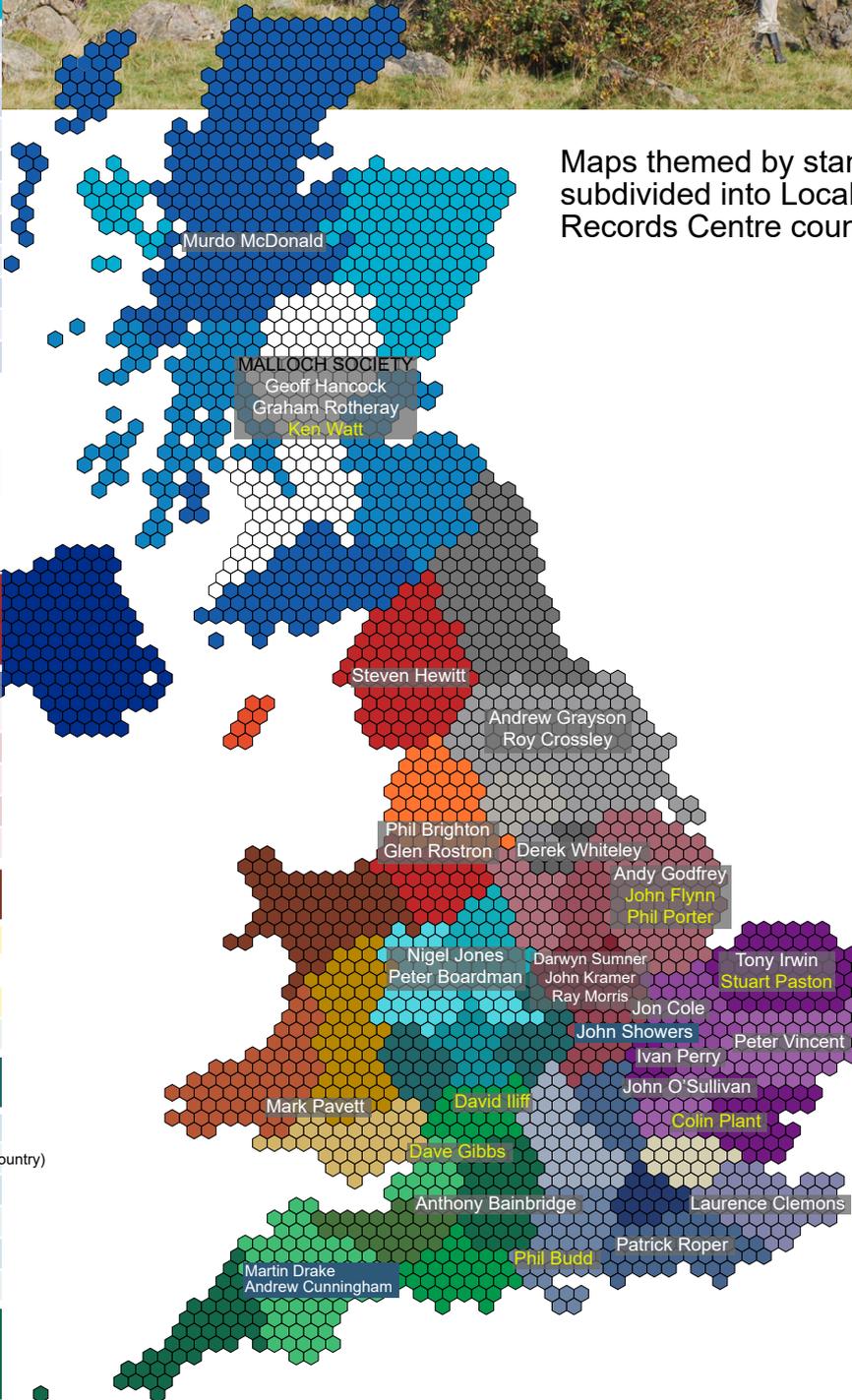
Ireland	
CEDAR (Ulster Museum)	

North West England	
Cumbria Biodiversity Data Centre	
Greater Manchester LRC	
Lancashire Envi. Record Network	
Merseyside BioBank	
RECOrd (Cheshire)	
Isle of Man	

Wales	
North Wales (Cofnod)	
Powys & Brecon Beacons	
South-East Wales	
West Wales BIC	

West Midlands	
Staffordshire Ecological Record	
EcoRecord (Birmingham & Black Country)	
Herefordshire BRC	
Warwickshire BRC	
Worcestershire BRC	
Shropshire EDN	

South West England	
Bristol ERC (BRERC)	
Cornwall & Isles of Scilly - ERCCIS	
Devon BRC	
Dorset ERC	
Gloucestershire Centre for ER	
Somerset ERC	
Wiltshire & Swindon (WSBRC)	



Maps themed by standard UK regions subdivided into Local Environmental Records Centre counties (see boxes)

North East England

North & East Yorkshire EDC
West Yorkshire
North East
Rotherham, Doncaster
Sheffield
Barnsley

East Midlands

Leicestershire & Rutland ERC
Lincolnshire ERC
Northamptonshire BRC
Nottinghamshire
Derbyshire (closed)

East of England

Norfolk Biodiversity Info. Service
Bedfordshire and Luton
Cambridgeshire & Peterborough
Hertfordshire ERC
Essex (closed)
Suffolk

Greater London

Greenspace Information for G. L.

South East England

Hampshire BIC (HBIC)
Thames Valley ERC
Kent & Medway BRC (KMBRC)
Surrey BIC (SBIC)
Sussex BRC (SBRC)
Buckinghamshire & Milton Keynes
Isle of Wight

The dipterists indicated have a good local knowledge and work closely with their LERC. Blue background = organised Regional Groups. Yellow text = hoverflies only

Soldierflies and Allies Recording Scheme

Newsletter 10, spring 2024

Edited by Martin C. Harvey
ISSN 2053-471X (print)
ISSN 2053-4728 (online)



Silver Colonel, Odontomyia argentata, one of several found in May 2023 during the Dipterists Forum spring field meeting, the first time this species has been recorded in South Wiltshire. Specimens found by Erica McAlister, Robin Hutchinson and Sue Taylor, photo by Martin Harvey.

Our 2024 newsletter includes recording scheme updates, species on the move, and a nice example of using an Alan Stubbs discovery from 1987 to monitor soldierfly larvae. And we can't mention Alan Stubbs without adding our congratulations for his [MBE awarded for his work on invertebrate conservation](#).

Many thanks to the authors, photographers and recorders who have contributed to this issue.

Robberflies and aphids



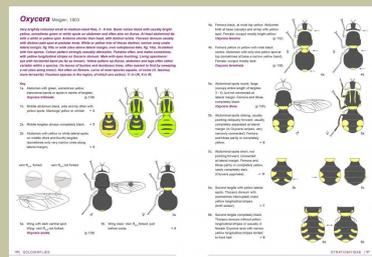
Stripe-legged Robberfly *Dioctria baumhaueri* with aphid prey – photo by jerry2018 via iNaturalist

I'm grateful to Alan Stubbs for passing on an email from Adam Parker, who has recorded Stripe-legged Robberfly *Dioctria baumhaueri* preying on Woolly Beech Aphid *Phyllaphis fagi* (Lincolnshire, June 2023). Alan points out that the only robberfly previously known to prey on aphids in the UK is Striped Slender Robberfly *Leptogaster cylindrica*. Alan points out that Woolly Beech Aphid is an unusually small prey item for *Dioctria* robberflies, and wonders whether this was a one-off or whether it happens more regularly but has been overlooked before.

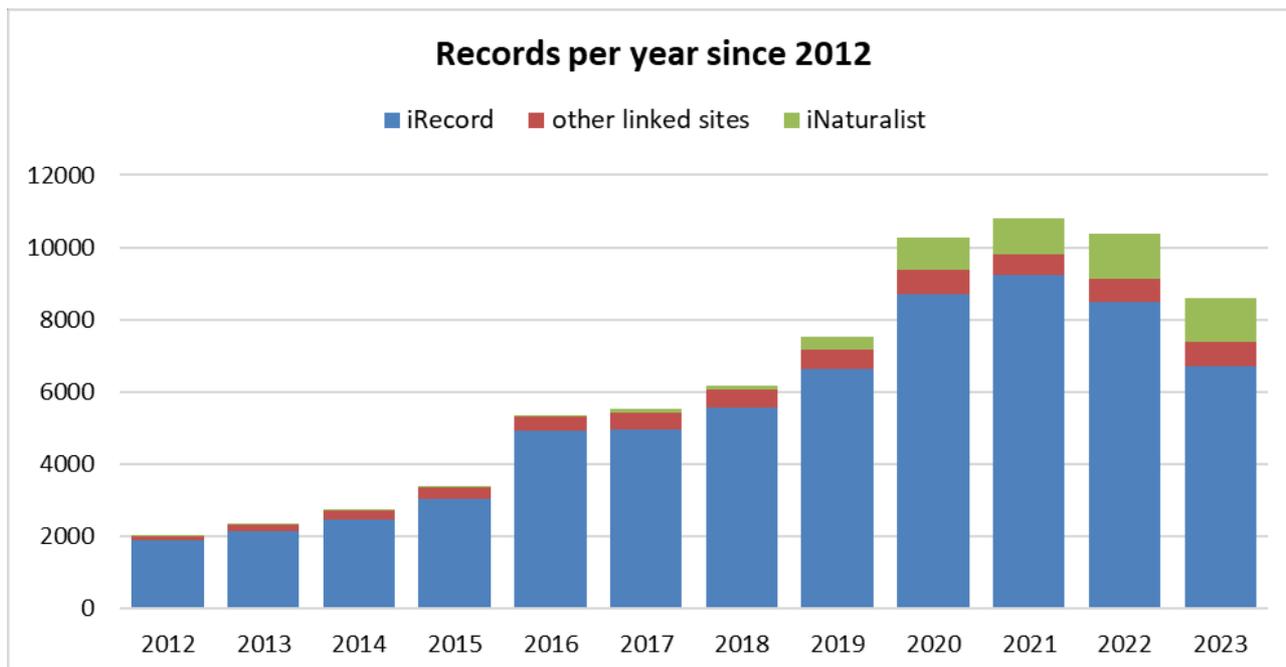
By coincidence a week or so later iNaturalist user jerry2018 posted photos of *Dioctria baumhaueri* preying on another aphid. In addition, Lavigne's [Predator-Prey Database for the family Asilidae](#) cites one instance of *Dioctria baumhaueri* preying on the grain aphid *Macrosiphum avenae* in the United States in the 1960s. So this seems to be a unusual but not unprecedented prey item.

Field guide to flies with three pulvilli by Theo Zeegers & André Schulten

A fantastic guide to seven of the soldierflies and allies families, with well-illustrated keys and species accounts. See the [full review](#) from the Dipterists Forum *Bulletin*. [Available from NHBS](#) (£16.99 + postage).



Recording scheme updates



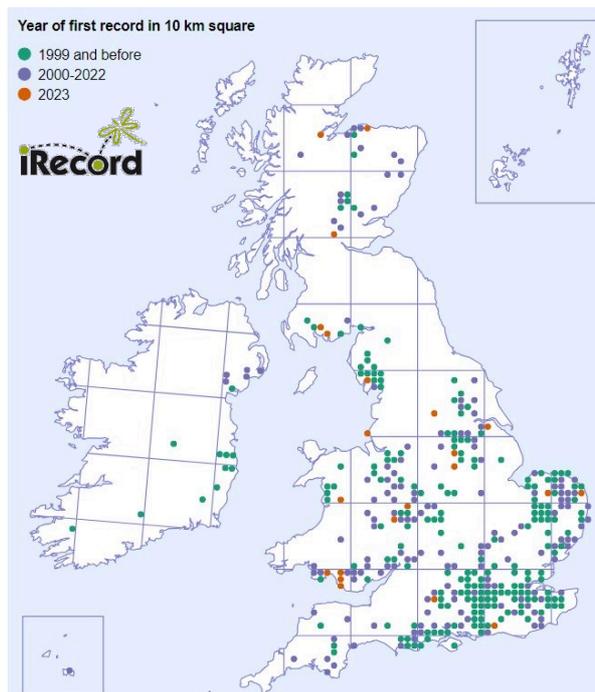
In recent years the recording scheme has been receiving around 10,000 records per year; records for 2023 are still coming in and should reach a similar total. This is a splendid contribution to knowledge of these families and for Diptera recording in general. Most records arrive via iRecord, the preferred route for the scheme, but there are also welcome contributions from other systems linked to iRecord, including NatureSpot in Leicestershire, SEWBRReCORD in South Wales, and iNaturalist.

Over 2,000 people have contributed records in 2023, and all are gratefully received, even if you've only added an individual sighting. A special mention for our top ten recorders contributing most records in 2023, with Sue Taylor (276 records) followed by Peter Brash, Paul Cook, Martin Harvey, Andy Brown, Will Scarratt, Matthew Berriman, Phil Brighton, Mike Bailey, and Derek Whiteley.

During 2023 there have been about 80 records that constitute new vice-county records for the species concerned (based on the recording scheme data alone). Many of these are the result of increased recording filling in gaps in the known ranges, but for some species there are clear indications of range expansion. Two examples are described in separate articles in this newsletter, for *Oxycera rara* and *Eutolmus rufibarbis*.

'Missing' species

Of course, not all species are expanding their range, and there are eight species that were recorded in the second half of the 20th century but have not been reported at all since 2010. Two of these are likely to be extinct in the UK:



Distribution of Common Awl Robberfly, Neoitamus cyanurus; orange dots show 10 km squares where this species was recorded for the first time in 2023, including five new vice-county records, based on the recording scheme data.

- Asilidae – Ginger Robberfly, *Choerades gilvus*: listed as Endangered, but assumed extinct, with the last record in North Hampshire in 1951
- Bombyliidae – Heath Villa, *Villa venusta*: Critically Endangered (Presumed Extinct), last recorded in Dorset in 1958

Two more have always been rarities, but could still be surviving:

- Asilidae – Scarce Awl Robberfly, *Neoitamus cothurnatus*: Critically Endangered, last recorded in Glamorganshire in 1997, otherwise only known from the Oxford area 1895–1921; recent records from the Channel Islands
- Stratiomyidae – Irish Major, *Oxycera fallenii*: Vulnerable, only known from North-east Yorkshire in 1996 and 1997

The remaining four species on the ‘missing’ list are all species that are hard to find and/or identify. Hopefully they are still present and are simply overlooked, but it would be very reassuring if we could find evidence for this.

- Asilidae – Breck Robberfly, *Machimus arthriticus*: Endangered, confined to sites in the Brecklands of West Norfolk and West Suffolk, last recorded in 2010
- Stratiomyidae – Clouded Centurion, *Sargus cuprarius*: Data Deficient, last recorded in East Sussex in 2004, apart from a possible 2022 record awaiting confirmation; formerly widespread, and very similar to the currently widespread *Sargus iridatus*, from which it requires dissection to confirm, so may be overlooked; however, all recent dissections that I’m aware of (other than the possible 2022 record) have proved to be *iridatus*
- Therevidae – Light Scottish Stiletto, *Thereva inornata*: Endangered, a species of rivers and woods in the Scottish highlands, last recorded in South Aberdeenshire in 2000
- Therevidae – Cliff Stiletto, *Thereva strigata*: Endangered, almost entirely confined to chalk cliffs along the south coast of England, last recorded in Isle of Wight in 2007

‘Newest’ species

The most recent additions to the British list are the Anthracite Bee-fly, *Anthrax anthrax*, and the Black Soldierfly, *Hermetia illucens*. The latter continues to be reported as an occasional escape from captivity (it is often reared for animal feed) but shows no sign of establishing in the wild.

In contrast, the Anthracite Bee-fly is now a well-established resident in the Canterbury area in East Kent, and in 2023 a new location popped up in North Wiltshire. It was recorded by Leanne Reddock who saw it flying around a bee hotel and apparently flicking eggs towards it, and it will be intriguing to see if it can establish itself here or if this will be another one-off sighting, as has previously happened in Cambridgeshire and Essex.



Anthracite Bee-fly *Anthrax anthrax* from North Wiltshire.
Photo by Leanne Reddock.

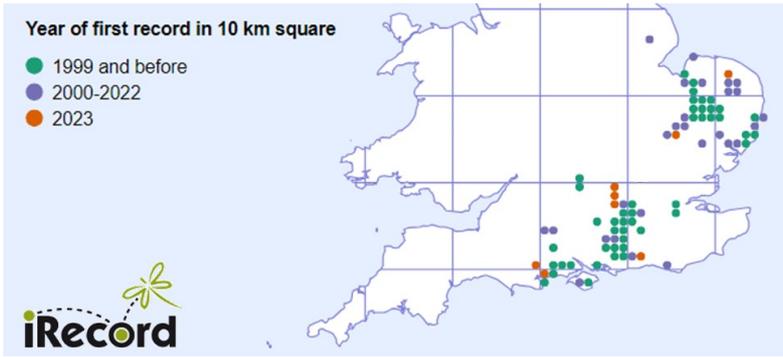
Soldierflies and allies in the entomological journals

The following articles and notes have appeared in recent journal issues.

- Macdonald, M. 2023. The bumblebee robberfly *Laphria flava* (Linnaeus) (Diptera, Asilidae) in Scotland. *Dipterists Digest* 30: 43–50.
- Bland, K.P. 2023. Scottish records of two species of uncommon Stratiomyidae (Diptera). *Dipterists Digest* 30: 155. [New 10 km square records for *Stratiomys potamida* and *Oxycera dives*.]

Robberfly *Eutolmus rufibarbis* extending its range and habitat

by Martin C. Harvey



The Golden-tabbed Robberfly, *Eutolmus rufibarbis*, has always been confined to southern and eastern England, with the largest proportion of records coming from Surrey. There is evidence of a spread in range in recent years, and in 2023 records were reported from one new vice-county (Buckinghamshire) and eight new 10 km squares (orange dots on map).

It has been regarded as a species “confined to sandy districts” (Stubbs and Drake 2014), but the new Buckinghamshire records are from chalk grasslands. On 1 July 2023, the Buckinghamshire Invertebrate Group held a field trip at Kings Barn Farm, Medmenham (SU8185). This is a large area of chalk grassland and woodland which is being managed to restore grassland biodiversity. We were pleased to find large numbers of *Eutolmus rufibarbis*, which was flying alongside Downland Robberfly, *Machimus rusticus* (which in the males can look confusingly similar).

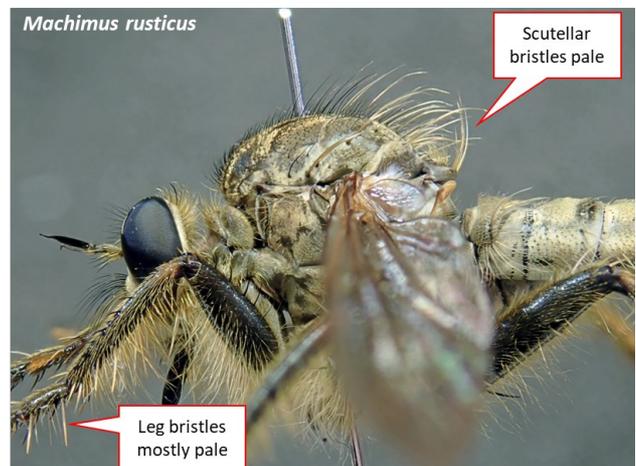
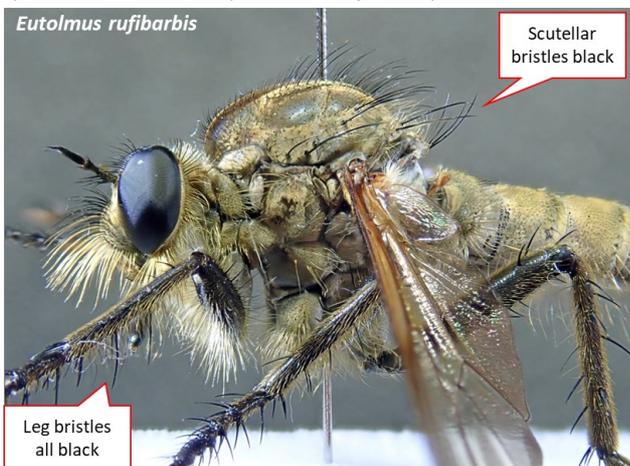
On 23 July 2023 another Buckinghamshire site was reported on iRecord, when Andy Spragg photographed an individual at Chairborough Local Nature Reserve, High Wycombe (SU8492). This site is a relatively small area of chalk grassland and scrub, entirely surrounded by housing and commercial buildings. Further specimens were found at the same location when I visited two weeks later.

Machimus rusticus is also spreading in range, so do take a close look at any large, dark-legged robberflies you find on chalk grasslands in south and east England.



Above: location of Chairborough Nature Reserve, surrounded by buildings, and inset photo of *Eutolmus rufibarbis* at Chairborough (photo by Andy Spragg).

Below: comparison of bristle colours for *Eutolmus rufibarbis* and *Machimus rusticus*, which can be very similar in the males (females have obviously different ovipositors)



Grapefruit as a monitoring tool for soldierfly larvae

by Richard Newton

Back in 1987, in *Larger Brachycera Recording Scheme Newsletter 4*, Alan Stubbs described how he stumbled across the fact that fruit, and in particular grapefruit skin, holds an attraction for soldierfly larvae. At that time Alan said "I hope to have started a revolution in finding strat larvae". I'm not sure how many people have joined the revolution since then, but Richard Newton has taken up the challenge, and describes some initial results from a study he is carrying out near Oxford.

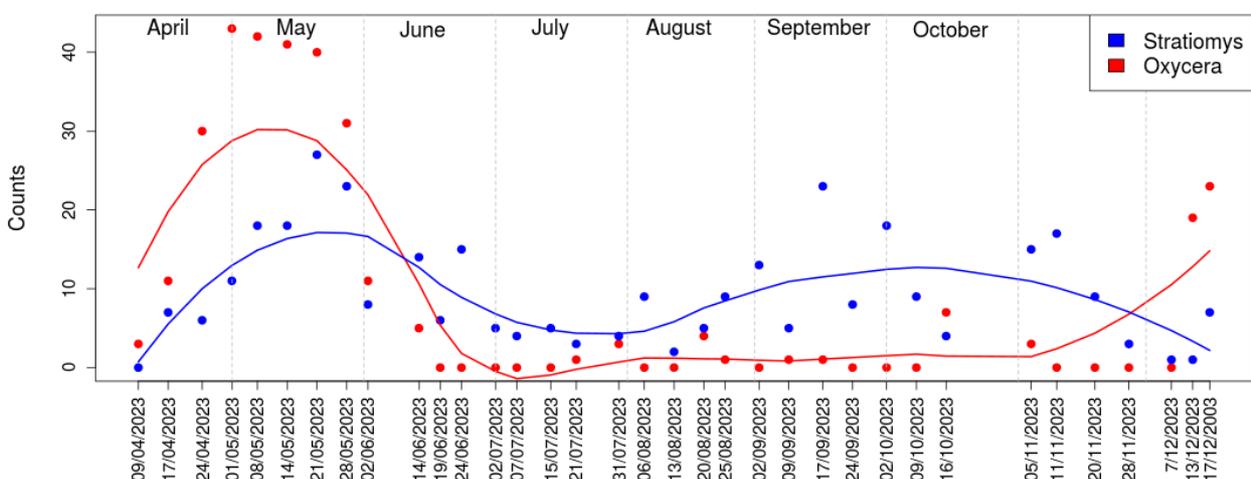
I have been counting soldierfly larvae at Chilswell Valley [a local wildlife site on the edge of Oxford with a small area of calcareous fen] since April, using grapefruit skin traps. The majority of the grapefruit skins have been placed along the courses of five unshaded springs, although two springs in the woodland were also included.

The number of measurement locations has varied throughout the year as locations have dried out in the summer or become too boggy to access in winter. I have also had to restrict the number of locations when fewer grapefruit skins have been available. At one stage I had 35 measurement locations, but the graph (below) shows the total counts only from the 16 locations which have been present and supplied with grapefruit skins throughout the study. To date, larvae have been identified to genus level, and have been a mix of *Stratiomys* and *Oxycera*.

There is likely to be some 'noise' in the measurements due to not being able to have grapefruit in an ideal state of decay at all locations on all measurement dates. On some dates the grapefruit may be too fresh or too decomposed. When I had a plentiful supply of grapefruit I could have up to three grapefruit skins at each location. In hot weather when the grapefruit decomposed quickly it was usually possible to have only one grapefruit at each location which might not necessarily be in the ideal state of decomposition. On the graph I have included loess lines to smooth out the noise, and this shows an apparent seasonality in the numbers of *Oxycera* larvae seen, which were relatively frequent early in the year, then seen in very low numbers across summer and autumn, and dramatically increased again at the time of writing, December 2023. Recording is continuing and next year I hope to identify larvae to species level where possible.



Above: grapefruit skins positioned in wetland habitat at Chilswell Valley.
Below: larvae of *Stratiomys* sp. attracted to the grapefruit.
Photos by Richard Newton



Soldierflies on the move

by Martin C. Harvey – adapted from a blog first published on the [Buglife](#) website

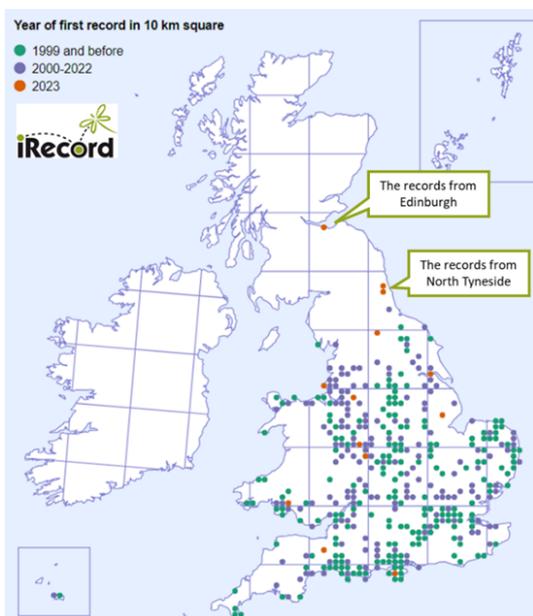
An entomologist is always on the lookout for insects, even in unlikely places! In early July 2023, Chris Barlow was inspecting a wooden fence around a supermarket car park in North Tyneside. Perhaps not the first place that springs to mind as good habitat for insects, but Chris knew that the fence was a favourite basking post for a variety of species. And on this occasion there was a newcomer among the usual fence-post crowd: the Four-barred Major Soldierfly (*Oxycera rara*). This distinctive fly breeds in wetlands, and was probably using the fence to warm itself up before returning to the ponds and ditches of the adjacent nature reserve.



Four-barred Major soldierfly (male) from the North Tyneside supermarket fence. Photo by Chris Barlow

It's always interesting to find a species that you haven't seen before, even more so in this case as it was the first ever record of this species in South Northumberland, representing a jump of 30–40 km from the previous most northerly record. It was swiftly followed by another

record that Chris made the same day, at a different location a kilometre or so north of the first sighting.



But the Four-barred Major didn't stop there: a couple of weeks later David Notton recorded this species at Lauriston Agroecology Farm, on the Firth of Forth coast near Edinburgh. This was the first ever record for Scotland, and pushed the known range further north by some 100 km. The habitat here was a more typical wetland with ponds, in an area of the farm set aside for nature. More of the soldierflies were seen in subsequent visits so it seems likely to be breeding, and benefiting from the wildlife-friendly management at this farm.

It's always exciting to see records coming in from new places and showing how the flies are moving around and surprising us. But alongside the pleasure of seeing a species

do well is the concern about what this actually means for biodiversity in general. It is very likely that some aspect of climate change is driving these changes, and although an expansion of range may be a good thing for the Four-barred Major, other species will be facing challenges as they try to find the conditions they need in a rapidly changing environment. Soldierflies, along with many other types of fly, rely on finding wet habitats of one sort or another for their larvae to develop in. Climate change may increase the frequency of droughts at certain times and places, or conversely may result in more severe flooding incidents, neither of which will benefit species that depend on finding sheltered, shallow waters in which to breed.

Four-barred Major soldierfly (female) from near Edinburgh. Photo by David Notton



This means that seeing species on the move generates mixed feelings. It's encouraging that at least some species appear to be resilient and are able to disperse to find new opportunities, but at the same time it's concerning that climate changes are leading to more extreme conditions. And species that have more specialised habitat requirements are likely to struggle to find what they need as their world changes around them.

**Hoverfly
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Spring 2024
ISSN 1358-5029**



Copy for **Hoverfly Newsletter No. 76** (which is expected to be issued with the Autumn 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 June 2024. 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 *Microdon myrmicae*.

**HOVERFLY RECORDING SCHEME
UPDATE: Spring 2024**

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

As the nights rapidly draw in and temperatures drop, a few hardy hoverflies still venture out into the chill November air of 2023. Numbers can be remarkably high if one finds a sheltered spot but one must wonder what might have been? Reports from across the country have been of low numbers and limited diversity throughout the season. Some of those shortages probably arise because we had a very serious heatwave and drought in 2022. Yet, a colder spring in 2023 may also have contributed. Disentangling these effects is not going to be easy!

In some ways, however, 2023 has been a lot closer in to conditions in the 1980s with some very wet periods that may prove to be a saviour for many hoverflies hammered by last year's drought. We may only know in the coming spring.

At the time this report was drafted, we don't have a clear picture of how recording has shaped-up. Records for 2023 have yet to be absorbed into the database and of course many more have yet to be submitted. For those people who only intermittently submit records we would be very grateful to have your backlog (see later).

We do know, however, that the numbers of records directly extracted from Facebook have declined for a further year (Figure 1).

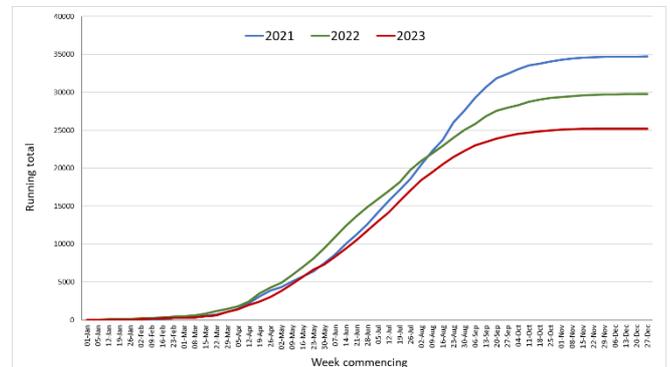


Figure 1 Record accumulation curves for data extracted from Facebook between 2021 and November 2023.

This decline was to be expected because a good many of our most active recorders now maintain their own spreadsheets or use SyrphBoard or iRecord to submit records. This shift is really helpful because it means that more effort can be spent encouraging newcomers, yet it also means that assembling an up-to-date picture of what is happening is a bit slower. On balance, that is no bad thing as it makes the data management process a bit more sustainable. Figures 2a & b shows how iRecord usage has increased in comparison with data extracted from Facebook. At the moment, usage of iNaturalist is comparatively low and

we would prefer to keep it that way because the platform has a number of characteristics that make it more complicated to process and upload data (see later).

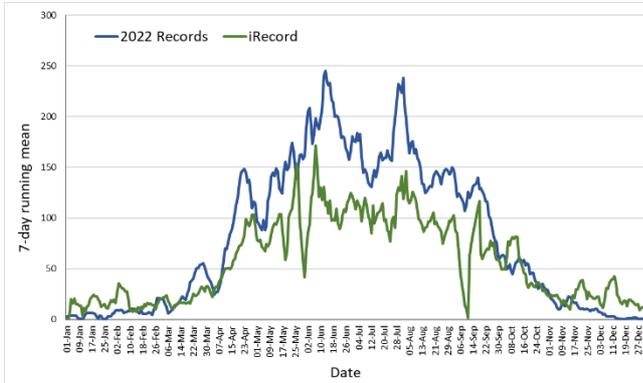


Figure 2a Numbers of daily records for Facebook extraction (blue) and iRecord verification from photos (green) in 2022

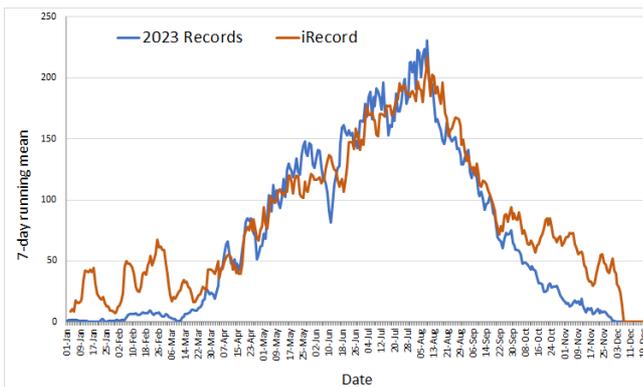


Figure 2b Numbers of daily records for Facebook extraction (blue) and iRecord verification from photos (orange) in 2023 up until 30 November.

Species status review

Natural England are keen to commission a revision of the hoverfly status review that was published in 2014. To do that, we need to get the dataset as complete as possible and therefore we are calling for all records that have yet to be submitted.

At the time of writing, we cannot be sure who will actually conduct the review, as Natural England purchasing rules are complicated by the need to provide high levels of professional indemnity insurance – something that the HRS is not set up for.

Growth in the use of online recording platforms

Over the past 3 years, on-line recording has gained in popularity (as hinted at in Figures 2a & b). Further illustration of this evolution is provided in figures 3a & b. Data for iNaturalist only cover 2022 and 2023 because our verification of data through the iRecord link to this platform started in late September 2021: it meant that there was a substantial backlog that complicates the scale of the graph for this dataset (2023 – 12,437 records; 2022 – 8,340 records; 2021 – 15,875 records). Both graphs comprise only those data accompanied by photographs.

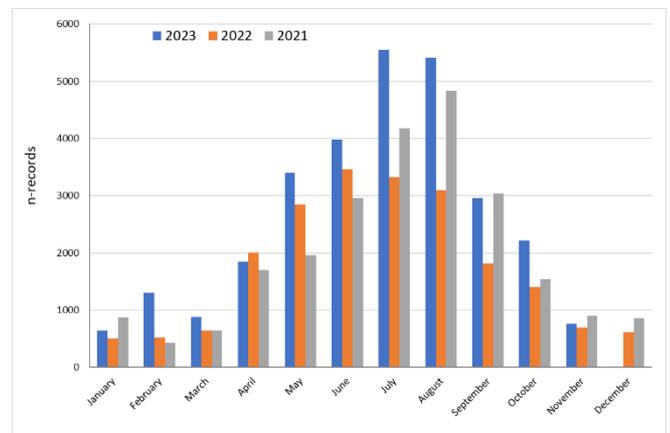


Figure 3a Numbers of records accompanied by photographs verified on iRecord between 2021 and 2023.

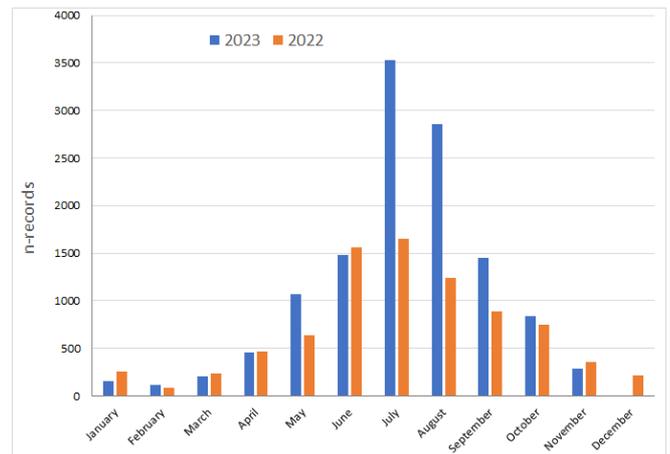


Figure 3b Numbers of iNaturalist records accompanied by photographs verified via iRecord in 2022 and 2023.

iNaturalist

Readers of the Dipterists Bulletin might be forgiven for assuming that the DF preferred recording platform is iNaturalist. It is not! DF uses iRecord for assembling data from its field meetings. From a HRS perspective, whilst we will verify and absorb iNaturalist data, it has

a number of severe limitations that make the data much more difficult to handle and interpret/use. Amongst the biggest issues we have encountered the following are especially troublesome:

- Many contributors use an alias and at least some change that alias from time-to-time. This tendency makes it very hard to make sure that data are linked to the correct name.
- Some users post on both iRecord and iNaturalist using different names so we have to try to work out who is who and clear out duplicated records.
- Somewhere between 5 & 10% of users only record at 10km level – such data are of precious little use apart from creating a dot on a map.
- About 5% of the data that comes in for verification is at 100km level only – utterly useless and a waste of the verifier's time. We reject all such records outright but it does still waste our time.
- Photographs are generally poorer resolution than on iRecord and are often much harder to interpret.
- The overall composition of the dataset is much weaker, comprising a far bigger proportion of ad-hoc single records by individuals who have limited interest in hoverflies. This means that it can take a lot of time matching names on the database for a relatively poor dataset.

There are few obvious rules that could be followed, foremost of which is that if you want to use iNaturalist, please don't add them to iRecord too – it wastes both your time and ours. Also, please stick to the same user name and ideally use your real name and not an alias.

12th International Conference on the Syrphidae

The following was circulated to previous attendees of hoverfly symposia:

The Symposium will take place in Průhonice near Prague (Czech Republic), in [Průhonice Castle](#), with accommodation in [Hotel Floret](#), located in the immediate vicinity of the castle. It will start on 2nd September 2024 (Monday) in the evening and will end on 7th September 2024 (Saturday) in the morning. The preliminary schedule is following:

Arrival: 2nd September 2024

Symposium: 3rd – 5th September 2024

Excursion: 6th September 2024

Departure: 7th September 2024

For more information, you can also visit our website: <https://web.natur.cuni.cz/zoologie/syrphidae/>. If you have any questions, feel free to contact us on Syrphidae12@gmail.com.

Participants were asked to register interest by 20 December but it seems likely that there will be scope for later bookings. Do consider attending – it would be good to have a strong GB presence.

Xanthandrus comtus males hold territory

Roger Morris

Until recently, I have very rarely encountered *Xanthandrus comtus* but in the past two years it has been a lot 'commoner' in my recording area (TQ26). Mostly, they seem to fly low down amongst or around sunlit vegetation but, in June 2023, at Wilderness Island in Sutton (TQ2865) I encountered a male holding station in a sunlit spot under trees in much the same way as male *Episyrphus balteatus*. The first time I made such an observation I was greatly surprised to discover that the stranger was *X. comtus*, but when I saw this species in the same place on several subsequent days this was clearly not a 'one-off' occurrence and was quite likely to have been the same individual.

Archive Records – can you help?

Roger Morris

Whilst working through the main entomological literature to extract flower visit records, I have encountered occasional references to entries in the journals of various regional natural history societies. I imagine that many have long-since disappeared but perhaps their publications survive. Do you know of any? If so, are they accessible, and in which case is there any benefit from working through them to extract records of species and of flower visits? I hope that eventually I will manage to work through the main journals (*Ent Rec*; *Ent Mon Mag*; *Ent Gazette*; *The Entomologist*) but it is unlikely that I will manage to do as full a literature search as is really needed to be sure that we know what has been published already. Filling in the gaps might be a useful project for those who want a quiet winter-time project.

Flower-visit records

Roger Morris

All of the interest in pollinators in recent years has led to a number of requests for HRS data on flower visitors. Obviously, we are willing to pass them on, but there are innumerable problems with the data because a lot of people will note what their recorded animal was sitting on, but not whether or not it was feeding and whether or not it was on a flower, so making sense of the records is fraught with problems. Equally, if one goes back through the literature, it is clear that very few of the reports of interesting species contain details of flower visits. Just occasionally somebody has written a brief account: the late RM Payne and Len Parmenter were obvious exponents. Clearly, there is a lot to do to improve our knowledge of what hoverflies visit which flowers. Interestingly, in species accounts in biological floras, flower visits are often very poorly covered and at least some contain obviously erroneous records! Perhaps it is time to rectify this situation? If you have a flowering plant whose identity you are sure of, what about a small project looking at its hoverfly visitors? Better still, what about recording other flies too and getting them identified so that a more complete picture of flower visiting can be assembled?

From a databasing perspective, I have used the convention at xxx to denote a flower visit because on xxx could mean sunning on the leaves of the plant as much as visiting the flowers. If one can see exactly what is going on then 'nectaring at' or 'taking pollen from' would be better. Beggars cannot be choosers however, and simply improving our general understanding would be a great step forward.

Hoverflies of Britain and North-west Europe; a photographic guide

Sander Bot & Frank van de Meutter

Bloomsbury Naturalist, 400p, paperback, ISBN 978-1-3994-0245-3 ePUB 978-1-3994-0247-7

Book Review by Roger Morris

This is a much-awaited English-language version of *Veldgids Zweefvliegen*, which was published in 2019. In addition to translation into English, coverage has been expanded to describe all of the species formally

known from the British Isles and from parts of northern France, north Germany and Denmark. It does not cover Fennoscandia, which would have added a lot more species. This coverage amounts to a little less than half of the known European fauna and, therefore, it not only provides a comprehensive account of what might occur in Britain but also acts as a valuable introduction to the northern European fauna.

In many ways, this volume is a logical progression from Mark van Veen's guide that we in Britain have relied upon for the past 20 years. There is a short introductory section with photographs labelled to explain the terminology, followed by a key with illustrations on a plate on the opposite page. The keys are followed by a set of species accounts, with each species illustrated by excellent photographs from a variety of angles, based entirely upon preserved specimens. The mind boggles at the amount of work involved in compiling such a comprehensive range of photographs! Users hoping to see live-animal photographs may be disappointed but it has to be remembered that this is essentially a key with a series of relatively short species accounts. Throughout the book the typeface is a little too small for my liking and I suspect that anybody with failing eyesight will have similar reservations. This choice of presentation is, however, inevitable, given the need to pack an awful lot of information into a manageable number of pages (perfect binding has some limitations).

The species accounts are arranged in blocks of three (occasionally two) with a distribution map and phenology histogram and various photographs of relevant male and female features on the opposite page. It is a logical approach but it does mean that where the species accounts are short there can be an awful lot of blank paper. In places, the amount of blank space is substantial and might usefully have been filled with live-animal photographs. Having had some involvement in the development of the maps, one point that is worth bearing in mind is that they are interpretations using Frescalo modelling to interpret what can be quite patchy data. For example, the Irish dataset is extremely limited and the maps may or may not convey the real situation. It is likely that the size of the maps will be a source of frustration for some users, but I'm afraid they had to fit the available space. Users should also bear in mind that the phenology histograms are at best indicative because the

geographical coverage is so broad – in the case of GB and Ireland it extends to some 5 degrees of longitude and 9 degrees of latitude that can mean that flight times vary by as much as a month or perhaps more.

For me, one of the critical questions when designing a book is the expected readership. This feels like a book by specialists for specialists. My rationale stems from the way the keys are structured and illustrated. To use the key properly and efficiently, the reader needs to understand the terminology and location of a wide range of morphological characters. The novice will almost inevitably find themselves flipping back and forth to try to acquaint themselves with the features discussed. In my experience, it takes a long while for the novice to readily find their way around the wing venation and the names of the individual cells, so unless cells are named on the plates (e.g. those for Key 1 on page 25) the novice may struggle. More experienced users may also find themselves confused by some of the names: for example, we tend to refer to the 'discal cell' whereas it should strictly be referred to as the discal-medial cell (dm). Similarly, the names of the pleural plates differ from those currently in use in Stubbs & Falk. There is no escaping these challenges, one simply has to adjust to the chosen terminology, however experienced we are.

A few weeks ago I was asked by a continental specialist whether the emergence of this excellent book worried me in terms of our forthcoming revision of the WILDGuide? My view is that we are competing for a different readership and that it will mainly compete with Stubbs & Falk. I suspect that a lot of British users will find themselves using this book in conjunction with existing literature. We must remember, however, that Stubbs & Falk is now seriously dated and in need of revision or replacement, and the **WILDGuide** only tackles about 60% of Britain's fauna. No single volume will suffice if one wants to properly get to grips with our fauna, as each presents a somewhat different cross-section of information. This new book is arguably the closest we will get to comprehensive coverage for many years to come.

The real test of this book will come when it is used extensively. I have not had the time to do so, but whilst working through the contents I found myself reflecting on the magnification of some of the illustrations and the degree to which it is possible to

interpret them. For example, I found the plates illustrating *Platycheirus* male legs too small to really convey critical characters. Similarly, I found interpretation of *Sphaerophoria* male genital capsules very difficult. These aspects also highlight the challenges that the novice will face; certainly anybody like me with failing eyesight will be reaching for the magnifying glass!

In a departure from other books on hoverflies, this one provides 'common names' and gives precedence to these names. On this, I am not a fan! It seems to me that the priority should have been given to the scientific binomial with the contrived colloquial name in a smaller font. I for one will not be attempting to use these convoluted and meaningless names that will only serve to confuse still further: for decades *Rhingia campestris* has had the understandable colloquial name the Heineken Fly (reaches parts other flies cannot reach) and now it is the Common Snout Fly – not only is the new name longer, it dispenses with what was actually a useful introductory name that could be used in conversations with enthusiast or inquiring bystander alike.

Overall, this is a valuable addition to the literature and Frank & Sander have produced a book that will doubtless become the 'go-to' resource for those hoverfly enthusiasts that want a bit more than a basic beginners guide. It should be on the bookshelves of all serious hoverfly enthusiasts, especially as it is currently marketed by Bloomsbury at £22.05 (discounted from £31.50). In Britain and Ireland we tend to take a very limited interest in the wider European fauna but perhaps that will change as this book might stimulate some British hoverfly enthusiasts to take more interest in Europe.

The Chrysomelid diet of the larvae of *Parasyrphus nigritarsis*

Stephen Suttill

Parasyrphus nigritarsis is unusual among UK syrphines because its larvae don't eat aphids but instead hunt the eggs, larvae and pupae of leaf beetles (Chrysomelidae) that live on alder, willow, poplar and docks. Although described as "Nationally Scarce", and scarcely seen as adult flies, the eggs and larvae are regularly found on dock leaves on my local patch in

the Tame valley on the Pennine fringe of Greater Manchester.

Since the Spring of 2021 I have attempted to rear *nigritarsis* from eggs found on Broad-leaved Dock (*Rumex obtusifolius*). The hoverfly eggs were laid on batches of Green Dock Beetle (*Gastrophysa viridula*) eggs and I provided regular additional supplies of eggs and larvae of the same species. So far, I have managed to rear the *nigritarsis* larvae to development diapause but none have survived the winter.

On 13 May 2023 I collected two Broad-leaved Dock leaves that hosted four Green Dock Beetle egg batches together with at least eleven eggs of *nigritarsis* nestled among them. These were provided with freshly-gathered eggs and larvae of their mother's chosen host species. By 22 May all the *nigritarsis* eggs had hatched and, despite their usual cannibalism, I still had eight *nigritarsis* larvae by 26 May.

On 26 May I noted that the Alder Leaf Beetle (*Agelastica alni*) had started to lay eggs and I wondered whether my *nigritarsis* larvae would eat these as enthusiastically as the eggs from docks. I posed this question on the UK Hoverflies Larval Group Facebook page, but no-one seemed to have put this to the test. So, on 27 May, a batch of four *nigritarsis* larvae had their diet changed from eggs of Green Dock Beetle (*Gastrophysa viridula*) to eggs of Alder Leaf Beetle (*Agelastica alni*). A control batch of four *nigritarsis* larvae from the same site continued their usual diet.

After seven days some of the *A. alni* eggs had been eaten but one larva had died, and the others were not showing much interest in the food provided. By 19 June all the *nigritarsis* on the *A. alni* diet were dead. The last one, in an ironic role reversal, was now being eaten by the beetle larvae. They could all have died of disease but I still have healthy *nigritarsis* larvae that were kept on the same leaf beetle diet which have successfully reached diapause, and which came from the same plant as the dead ones.

A possible further investigation would be for someone to find *nigritarsis* laid on Alder and feed them on Dock Beetle eggs. In my area *A. alni* don't start laying eggs until five weeks after *G. viridula* but maybe there is a greater coincidence of laying times in other areas.

Thanks to Geoff Wilkinson for his comments on this note. Thanks also to Lief Bloss Carstensen, Teresa

Galbraith, Nicola Garnham and others who have shared their experiences of rearing *P. nigritarsis* and, of course, Ken Gartside for introducing me to this fascinating species.



P. nigritarsis larva with Alder Leaf Beetle eggs



P. nigritarsis larva with Green Dock Beetle eggs (photos; Stephen Suttill)

***Eristalinus aeneus* recorded in Gloucestershire: postscript**

David Iliff

In **Hoverfly Newsletter No. 74** I reported the first Gloucestershire record of *Eristalinus aeneus* when John Widgery found a male in his garden on 3 July 2023. It was doubly surprising; firstly that the species had not been found in the county before and secondly that this initial record should be well away from the coast (where this species is predominantly found).

On 25 August (after the last newsletter had gone to press) John had another *Eristalinus aeneus* in his garden, this time a female.

Caliprobola speciosa in the New Forest

Andy Murdock

Caliprobola speciosa is a large, distinctive, saproxylic species whose larvae develop in rotten stumps of ancient trees. It is on the western edge of its range, confined to just the New Forest and Windsor Forest where its larvae mostly use Beech trees.



Caliprobola speciosa (male). Photo: Russel Wynn

Ball and Morris (2014) noted the lack of records in the New Forest and discussed the current status of *Caliprobola speciosa* as, anecdotally, it was suspected to have declined in recent years. With only around 150 records in the HRS database and NBN combined, the status of *Caliprobola speciosa* remained uncertain. It is more widespread in continental Europe and is listed as of 'Least concern' on the European Red List of Endangered Species (Pennards, 2021). Again, the need for further studies was highlighted.

The 'Green Forest Hoverfly Hunt' began in the New Forest in 2022 but had little success; generating just a single record (albeit at a new site) in the ca. 6 week survey window. Only four other sightings were recorded in that year.

In 2023, a team of 21 volunteers set out again to look for *Caliprobola speciosa*. We adopted a targeted approach guided by an online mapping system (Maploom) which contained a number of habitat datasets (ancient woodland areas, canopy density etc) and information on specific 'target' trees gathered from the 2022 surveys. Precise GPS coordinates and

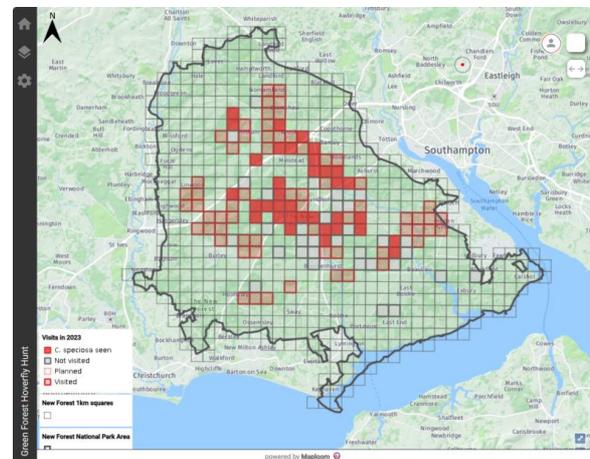
photos of the trees were available to surveyors on a mobile phone map along with surveyor location.

Each 1km grid square was given a suitability score for *Caliprobola speciosa* based on previous records at the site or nearby, presence of target trees identified, presence of ancient woodland, dead/decaying trees from the Woodland Trust's Ancient Tree Inventory and degree of canopy openness. Surveyors undertook 'vigils' at target trees and searched 1km squares looking for new trees and hoverflies. Squares visited were 'ticked off' and any sightings and other information noted.



Typical *Caliprobola speciosa* tree stump. Photo: Tony Short

In total we generated 101 records of *Caliprobola speciosa* plus seven from outside the team, one of which was from the other stronghold site, Windsor Forest. Based on the maximum count at any one location, we estimate we found 94 individuals (82 males and 7 females, plus 5 adults of undetermined gender). Nearly all sightings were at Beech stumps with only a single at Oak and one flower visit record at Hawthorn.



2023 *Caliprobola speciosa* New Forest distribution (bold red squares)

We found *Caliprobola speciosa* in 30 new 1km squares and the new distribution map shows two distinct bands (bold red squares) of almost continuous distribution across the New Forest. Perhaps unsurprisingly, this follows closely the distribution of the ancient woodland areas. In addition, we generated over 400 records of 40 other hoverfly species, including the rare *Pocota personata* and nationally scarce *Myolepta dubia*, *Mallota cimbiciformis* and *Psilota anthracina*.

Despite the success of the 2023 surveys, many questions and uncertainties remain over the future of *Caliprobola speciosa* in the UK. The results suggest it is probably doing better than we thought and is under-recorded. However, we need to ensure 2023 was not a one-off (it was ideal weather in May) and whether similar numbers occur in other years.

Recent storms provide a ready supply of dead wood for the near future but the replacement of Beech trees in the New Forest is hindered by grazing pressures. Climate change and increased frequency and intensity of droughts also pose a threat to Beech wood habitats with a predicted northwards shift in extent in the next 150 years (Martinez *et al*, 2022). There is no obvious place with sufficient numbers of ancient beech trees for *Caliprobola speciosa* to shift northwards to and it does not seem to use oak much in the UK. Therefore, more information is needed on the species and habitat requirements to support future conservation. Forestry England have offered funding to support the ongoing Dipterists Forum affiliated surveys in 2024 including: observation, habitat characterisation, mark-release-recapture and inputs to genetic sequencing.



Caliprobola speciosa: wasp-like in flight Photo: Paul Stevens

If you wish to take part in the 2024 surveys, please contact Andy Murdock, andy@maploom.com

For further information, please see the project website: <https://caliprobola.maploom.com/info>

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Cranefly News

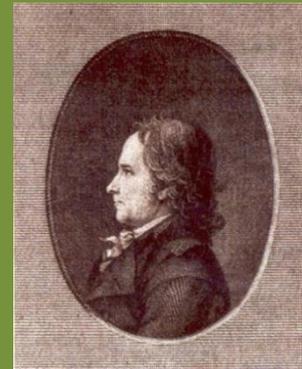
The Dipterists Forum Cranefly Recording Scheme

For Superfamily Tipuloidea & Families Ptychopteridae & Trichoceridae

Newsletter No 42

Spring 2024

Editor: John Kramer



Johann Christian Fabricius. Photo. EGH

The Way Forward.

The importance of larval ecology has been stressed a number of times in Cranefly News and in this issue Alan Stubbs has provided a key to the larvae of the 'Rock Craneflies' *Dactylolabis*.

The large amounts of Cranefly data collected so far are limited in their usefulness by the absence of any standard collecting method. The botanists have their quadrats and 'Butterfly Conservation' have their Standard Walked Transects which allows comparisons between locations, and the monitoring of populations through time. If you are planning your fieldwork for next year it would be useful to keep the idea of a 'constant sampling effort' in mind. A method I have used was to sample an area of ten square metres for one hour. So, for example you could thoroughly sweep the vegetation of a five-metre stretch of a stream on each side, or run a light trap in the same place for a constant time. There are of course many other variables, not least amongst them is the weather and time of emergence of adult flies. If you wanted to monitor your favourite site over a period of years, how would you set about it? The light-trapping work of Steve Robbins (below) is a good example.

Craneflies and Light.

I have had further correspondence on this topic from Steve Robbins in Cornwall. In an excellent piece of very thorough recording work Steve identified the cranefly by-catch from his light trap and presents his results below.

The craneflies attracted to a Rothamsted light trap in East Cornwall (VC2) – January 2018 to December 2019. Steve Robbins

The Cranefly by-catch recovered from a standard Rothamsted light trap was analysed over a two year period 2018/19. The trap was sited on a 4 hectare smallholding/nature reserve (SX325781) some 4 km. south of Launceston in East Cornwall (VC2). Eleven species new to VC2 were recorded.

The immediate surroundings of the trap include a 2 metre high Beech hedge immediately to the East of the trap, an area of soft fruit mulched with dry grass, vegetable gardens and large compost and dung heaps. There are also areas of Bramble and some mown grass all within 10 metres of the trap site. Some 15 metres to the West of the trap there is a Cornish, stone faced hedge bank with mature Ash, Oak, Hawthorn and Willow. This forms the boundary of the holding. Beyond this boundary there is semi improved grassland, cattle and sheep grazed, the fields are small with well developed native species hedges (tree rows). The soils are largely neutral and vary widely in terms of drainage from relatively dry and free draining to water logged for most of the year. Within 100 metres of the trap there are small areas of deciduous woodland, mainly of relatively recent origin (less than 40 years since planting), springs and seepages, a stream and a number of small ponds at various stages of development again of similarly recent origin. Some of the ponds have silted up to form wet, marshy areas. In the 1970's the holding was entirely down to heavily fertilised, permanent grass, the garden, hedgerows and the few remaining large trees being the only remaining reservoirs for fauna and flora. The habitats currently on the holding (woodland, ponds, wetland, flower meadows etc.) are all of relatively recent origin having been created in the last 45 years, with the exception of the banked Cornish hedges and the associated large trees.

The standard Rothamsted light trap utilises a 200 watt, clear tungsten filament bulb, primarily designed to attract moths, there is inevitably a by-catch of other insect groups that are attracted to a light source at night. The design

of the trap, the nature of the light source and the solid roof and base, set on a stand approx. one metre off the ground, is deliberately intended to limit the size of the moth catch to manageable proportions.

A total of 80 species were identified as being present on the site from the families Tipulidae, Cylindrotomidae, Pediciidae, Limoniidae, Trichoceridae and Ptychopteridae, although not all strictly crane flies, these are all families that are included within the crane fly recording scheme. No representatives of the families Cylindrotomidae or Ptychopteridae were found in the trap by-catch. The results tabulated here represent approximately 270 trap nights spread over a two year period January 2018 to December 2019.

Total numbers of crane flies attracted to the trap over the two year period exceeded 15000 (approx!). One species (or possibly species group) made up a very high proportion of the catch numerically, over 80%, the Trichocerid (winter gnat), *Trichocera annulata*. Warm, early autumn nights could result in over a thousand *T. annulata* being attracted to the trap in a single night. The very high numbers of this species may partly be the result of the traps location alongside large compost and dung heaps and a vegetable garden, the species preferring to breed in rotting organic matter. *T. annulata* appeared in the trap in every month with the exception of June and July, numbers peaked in October.

Of the 80 species recorded in the 4 hectares surrounding the trap site, 69 were recovered from the by-catch of the Rothamsted trap and a further 11 species, that have not been seen in the trap but were found to be present on the site, were the result of sweep netting, beating and chance observations. Comparatively little effort has been put into recording techniques other than the light trap and there are likely to be more species to be found by these methods.

Notes on selected species.

Tipulidae

Nephrotoma

N. flavescens is by far the most frequently recorded of the genus with 23 individuals noted.

Nephrotoma guestfalica. Five came to the light in July and August, this appears to be a first record (28.06.2019) for VC2 and Cornwall.

Tipula

Tipula pagana. Forty noted during October and November.

Tipula rufina. Small numbers over a long season, February to October.

Tipula staegeri. Six in October.

Tipula oleracea. Noted from April to November, peak numbers in April (56 recorded during the month).

Tipula paludosa. Coming in at number 2 in the top 20 species in terms of numbers, number 1 if the winter gnats are excluded. 1481 were recorded over the whole period, peaking at 160 on the night of 29.9.19 (103 female, 57 male). Peak numbers in 2018 were 20 on the night of 19.9.18. While these numbers may well reflect a much larger emergence of the species in 2019, weather conditions during the peak flight period, particularly air temperatures, will also have a bearing on the figures.

Tipula subcunctans. Singleton in October, appears to be first record for VC2, there are a number of lowland records from VC1.

Tipula irrorata. A single record of a specimen attracted to the house lights nocturnally – no records from Rothamsted trap. Apparently the first Cornwall and VC2 record.

Tipula pierreii. One record only in August. Apparently the second Cornwall record and first for VC2.

Pediciidae

Dicranota (Ludicia) claripennis

Dicranota lucidipennis

Both *D. claripennis* and *D. lucidipennis* were present in the catch (determined by genitalia examination) a total of some 18 individuals (*Dicranota* sp.) were noted. Of those examined *D. claripennis* predominated. *D. lucidipennis* would seem to have no previous VC2 records.

Limoniidae

Subfamily Chioneinae.

Cheilotrichia cinerascens. Exceeded only by *Trichocera annulata* and *Tipula paludosa* in abundance with 566 recorded between April and November.

Crypteria limnophiloides. A frequent visitor to the trap with over 70 recorded, peaking in October and November – apparently new to VC2 and Cornwall.

Erioptera divisa. Ten records spread throughout June and July. There appear to be no previous records for VC2, Cornwall or Southwest England.

Erioptera lutea. Very common, over 400 individuals recorded from April to December, coming in at fourth place in the 'top twenty' species.

Gonomyia abscondita. Infrequently recorded, apparently the first record for VC2 and Cornwall.

Molophilus species. Only males were identified to species by genital examination, females were recorded as *Molophilus* sp and do not feature in the lists and totals.

Symplecta hybrida. A single record in June would appear to be the first record for VC2

Symplecta (Trimicra) pilipes. Of regular occurrence from April to November, appears to be double brooded, peak numbers being recorded in June and October. Again this appears to be a new species for VC2, previously recorded in VC1.

Subfamily Limnophilinae.

Euphyllidorea lineola. Noted frequently from April to September, possibly double brooded with peaks in May (15) and September(14).

Limnophila schranki. A single in May, appears to be the first record for VC2 and Cornwall.

Subfamily Limoniinae

Thaumastopectera calceata. A single in June would seem to be the first VC2 record.

Trichoceridae*

As noted above, *Trichocera annulata* is abundant, the numbers running into many thousands in a season. Numerically it comprises over 80% of the catch.

Trichocera saltator is common as are *T. regelationis*, *T. hiemalis* and *T. major*.

*The group has been revised and the species referred to here are as defined at the time of the survey. Recent publications suggest that other species may well be present.

East Cornwall, VC2, is generally quite poorly recorded for Diptera in general and Craneflies in particular, the National Biodiversity Network database has relatively few records for VC2 as does the iRecord database. The ERCCIS (Cornwall only) database has a more comprehensive collection of records. East Cornwall has no doubt suffered in the past from naturalists and dipterists speeding through the vice county keen to get to the more specialised habitats of West Cornwall.

The majority of the cranefly species recorded during the survey are common, generalist species probably present over large parts of rural East Cornwall. It is of course, impossible to make any assessment of the distribution/abundance of some of the apparently less common species e.g. *Tipula irrorata* and *Erioptera divisa*, not least as even common species such as *Erioptera lutea* (over 400 recorded during the survey) only have a handful of previous records from the entire vice county. Thanks to the paucity of VC2 records more than 10% of the species noted in this survey appear to be new to VC2 and/or Cornwall.

Thanks to Peter Boardman and John Kramer for assistance with identifications and to ERCCIS (Environmental Records Centre for Cornwall and the Isles of Scilly) for access to the ORKS database.

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APPENDIX. Detailed results.

List of species attracted to Rothamsted trap – January 2018 to December 2019 with totals for period.

Tipulidae			
<i>Nephrotoma appendiculata</i>	1	<i>Molophilus bifidus</i>	1
<i>Nephrotoma flavescens</i>	23	<i>Molophilus griseus</i>	73
<i>Nephrotoma flavipalpis</i>	2	<i>Molophilus medius</i>	18
<i>Nephrotoma guestfalica</i>	5	<i>Molophilus ochraceus</i>	3
<i>Nephrotoma quadrifaria</i>	2	<i>Ormosia hederiae</i>	4

<i>Nephrotoma scurra</i>	1	<i>Ormosia nodulosa</i>	2
<i>Tipula fulvipennis</i>	7	<i>Symplecta stictica</i>	16
<i>Tipula maxima</i>	5	<i>Symplecta hybrida</i>	1
<i>Tipula vittata</i>	15	<i>Trimicra pilipes</i>	66
<i>Tipula flavolineata</i>	1	<i>Dicranophragma adjunctum</i>	160
<i>Tipula fascipennis</i>	12	<i>Dicranophragma nemorale</i>	14
<i>Tipula confusa</i>	14	<i>Eleophila maculata</i>	1
<i>Tipula pagana</i>	40	<i>Eleophila submarmorata</i>	1
<i>Tipula rufina</i>	13	<i>Epiphragma ocellare</i>	1
<i>Tipula staegeri</i>	6	<i>Euphyllidorea aperta</i>	2
<i>Tipula oleracea</i>	142	<i>Euphyllidorea lineola</i>	45
<i>Tipula paludosa</i>	1481	<i>Limnophila schranki</i>	1
<i>Tipula subcunctans</i>	1	<i>Phyllidorea fulvonervosa</i>	1
<i>Tipula lateralis</i>	53	<i>Phyllidorea ferruginea</i>	15
<i>Tipula pierrei</i>	1	<i>Pilaria discicollis</i>	2
		<i>Pseudolimnophila sepium</i>	1
Pediciidae		<i>Antocha vitripennis</i>	1
<i>Dicranota claripennis</i>	8	<i>Dicranomyia chorea</i>	53
<i>Dicranota lucidipennis</i>	1	<i>Dicranomyia mitis</i>	4
<i>Dicranota sp.</i>	9	<i>Dicranomyia modesta</i>	24
<i>Pedicia littoralis</i>	2	<i>Limonia macrostigma</i>	1
<i>Pedicea rivosa</i>	1	<i>Limonia nubeculosa</i>	12
		<i>Rhipidia maculata</i>	273
Limoniidae		<i>Thaumastoptera calceata</i>	1
<i>Cheilotrichia cinerascens</i>	570		
<i>Crypteria limnophiloides</i>	80	Trichoceridae	
<i>Ericonopa trivialis</i>	3	<i>Trichocera annulata</i>	15486
<i>Erioptera divisa</i>	10	<i>Trichocera regelationis</i>	139
<i>Erioptera fuscipennis</i>	4	<i>Trichocera saltator</i>	44
<i>Erioptera lutea</i>	437	<i>Trichocera hiemalis</i>	8
<i>Gonomyia abscondita</i>	1	<i>Trichocera major</i>	44
<i>Gonomyia conoviensis</i>	2		
<i>Ilisia maculata</i>	18		
<i>Ilisiaoccoecata</i>	3		

The twenty species found with the greatest frequency in the Rothamsted trap – Jan 2018 to Dec 2019.

Taxon	Total
<i>Trichocera annulata</i>	15486
<i>Tipula paludosa</i>	1481
<i>Cheilotrichia cinerascens</i>	570
<i>Erioptera lutea</i>	437
<i>Rhipidia maculata</i>	273
<i>Dicranophragma adjunctum</i>	160
<i>Tipula oleracea</i>	142
<i>Trichocera regelationis</i>	139
<i>Crypteria limnophiloides</i>	80
<i>Molophilus griseus</i>	73
<i>Trimicra pilipes</i>	66
<i>Tipula lateralis</i>	53
<i>Dicranomyia chorea</i>	53
<i>Euphyllidorea lineola</i>	45
<i>Trichocera major</i>	44
<i>Trichocera saltator</i>	44
<i>Tipula pagana</i>	40
<i>Dicranomyia modesta</i>	24
<i>Nephrotoma flavescens</i>	23
<i>Ilisia maculata</i>	18
<i>Molophilus medius</i>	18

Species recorded in the vicinity of the Rothamsted trap, mostly by day, but not recorded from the trap.

Tipulidae
<i>Dictenidia bimaculata</i>
<i>Tipula irrorata*</i>
Cylindrotomidae
<i>Cylindrotoma distinctissima</i>
Pediciidae
<i>Pedicia occulta</i>
<i>Tricyphona immaculata</i>
Limoniidae
<i>Austrolimnophila ochracea</i>
<i>Dicranomyia morio</i>
<i>Helius flavus</i>
<i>Limonia phragmitidis</i>
Ptychopteridae
<i>Ptychoptera albimana</i>
<i>Ptychoptera lacustris</i>

*Attracted to house lights on one occasion.

Steve Robbins

An Overview of Craneflies attracted to light.

Steve's records of 20 species **Tipulidae** attracted to light confirm those recorded in Cranefly News #40 and #41. He recorded 4 species **Pediciidae** in his light trap, 3 of which are new: *Dicranota claripennis*, *Dicranota lucidipennis*, *Dicranota sp.* and *Pedicia littoralis*.

Another UK record of *Atypophthalmus umbratus* (de Meijere, 1911)

Pete Boardman and Colin Legg.

In CN40 (digital version only) and CN41 (paper version) John Kramer included an interesting article about a couple of 'new' species noted in British Craneflies (Stubbs, 2021). It included this species, known previously as an accidental introduction to Kew Gardens, where a population flourished for some years in a wet tropical biome, before, as Alan puts it in his typically comic prose "*the spider population gained the upper hand*", and the species seems to have been lost there since 2002.

It now appears the fly has found another way in, but this time via Dutch house plant imports to garden centres. A single specimen was noted on a kitchen window in the home of the second author on 28/11/23 near Stirling in Scotland, where pot plants had recently been introduced from a local garden centre. The cranefly was photographed and submitted to iRecord and the UK Diptera Facebook group where it was identified by Michael James and passed to the first author for verification. It was confirmed that the pot plants were very likely to have come from Dutch suppliers and the garden centre talked oxymoronically about treating their imported stock with "*an organic environmentally friendly pesticide*"! The cranefly, presumably safe in the soil in its pupal form, survived this treatment.

Similar observations have been noted in Holland (Oosterbroek, 2009), where the fly was found amongst Anthuriums and Gerberas, and more recently in Belgium in 2020 (Kolcsar et al, 2021) from a glasshouse. Also, records are noted from a Swedish glasshouse (Enerfelt, 2020), and from the Iberian Peninsula at various indoor locations (Mederos et al 2019).

The likelihood is that this species will turn up more frequently if it is now within the garden centre house plant supply chain, though obviously it depends on keen-eyed observers intercepting the cranefly.

We thank the garden centre in question for supplying information on the source of their pot plants, and Ian Andrews and Michael James for their role in identifying the fly and highlighting the find.

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The elusive larva of *Neolimonia dumetorum* - Alan Stubbs

Adults of this crane fly are widespread in woodland and can be locally abundant. Yet, seemingly the larva is undescribed, the only British saprophagous genus lacking any description worldwide: thus a prime target for resolution of this deficit.

There is only one mention of a larva being found, and reared to identify (Harvey, 2021). A larva was found in unspecified decaying wood on 25 January 1998, kept indoors, and an adult female emerged on 23 June (Harvey, 2021).

All other reports seem to be based on rearing from larval habitat rather than having found the larvae. Thus, it is among species with larvae in dry or more or less wet decaying wood (Brindle, 1960c) and a preference for strongly decayed logs with low density and C:N ratios (Hovemeyer, K.; Schauer mann, J. 2003); it has been reared from stumps of beech (Hovemeyer, 1998); a small dead oak trunk (Roper, 2005); pollard ash (in cavities, Alexander & Jones, M. 2016; sapwood & bark decay, and saproxylic fungi (Hewitt, et al., 2017); in Russia some agaric fungi as well as rotting wood of deciduous trees (Krivosheina, 2008). Since the fly can be common in some conifer plantations, deciduous wood may not be essential.

In the Nearctic, *Neolimonia rara* (Osten Sacken, 1869) has been reared from fungi of the family Polyporaceae (Bunyard, B.A. 2003).

N. dumetorum would seem to be most associated with late, advanced decay. As a member of the Limoniinae, the larvae (and pupae) can be expected to live in a silk tube, probably covered in adhering particles of rotten wood and detritus which might be the reason larvae are so difficult to detect. In Britain, rearing from fungi has not been reported (as far as I am aware): saproxylic fungi such as polypores occupy an interface in which larvae may have opportunity to move between rotting wood into fungi, or visa versa, and thus obscure interpretation.

I am poised to construct a key to the larvae of saproxylic crane flies but the absence of larval material for this genus is a limitation in accuracy (does it resemble another genus or look so different that confusion would be unlikely?). Some help is needed please to crack the field craft: if larvae were easy to find, it would presumably have been amply illustrated in the literature by now.

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Alan Stubbs [alan.stubbs@buglife.org.uk]

Alternative food sources for larvae of *Neolimonia dumetorum* ? - Peter Chandler

In material I've identified from the Blasket Islands (off the coast of Kerry, see article on *Sarcophaga portschinskyi* in latest Digest Vo..30 No. 1) are some *Neolimonia dumetorum* which have been caught by pitfall traps in numbers that suggest a resident population:

2 males, 2 females on 23 April 2023

8 males, 3 females on 8 August 2023

Adam Mantell, who collected them, assures me that there are no trees on the islands. He commented: "I wonder if it occasionally uses other niches for larval development, or whether it might utilise woody ericoid material which is abundant on the island?"

Areas without trees within flying distance are a rare occurrence. Have any members of the CRS evidence to support Peter's hypothesis that rotting 'heather' stems might be used as a larval food source ?

Following the piece in the Autumn 2023 issue of Crane-fly News (#41. **New Records of *Nephrotoma sullingtonensis***) I have had two developments, and so the thread continues in this issue. Thanks to Roger Hawkins I had a mail from BENHS member John Paul regarding his 2001 record. John wrote as follows:

When I was living in Sussex, Sullington Warren was one of my regular haunts but I saw Nephrotoma sullingtonensis only once, on 10.v.2001. I saw several of them fluttering about and hanging off gorse bushes in a clearing with scattered shrubs and heather (GR. TQ097142). Nephrotoma appendiculata was present in smaller numbers at the same spot. I collected voucher specimens of both species and identified them using the paper by Stubbs in the AES journal and more recently I re-checked them using the crane-fly book. I have visited that clearing on numerous occasions in all seasons without re-finding Nephrotoma sullingtonensis. I believe Mike Edwards had a similar experience some years earlier when he found it in numbers on Sullington Warren (I'm not sure exactly of the date and location) but he did not find it again on later visits.

The impression I have is of an insect with a brief lifespan and short emergence period which probably varies according to the seasonal conditions and weather, making it difficult to predict when adults will be on the wing.

John's observations raise the question, what is the trigger for the mass emergence of the adults ??

From its distribution, it seems to be a fly of hot warm climates like the Iberian Penninsular. England is its northernmost outpost and it is not surprising that the warm sandy soil of Sullington Warren should provide it with a habitat.

In #41, Graham Lyons reported that Alice Parfitt had found *N. sullingtonensis* flying at a new location – Hurston Warren (TQ068166)– and Alice kindly sent me two specimens for dissection.

Crane-fly People: Johann Christian Fabricius (1745-1808) - E.G. Hancock, Hunterian Museum, University of Glasgow,

Fabricius is regarded as the father of descriptive entomology or the "Entomological Linnaeus" as he concentrated almost entirely on insects. He did not devote particular attention to craneflies but as he named about 10,000 species from all orders it is inevitable that craneflies were included. Born in Denmark he demonstrated an interest in natural history from an early age and studied at the University of Copenhagen during part of 1762 but moved to Uppsala later that same year. For two years he was an energetic pupil of Linnaeus with whom he retained a long-standing friendship. Fabricius was one of the few to provide personal anecdotes on the latter's life and habits, utilised by later biographers, and was an



Fig 1.

active promoter of “The Method” as he called the binomial (or Linnaean) system. A number of his contemporaries are also well known entomologists such as Daniel Solander (1733-1782), Pehr Forsskål (1732-1763) and Carl Peter Thunberg (1743-1828). They and several others were designated by Linnaeus his Apostles. His idea was that these pupils would go out into the wide world and send back collections for him to work with. They have been the subjects of a massively expensive, extensive and physically weighty series of volumes (Hansen, 2007-2011). Fabricius was not among their number - his ambition was to work almost exclusively with insects travelling himself to study collections and develop sources and networks. This concentration of effort resulted in him describing more than three times as many insect species as Linnaeus.

Fabricius and Diptera

Fabricius (1805) brought together in one volume, *Systema Antliatorum*, his accumulated knowledge of flies. He based his higher insect classification on the structure and function of mouthparts, known as the cibarian system. Linnaeus used wing characters and hence Diptera were already clearly defined by having one pair of wings and halteres. Thereafter, [Pierre Andre Latreille \(1762-1833\)](#) introduced multiple characters and also the concept of a family level taxon between genus and order (although the use of family level names identified by ending in -idae was not yet in use). Johann Wilhelm Meigen (1764-1845) for his work is often referred to as the father of Dipterology although he dealt with just the European Diptera fauna. Identification keys were developed by Ignaz Rudolf Schiner (1813-1873) and Carl Robert Osten-Sacken (1828-1906) introduced the idea of synoptic catalogues and research programmes based on collections and experts in museums. Osten-Sacken’s role as a crane-fly worker was dealt with in an earlier CRS News (Kramer, 2023). The complex story of development in the higher classification of insects throughout history is described in detail by Wilson & Doner (1937). Fabricius was the last person able to provide an overview of insects on a worldwide scale. The numbers of new species being discovered



Fig. 2.

increased exponentially as the nineteenth century progressed meant taxonomists could only function effectively in more specialised ways as coleopterists, lepidopterists, hemipterists, etc.

Fabricius spent most summers between 1767 and 1789 visiting London to access collections that were accruing as a product of exploratory voyages, the processes of colonisation and London being a centre of world trade. His activities and method of working are given in his own account (Fabricius, 1784) parts of which were translated by Armitage (1958). After that period usually he visited Paris each summer consulting collections there to spend more time with his family; his wife preferred French society. Linnaeus’ collections are in the Linnean Society of London, Burlington House, Piccadilly but specimens utilised by Fabricius can be found in a number of European museums. From his London period the two main surviving collections are those of

Joseph Banks (1743-1820) in NHM (London) and William Hunter (1708-1783), in the University of Glasgow. Some background to this particular period of activity is given in Hancock (2015). Apart from consulting the original publications Zimsen (1964) provides a list of names with an indication of the existence and location of types she could establish at the time. It rapidly becomes clear that not all survived wars and civil strife alongside the ravages of time - a common fate of these early collections.

When scrutinising checklists of most insect groups from around the world the name Fabricius quickly becomes familiar. His labours were initially part-time and almost a leisure activity as he was employed to teach Natural History and Political Economy at Copenhagen (1768-1775) and moved to the University of Kiel (then in Denmark) to do the same. In 1789 he was granted a “release” from these roles and became an insect taxonomist but was frustrated in never being actually employed as such.

The output of Fabricius for crane-flies (Tipuloidea), restricted to currently valid names, was six Palaearctic, two Nearctic, one Afrotropical and nine Neotropical species. Linnaeus had named thirteen crane-flies, twelve of which occur in Britain but none were from beyond Europe, reflecting the relative breadth of their sources. To focus on the British checklist, Linnaeus authored 12 species and 6 were Fabrician names. For comparison, Meigen was the author of 78 British species, Schummel 19, Zetterstedt 14; Francis Walker 8 and 34 were by F.W. Edwards. In Fabricius (1805) three genera covered the “crane-flies”, *Ctenophora*, *Ptychoptera* (in earlier works these were in *Tipula*) and *Tipula*. Trichoceridae also were included in *Tipula*. A number of other names he placed within *Tipula* were of species since moved to a range of families such as Chironomidae, Mycetophilidae, Bibionidae and even Therevidae.

It is unfortunate that nematoceros Diptera are not well represented by specimens in the surviving eighteenth century collections. This may be due to their delicate nature in contrast to the more robust higher Diptera, beetles and other insect groups. In Glasgow as far as crane-flies are concerned there are several specimens of what were originally listed as “*Tipula*”. It is a particular disappointment to me as the curator formerly responsible for



Fig. 3. *Bittacomorpha clavipes*

entomology in Glasgow, including Hunter's *Bittacomorpha clavipes* (Ptychopteridae). cabinets, that the type of "*Tipula clavipes* Fabricius, 1781" has not survived. Surely one of the more spectacular of flies, now known as *Bittacomorpha clavipes* (Ptychopteridae). The original specimen was from the collection of Thomas Pattinson Yeats (1746-1782) acquired by William Hunter by bequest in 1782.

New species of British crane flies Fabricius although all described from European localities are:

Tipulidae

Tipula [Ctenophora] flaveolata Fabr., 1794. Type locality: Germany

Tipula [Prionocera] turcica Fabr., 1787. Type locality : Kiel

Tipula [Nephrotoma] dorsalis Fabr., 1782. Type locality: Germany

Tipula [Trimicra] pilipes Fabr., 1787. Type locality : Kiel.

Tipula [Limonia] flavipes Fabr., 1787. Type locality : Kiel.

Tipula [Dicranomyia] morio Fabr., 1787. Type locality : Kiel.

A trichocerid from Norway of uncertain identity, due to specimen condition, is treated as a probable *Trichocera maculipennis* Meigen, 1818 and *Ptychoptera albimana* Fabr., 1787 was described from a Kiel locality.

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Captions for figures

Figs 1 & 2. Undated engraved portraits of Johann Christian Fabricius; one of him as an older man is thought to be about 1798.

Fig 3. *Bittacomorpha clavipes* Fabricius, 1781, from Georgia., taken by Christina Butler (Creative Commons license CC-BY-22). The type has not survived.

E.G. Hancock, Hunterian Museum, University of Glasgow,

***Molophilus occultus* de Meijere, 1918 new to the Isle of Coll - Pete Boardman**

The Twin-triangle Mol *Molophilus occultus* is perhaps the de-facto bog crane fly and is encountered fairly commonly in some of our wetter, boggy habitats in the southwest and south of England, Wales, the north-west of England, and throughout Scotland up to Orkney. During June this year I visited the Isle of Coll in the Inner Hebrides briefly to observe corncrakes, a long-time wish. Though the weather had broken after an unusually prolonged dry and hot spell for the island, and was particularly stormy and wet, I spent a little time sweeping on boggy ground between rain showers and encountered this crane fly on June 24th at NM206553 and NM262635. It is likely to be very common in similar situations elsewhere on the island, and the neighbouring island of Tiree. Coll is largely a 'diptera white hole' with very few records of anything, with *Tipula paludosa* the only other recorded crane fly.

***Ellipteroides (Protogonomyia) alboscuteclatus* (von Roser, 1840) re-found at Haugh Wood SSSI,**

Herefordshire – Pete Boardman, Nick Button, Kristina Fekete-O'Hare, Annie Morris, Leonore Williams, Beth Mather, and Fran Mullany

The Spring Black Lamb *Ellipteroides alboscuteallatus* was first recorded above the Pentoloe Brook at Haugh Wood SSSI (SO585376) in Herefordshire by J.H. Wood on the 14/07/1898 (detailed in Heaver, 2006) and has been recorded sparingly since by Peter Chandler in June 1997, with further site information in Heaver, 2014. During 2023 the Natural England Field Unit (NEFU) visited the site to carry out a condition assessment of the various features that required monitoring at the site. This gave a great opportunity to see if the crane fly was still around and to gauge the phenology of the species. Visits were undertaken on the 06/06/23, 04/07/23, and 26/07/23 and the fly was found on each occasion, with the largest numbers being located on the final visit. Other species of interest found were the Northern Yellow Splinter *Lipsothrix errans* (Walker, 1848) and the Oblique-triangle Mol *Molophilus (Molophilus) lackschewitzianus* Alexander, 1953 on 06/06/23, the Saw-edge Mini-mol *Tasiocera (Dasymolophilus) robusta* (Bangerter, 1947) on 04/07/23, and the Lined Mini-longtail *Paradelphomyia dalei* (Edwards, 1939) on 24/07/23.

Thanks go to Nick Button for initially organising the survey and the other authors for contributing to the fieldwork.

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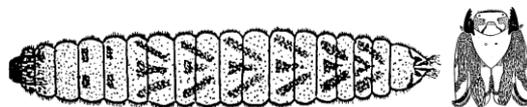
CRANEFLY LARVAE - DACTYLOLABINAE - Alan Stubbs

Members of this small family are specialised to live on wet rock surfaces (hydropetric habitat), the larvae are camouflaged by colour and disruptive markings (and perhaps debris adhering the body).

The family has only 1 genus, *Dactyolabis*, with 2 species in Britain. These are *D. transversa* (Meigen 1804) and *D. sexmaculata* (Macquart 1826). There are 20 species in Europe.

Larval characteristics of British species

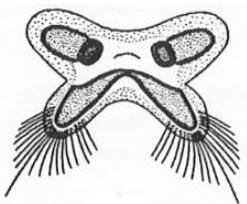
- 10-12 mm long (full grown).
- Anal segment with 4 well developed lobes, each with a sclerotised plate.
- Body depressed, with raised tubercles.
- Body segments with pairs of oblique dorso-lateral dark lines.
- 4 anal papillae, pointed, long or short.
- Head capsule massive.



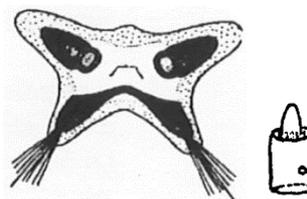
Body and head of *D. sexmaculata* (Bangerter, 1931)

Key to Larvae of British species of *Dactyolabis*

1. Greyish, most body segments with oblique dorso-lateral brownish-black lines. Spiracular disc with sclerotised plates dark only around margins. Antennal base very short. Anal papillae [not illustrated] short, not on a fleshy pedicel. On wet limestone rock *sexmaculata*



D. sexmaculata



D. transversa



Spiracular discs and antennae (spiracular disc from Brindle & Bryce, 1960; antennae from Bangerter, 1931.)

2. Dark yellowish, most body segments with oblique dorso-lateral black lines. Spiracular disc with sclerotised plates almost uniformly dark. Antennal base elongate. Anal papillae [not illustrated] long, pointed, on a white fleshy pedicel. On wet gritstone rocks *transversa*

The Pupae

Brindle (1967) reports that pupae are brownish or grey, attached to the last larval skin, the cuticle tuberculate, the anterior horns elongate with the base broadened: illustrations 107-109 include last segment of abdomen for male and female *D. sexmaculata*. Bangerter (1931) describes (in German) and partly illustrates both British species.

Locating larvae

The field craft in finding larvae has not been handed-on but larvae were usually common where found (Brindle, 1967). He was based at Nelson, near the west flank of the Pennines. Uplands are most prone to be humid, including from drizzle and mists/clouds, favouring larva moving over rock surfaces. Lowland occurrence seems to be mainly linked to sheltered, humid conditions.

Adult *D. sexmaculata* in particular can appear quite early in the season and the flight period is short. It seems likely that the best period to search is March or April, before warm month evaporation become limiting (all be it that exposure to wind can be a major drying agent and at any time of year). Brindle (1967) notes that adults were found on limestone pavement (Raven Scar, on Ingleborough), a very dry habitat and suggests that larvae are probable living in the grykes or crevices where some degree of dampness exists. It is thus pertinent to note that in early spring, at coastal Croatia several larvae of a species of *Oxycera* (Stratiomyiidae) were found crawling over exposed limestone rocks after rain but not when the rocks were dry (pers. obs.); It seems likely that *Dactyolabis* larvae have similar behaviour.

Brindle (1967) states that the larvae feed on algae and mosses. The mandibles of *D. sexmaculata* are strong so grazing on encrusting lichens is a possibility [*Oxycera* feed on microbes]. The mandibles of *D. transversata* are weaker (Bangerter, 1931) so dietary differences are very probable.

Species notes

Some information in Stubbs (2021) is updated following more detailed review of the literature.

sexmaculata (Macquart, 1826)

There is a strong but not exclusive association with Carboniferous Limestone, which is grey anyway but if exposed, the surface becomes dominantly encrusted by light grey lichens. Being a fairly tough rock, its outcrops in England and Wales tend to form high ground. It can occur on some similar limestones in northern and western areas. Adults have been found at a seepage high up Beinn Eigh (Kramer, 2008) where acidic rocks are dominant (the anomaly may possibly be explained by occurrence of calcium rich mudstones). At Honister Pass, on the west flank of the Lake District mountains, the species was found in an area of upland acid grassland, enriched by both acidic mire and seepages as well as base-rich flushes (Hewitt, 2013), a further illustration that acid situations can have local calcareous (or other base-rich) influences: almost certainly the larval, habitat was on rocks within or at the edge of the flushes/seepages. Adults have been recorded at low altitude as well in northern and western Britain but mainly within upland areas.

transversa (Meigen, 1804)

It was regarded as gritstone species by [Brindle & Bryce \(1960\)](#). Brindle lived at Nelson, with ready access the west side of the Pennines so was referring to the Millstone Grit, an acidic rock in sharp contrast to the Carboniferous Limestone. Whilst a strong affinity with acid rocks applies in some parts of Britain, in Shropshire *transversa* is also found in calcareous situations (Boardman, 2016). Both open and wooded situations can be suitable.

The ecological niche of the larvae is still poorly defined. The float-hairs are more confined than in *sexmaculata*, suggesting niche segregation beyond rock type. Adults have been found on rock faces where water is oozing out of peaty moorland. Perhaps wet debris is important for camouflage, or diet with algae included. It can be listed among the fauna found along streams (e.g. Godfrey, 2001) and it is a listed flowing water species ([Cranston & Drake, 2010: p. 175](#)) but that appears to be deceptive; the breeding niche is most likely to be localised hydropetric habitat along stream banks or very close by. Rarely adults of both species seem to share the same seepage fed rock face (Boardman, 2016).

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Dactylolabis denticulata: larva and pupal exuviae. © M. Billard.

Many thanks to the contributors for another interesting issue. The next deadline for submission of copy to the Editor is June 21st 2024

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Collating & Managing

Methods available to the schemes are limited, for example there are presently no suitable image management tools. Current tools are: Recorder 6, MapMate, Excel & Access. Both BRC and Dipterists Forum may help Schemes with this task.

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Homes and keys

All of the Recording Schemes have a home on the Dipterists Forum website. Some of these are quite substantial and may be where you will find **Identification keys**. Others have additional homes (red home symbols) which they might prefer (check both).



Icons for homes and keys: a red house icon, a blue house icon, a red bird icon, and a black 'a' icon.

a

Icons for homes and keys: a red house icon, a blue house icon, a red bird icon, and a black 'a' icon.

Icons for recording schemes: a green 'X' in a box, a green leaf icon, and a green 'F' in a box.

Icon for a red bird.

Icons for publishing: a blue 'a' icon, a green house icon with a fly, and a green leaf icon with 'GIF' text.

Collecting

Record icons: a green 'X' in a box, a green leaf icon, a green 'F' in a box, and a green bird icon. Text: iNaturalist, Social media.

Disseminating Click these icons at each Scheme

Own website, Scratchpad (freezing), Dipterists Forum www.dipterists.org.uk, iNaturalist project (Dipterists Forum), Open Data (NBN Atlas), Look for Newsletters on these sites and in the Dipterists Forum Bulletin (<https://tinyurl.com/3pqcajh>)

Publishing

Open Data publishing to publicly accessible sites is our contribution to conservation & education. Many schemes achieve this through NBN Atlas and GIF. In 2020 our UK total was 341,353 with an additional four times that figure planned.



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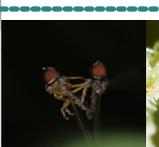
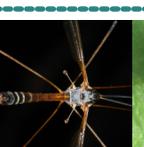
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Mosquitoes Recording Scheme
Culicidae

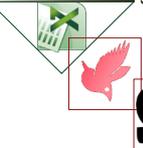
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Small Acalyptrates
Recording Scheme

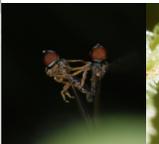
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