

BULLETIN OF THE
Dipterists
Forum

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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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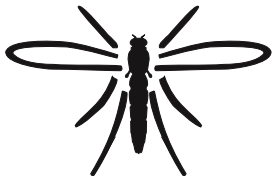
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RECORDING SCHEME BROCHURE

Download the back pages for a brochure

Download the above Newsletters from <http://www.micropezids.myspecies.info/node/301> or contact the organizers (see back page)

🔗 **All links in this Bulletin are to be found on one web page at <https://tinyurl.com/mryw9w33>**

Copies of this Bulletin are mailed to Dipterists Forum members. A PDF version is available on our website (members only.)

Back issues may be obtained at www.micropezids.myspecies.info/node/301 where guide notes for potential Bulletin contributors may also be found.

Gathering News

The instant one Bulletin is completed and sent to the printers, the framework for the next one begins. A new Review section to begin work on some recent books and this News section ready to make notes on other items which come to our attention. Most of it is then done by the time the deadline arrives and I can hope to polish it off within a fortnight. Reading our Scheme's & Study Group's newsletters it's clear they do the same so send us your stories as soon as you get them.

Hot on the heels of the last Bulletin, Zoe Adams was able to begin setting up arrangements for the online Annual Meeting. With venues closed, or slow to get going again this has been a tough job these last couple of years. Hopefully the messaging through our website managed to bring the details to everyone's attention in time.

My August copy of British Wildlife arrived shortly after the last Bulletin sped away to the printers too. It's always intriguing to compare the issues we've raised in the Bulletin with those reported by Sue Everett in her Conservation News column. We'd picked up on the same BNG & Dasgupta topics. Their amazing review of Dave Goulson's apocalyptic book *Silent Earth*, came in a later issue, written by Peter Marren. The grumble pieces by him and Mark Avery are usually a treat in BW.

Astronomical costs

Although astronomy is far, far away from our science sector, the issue of funding cuts by New Scientist's columnist Chanda Prescod-Weinstein struck home recently (11th Dec.) She tells of cuts "undermining and impoverishing attempts to discover the secrets of nature and sharing them". That's our voyage too, at least four of the cherished institutions in our science sector have indicated they've funding issues in the pages of just this one Bulletin. We should support them in any way we can. Boldly go before the sky falls in.

Biodiversity targets

These are in the form of 10 year targets, the 2010 Aichi targets were substantially missed and in 2020 there should have been a new set of targets set up for 2030. Those have been delayed and won't be negotiated until this year in Kunming. Look for "Post-2020 Global Biodiversity Framework", New Scientist is a good source.

Open Data - update figures

Open data is a term you'll come across a good deal in this Bulletin. Publicly accessible species occurrence records that you'll readily find on NBN Atlas.

Dipterist Forum has a data partner page on their site at <https://registry.nbnatlas.org/public/show/dp172> where you'll currently find 17 datasets listed. Half of them are Recording Schemes and the other half are compilations from our Field Weeks.

There has been a lot of activity there in 2021 and the records have again increased since the last Bulletin.

63,326 to 77,565

Dipterists Forum Open Data records increase on our NBN Atlas page

This is all your work of course. Records sent to our Recording Schemes and through other systems are now playing their part in conservation & research and are available for you to play around with.

Open Data, blah blah blah

The implication of that headline structure, used extensively around COP topics, is of too much talk and too little action. Legitimate for us to use the form, as biodiversity loss is the naturalist's particular area of concern in the current crises. It's too broad a topic to examine all aspects in this Bulletin but as Dipterists Forum is essentially formed from a group of Recording Schemes, we can take a look at the "Recording" aspect of our efforts and examine how well we're doing. Get some indication of the balance between words and actions.

Roger Morris put his finger on this aspect in our recent Annual Meeting when he asserted that "*We can be much much more assiduous with our recording*" and by RSPB's Mark Avery in a recent British Wildlife writing of monitoring schemes as "*a bit like planting a tree - the best time to do it is 20 years ago but the next best time is now*"

We need the information in order to have a measure of the health of the environment and we naturalists are the only ones gathering that information. Amongst their several other roles, the Recording Schemes help ensure quality control, and deploy species occurrences via systems which permit researchers to produce and publish those health measures. In some cases those analyses are also carried out by the Recording Schemes themselves, notably Morris & Ball's British Wildlife article on *Climate Change & Insect Declines* and the current efforts by at least three other Schemes to produce assessment reports which will contribute to reappraisal of formal IUCN statuses; key metrics in conservation.

So **Open Data** is our thing. Many of us are striving to publish records onto NBN Atlas so that researchers can perform analyses which will contribute to these measures of the health of our environment.

Aspirations & Commitment

Dipterists Forum's aspirations are pretty clear from our formal objectives.

As regards Dipterists Forum commitment to these, the situation may best be indicated by a couple of snippets from our June 2021 Minutes:

"there is strong support within the DF for record sharing with NBN Atlas to happen where possible" Not all of them though, as Martin Harvey stated "*some schemes do not use iRecord or do not wish verified records to be passed on [to NBN Atlas]"*

	★★★★★	Aspirations
	★★★★★	Commitment

Looking for acorns

Well we did plant them 20 years or more ago. We organised Summer Field Meetings and we're now trying to track them down. We've had some of those forests for a while (Abergavenney 1997, Dorset 1998 etc.), seen our recent plantations flourish (Nottinghamshire 2015 onwards) and recently discovered one mature stand in Wiltshire (2004.) But we're still actively looking for many of those we planted in the first decade of this century ~ 20 years ago.

	★	Epoch 1: Ancient
	★★	Epoch 2: Digital dawn
	★★★	Epoch 3: Modern

This topic is covered in detail in the Recording section of this Bulletin. The high score for Epoch 3 is down to a lot of recent NBN Atlas uploads. There's still a long way to go though.



Technology & current recording

An area that's not completely in our hands as we're reliant on tools we're given or can adapt. There's still a long way to go in respect of recording tools and many reviews about that are to be found in previous Bulletins. No adequate citation systems for recording publications, nothing for users to map or analyse records easily. Significantly, nothing to support photographers.

Star performers are our Recording Schemes who make the best they can with those tools and more. Still some way to go though.

Recorders are amazing. Read on for a host of tips as to how you might make the job of recording simpler, more precise and more exciting.

	☆☆☆	Available tools
	☆☆☆☆	Recording Schemes
	☆☆☆	Recorders

Biodiversity loss is the bottom line in climate change debates (ask the Venusians) and we cannot measure this loss (or change) without the data. In fact the collecting and dissemination of such data by us naturalists may be seen as one of the few areas where individual actions may contribute to some form of overall positive effect. Submitting a wildlife record is more feasible than swapping out a gas boiler.

Darwyn Sumner

Feedback

I think I'll have this one embroidered and framed:

I felt I simply had to write to you about the Bulletin. It is quite superb, so interesting, covering so many subjects and with such excellent photographs. I have watched it develop and change over the years under your regime and must conclude it is now one of the best magazines of its kind. Congratulations to you for your amazing hard work. I know just how hard from own experiences with a website. Thank you.

The rest of them are shorter so engraved pewter beer mugs seem more traditional (e.g. "I always enjoy it"). Last year I added a lot more diptera-records wrangling to that writing job, reminiscent of the work I was tasked with in Leicestershire Museums back in 1996 when we began to develop Local Records Centres. Back then colleagues, support and audience were apparent as I met them on a daily basis. Nowadays those aspects are less clear, it's hard to know one's audience without responses. I guess that's true of colleagues too.

Keep up the contributions and feedback, the Dipterists Forum community is the best of its kind and the Bulletin, which is a team effort, is a reflection of all that we do.

Darwyn Sumner (Editor)

🔗 One link to rule them all ...

As the compilation of this Bulletin progressed it became evident that we'd an unusually large number of links to sites on the internet. All the Scratchpad sites and all the various iNaturalist projects for a start, then there are some useful spreadsheets we'd like you to have. It's a difficult set of information to convey in a print journal. Sure I can hyperlink everywhere in the text (and have in places) but that presupposes that, once you've had your copy in the post, you'd download the pdf from the membership area of the DF website then you'd be able to just click on the links. But it seems likely that not many habitually do that. We do have one good example of these

hyperlinks in our downloadable back pages guide to Recording Schemes (<https://micropezids.myspecies.info/node/301>) but that takes some degree of effort to maintain, especially with the growing number of Recording Schemes and their adoption of additional technologies.

So this time I'm trying something else, a website page that's developed alongside this Bulletin issue.

A Scratchpad page fits the bill for the most convenience to our editorial team. The best bet might be our very own Dipterists Forum Scratchpad site but we haven't got one of those (yet) in the meantime I'll use my own.

Example 1: Links to all the Diptera Scratchpad sites. I did a pretty list in Bulletin #88, p9 and because of Rob Davis' presentation at our Annual Meeting had to update it. Repeating the whole same item in this Bulletin didn't seem a good idea just to add a couple of new sites, especially as it contains a lot of links. So that list is to be found on the compendium below.

Example 2: iNaturalistUK projects for various diptera groups are being set up at a considerable rate. You'll find that list there too.

Example 3: Spreadsheets may be collaborative projects and become updated periodically, even frequently. The most recent versions can be downloaded below.

It's just one page on a website at the moment, one tinyurl code to type out to access all the links in this Bulletin. Not as pretty as can be achieved by desktop publishing but very practical:

<https://tinyurl.com/mryw9w33>

... and in the darkness find them

Bulletin archive

If you'd worked yourself into a frenzy of anticipation regarding the content of the one missing Bulletin in our archive then sadly I must disappoint now that we've found it. Nothing much in the September 1976 issue except bed & breakfasts at £3.50 per night.

The exciting thing is that we've now got a full set thanks to Tony Irwin retrieving his collection from the museum in Norwich and asking me if we'd any missing.

Access our digitised collection on the DF website.

Darwyn Sumner

Back Numbers

The most important cupboard in my house contains two contrasting sets of back numbers. The latest arrivals to occupy the space comprise many boxes of past issues of the Forum Bulletin and the Dipterists Digest. The more interesting and in some cases valuable back numbers, which once had the space to themselves, are several dozen bottles of wine maturing in the dark against their drinking day – which for some may well be the 25th December.

I have taken over from Martin Drake the task of responding to requests forwarded by John Showers, mainly from new members, for back numbers of the Bulletin and the Digest. Existing members can access the website for back numbers but may prefer hard copies, in which case I may be able to oblige. Runs of the Bulletin go back intermittently to 2009; similarly we hold the Digest back to 2010, but again in varying quantity and with gaps.

A spreadsheet built by Martin gives a full list of the issues which have been called for during his tenancy; I shall be maintaining a similar record of what moves and what does not, with a view to recommending in due course that we bin items for which there is little if any demand. Members will sympathise with my need occasionally to expand the space available for my other back numbers.

Requests for me to host wine tastings will not be entertained.

Anthony F. Bainbridge afbainbridge@gmail.com

Vernacular names

Trawling through some older Bulletins recently I came across the Dipterists Forum debate on vernacular names. It was all started by Alan Stubbs in 1995 (#40) in an item titled *The Llanfairpwllgwyngyll Syndrome* at a time when both the Hoverfly and Soldierfly books were uppermost in our minds and vernacular names were being applied to help facilitate recording.

Roger Key responded (#41) in which he cautioned: “*Good English names need to be short and sweet to be remembered and names with eight syllables ('west-²ern-³sil-⁴ver-⁵still-⁶ett-⁷o-⁸fly) are really asking to be either forgotten or made rude jokes about.*”

Finally Martin Drake (#43) provided solid examples of formal systems applied outside the topic of diptera.

The above examples are published, as too were the European diptera in the Stilt & Stalk Flies Recording Scheme (Micropezids & Tanypezids) back in 2018 and the new Crane-fly book in 2021. As Alan says, ultimately the choices are down to the Recording Schemes.

The subject arises every time those choices are questioned or new ones devised. Themes are a good approach, the Soldierflies adopted an obvious military one and for the Stilt etc. flies a street entertainer theme was irresistible:



Lincoln Christmas Fair in 2017. A stilt-legged, stalk-eyed theme mascot.

Type the word *Échasseur* into the internet (with the accent) to see images of costumed stilt walkers from Namur jousting by waving their stilts around - just like the displays by *Rainieria* spp.

Hence *Rainieria calceata* = Beech *Échasseur*

DOI:10.13140/RG.2.2.10298.31688

In his presentation at our Annual Meeting, Donald Smith proposed the name Desperate Dan Seaweed Fly for *Coelopa frigida* because it has a protruding chin and bristly face. I guess that one is going to stick too.

Nature denial

The Oxford Junior Dictionary is at it again, waging war against Nature by deleting the words acorn, buttercup, hedgehog & conker etc.. Ray Bradbury had the right idea.

<https://www.bbc.co.uk/news/uk-england-oxfordshire-42441025>

Chairman's roundup

Just when the beginning of the end of this pandemic seemed in sight, as I write on the last day of 2021 we are now facing further worry and restrictions due to the Omicron variant. Our spring workshop on craneflies at Preston Montford must now be in doubt – if it has to be postponed this will be a great shame given the recent upsurge of interest in craneflies following publication of Alan Stubbs' superb book. Through all this uncertainty the society has nevertheless continued to function effectively, and I believe to meet the wishes of members. Our online Dipterists Day held in November was again well attended and a success - many thanks to Zoe and all the speakers for a most engaging day.

It is sad to hear the news that Jon Cole died in November. A former treasurer of the forum, a quick scan through the contents of the Digest reveals many contributions to our knowledge of the British Diptera fauna. I gather that he was a regular attender of DF events, including many spring and summer field meetings, having been at the first of these at Mitcheldean in 1973; I had the pleasure of meeting him on a few occasions. Ian Maclean is preparing an obituary for the Digest. Our condolences to Jon's family.

On a happier note, many congratulations to Roger Morris and Stuart Ball for winning a Marsh Award for Invertebrate Conservation, recognising their work establishing and running the Hoverfly Recording Scheme as well as all the other groundbreaking work they have done to promote the study of Diptera.

After many years on committee, Stuart has now stepped down, at least for a while. His contributions have been huge. Twice, I believe, he has served terms as chairman. He developed and ran our original website. Together with Roger Morris, he was in at the start of developing DF's training workshops, proving himself an excellent teacher. There will be many reading this who, like me, owe a huge debt of gratitude to Stuart and Roger for introducing us to flies through their hoverfly workshops and getting us hooked. Stuart has not only been at the centre of advancing interest in hoverflies but has also provided quality training and identification handbooks for Sciomyzidae, Muscidae and Scathophagidae. His influence on the development of the society and the study and understanding of Diptera has been profound.

Welcome to John Mousley as our new committee member. John has been with the society for many a year and a regular participant at recent field meetings where his considerable enthusiasm and energy have been very welcome. Once or twice a year he even attends Devon Fly Group meetings, travelling with his wife Sally all the way from home in Leicestershire to do so! His passion for Diptera and for the natural world will doubtless be of much benefit to the society.

After five consecutive years as chair (a record I think) I am now stepping down and am delighted that Erica has agreed to take over the role – one I'm sure she will fulfil superbly. She needs no introductions from me, being well known I'm sure to you all both through her position at the Natural History Museum, her books on flies, and her high public profile. Her term as President of the AES has recently concluded, freeing up some time to serve as our chair.

For me, it's been a real privilege to hold the position. During the five years, the society has gained in influence and reach – membership numbers have grown steadily (from 366 to 484, a 32% growth), social media contacts have increased vastly, our new website has been a real success, and, although I do not have any measures for this, I am confident that both of our excellent publications, the Bulletin and Digest, have continued to gain

readership and impact. On top of all that, the number of affiliated recording schemes has increased from 19 to 28!

All this has been a result of the result of the dedicated work of committee members, past and present, especially officers, supported by other members of the society. I shall not attempt to name each of you – it’s a long list - but huge thanks for all you’ve done to ensure the efficient running and growth of the society, as well as for all the support and help you’ve given me.

I would like to take the opportunity to mention two people who have been of particular help to me. They are our former secretary Amanda Morgan, who continued working enthusiastically for us through terminal illness, and our current secretary Jane Hewitt. There’s no way I could have managed without the encouragement and support of either.

Rob Wolton 27 Dec 2021

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.

Poop area

I guess Zoe’s going to give us summaries of the talks at the Annual meeting. Highlights for me though, apart from the deliveries of cups of tea, were the messes that the automatic speech translator made of technical and other phrases. My favourite being “Puparia in bat roosts” which translated as “Poop area in Baton Rouge”.

Fly shag



In Kew Gardens there grows a newly discovered wild tobacco plant *Nicotiana insecticida* originally found by the roadside in Australia. It’s covered in sticky glands that trap and kill flies (New Scientist 21/8/21).

A pipe-smoking dipterist’s dream plant.

Species status reviews

Diptera



Darwyn asked me for a summary of where we are with the status review process for Diptera. In Natural England we have no particular priority of one family over another, although the long-awaited Hymenoptera review (just submitted to the Inter-Agency panel), is an important update to a widely collected and important group of insects. One of the few major priorities given the strategic gap it fills.

Where do the statuses live?

Reviews published to date live either on Natural England websites

<https://tinyurl.com/2p9y3tjh>

or collectively with JNCC

<https://tinyurl.com/y8vx3fpz>

Asides from in the reviews, in our Pantheon database (<https://www.brc.ac.uk/pantheon/>). We are trying to improve the data flow on that and working with the UK Species Inventory (UKSI) and JNCC (many thanks to Martin Harvey for tackling that one). Pantheon, of course, does not cover all 40,000 odd macro-invertebrates, but should cover most of families of operational interest.

Older readers may remember the creation of Assessments, sub-IUCN “Reviews”, which demand less rigour and proof of status and which deliver Provisional status to the taxa. These remain useful and might well be deployed with families with smaller data stacks. They can act as a valuable rallying point and a useful resource within which record field observation and grey literature.

How to Review

There are IUCN training courses to be a formal reviewer which are useful in understanding the process and the criteria. Unless your fly family is quite small and quite well recorded, Reviewing can be an arduous process. You must tidy the records if not already tidied, establish your review periods, demonstrate a trend (decline, increase, stable, no idea), and then apply the criteria on those species in decline. Your argument must be supported by the criteria, usually Criterion B, which demonstrates decline, with plausible threats. Vague climate change assertions will not cut it, nor will sweeping but unsupported assertions on habitat change. Trying to convince the Inter-Agency Steering group that a sand dune system will be swept away by sea level rise in the next 10 years probably will not cut it. Sea level rise impacts on populations are real though. Desmoulin’s whorled snail has been severely impacted on the Deben estuary by it but jumping ahead too far in the argument is not recommended.

There is enough science out there to support most cases if you look. It is easy to find research on rates of soft rock cliff retreat on England’s south coast, and how it is increasing, so you can use that as a real threat for those species that call that habitat home. Criteria misuse is another crime, especially only applying the first half of D2 and ignoring the bit about moving to a higher threat category in a short period (in a 3-12 year space). Your species can be rare but not under threat. Some of these species show stability and so fail the first criterion hurdle of decline. You need to be extremely clear about the differences between IUCN Threat and GB rarity. The former, with its focus in the criteria on numbers of “Locations” is the other major stumbling block. I tend to talk about it in terms of “threat

Location” so it is considered not so much a place, but a “threat envelope”. Large stretches of the soft rock cliff which face the same direction and are impacted by the same storm and which are founded on the same geology might well be considered a Location, even though they cross hectad lines. Heathland fires can shrink heathlands down to few or one location, as can connected watercourses, mindful of flows.

Reviewed species usually fall into the following categories, sorted here by typical category size, largest first:

Least Concern – obvious, stable, and widespread species;

Data Deficient – where the data stack for a species is either too sparse, too gappy, or generally does not lead you anywhere useful;

the Threatened categories (CR,EN,VU) – these usually fall out well;

Near Threatened, some are obvious but some are not- they are not quite meeting **Threatened**.

You will be left with a small pile of species which feel hard to place and which are. Out of the 581 Hymenoptera we had 26 of these. Getting 2nd or 3rd opinions on those is useful if not essential.

What’s the point of a review?

It needs to be useful, so people need to be bothered about the family, collect, and record it. The family needs to have some traction in surveys and to make a difference in site assessment and comparison. This excludes many of the more obscure families. These may well be usefully grouped into an Assessment where you can be more liberal, publish grey literature, and usefully provide a summary of what little is known, rather than attempting a Review and ending up with a huge stack of Data Deficient species. Environmental DNA will, in time, make this paragraph void, but we are not there quite yet.

What do I need for a review?

- Reviewers! It is much easier to split this task over several people, so perhaps a data cleaner, someone chasing down new records, someone who can compile the species account and the historic records, and a team to go over the criteria and the fit.
- A good data stack. Within both your first and second review periods you do need enough records. You can compensate a bit for things like the Welsh peatland survey or the East Anglian fen surveys of old skewing the first period, but if your second period is thin, much can end up Data Deficient.
- A reasonable understanding of the ecology of the species if you are going to tease out the threats. Is its core breeding habitat impacted by climate change in the short term? Does it sit on its global northern range in the UK? If it feeds on another species, or a plant, does that lead you anywhere? Is the species really hard to catch?
- Time. These things take time to create, and the hurdles of getting them published need crossing. The effective loss of our publishing team into DEFRA does not help that. Putting the modern Review into the Review template helps a lot.
- A GB perspective. All our reviews are GB (and so exclude Northern Ireland) and should remain so, though it is useful to track species presence in the countries.
- Rigour. The Criteria are there to be relied upon and cited. Modern reviews cite the criteria used to give the IUCN Threat category, so your data must align with those. The Red List summary sheet is your go to friend. <https://www.iucnredlist.org/resources/summary-sheet>
- Resources. Reviews can be done under contract and this can be useful if it involves, for example, trips to museums to look for specimens and record extraction. This does, of course, depend on early notice and the funds being able to give up, not to mention an

ability to cope with the DEFRA procurement system.

- Agency capacity. There is one of us in Wales, one in Scotland, and 2 in England, down from 3. In England we will briefly rise to 4 then fall back to 3 next spring so hopefully that will help until I move my current partial retirement into full. We have whole countries to cover, SSSI to notify, and much else.

Darwyn has helpfully tabulated the Diptera, so giving some idea of what might be tackled and what should be left alone. There is no expectation of reviewing everything, in any Order not just in the Diptera. There is merit in keeping the reviews up to date or at least tracking species in decline. We have never published one of those, but it seems sensible to do targeted reviews though that would work better with deliberate and targeted surveying to underpin it. Perhaps the focus of field meetings, for example. This approach might reduce a family review down from several hundred species to say 26.

David Heaver


... and more

David Heaver makes the interesting point, that he’d done the Acalypterates & Calypterates as **assessments** rather than full **reviews**. The latter would need a full IUCN sign-off: super-detailed consideration by expert panels built upon statistics related to area of occupancy + population studies and all the complexities that IUCN demand. The former (assessments) are much easier for us to produce. Well, I say easier, one still needs to have a good grasp of the numbers and distribution of these beasts and a bit of familiarity with their habitat needs.

We’re far better placed to do this sort of work these days with the huge increases in Open Data and the recent work carried out by Recording Schemes. Assessments of this nature remain essentially “provisional” but they’re of considerable use to us. David points out that this assessment approach also has value when datasets are small. Some so small that no-one bothers at all with them; he maintains a list of these.

Darwyn Sumner

Scratchpads

 It’s difficult to categorise these. They’re a kind of website template that arose from the House of Lords enquiry into the state of **Taxonomy** in the UK and are administered by our Natural History Museum.

They’ve been taken up by a few UK Diptera Recording Schemes and several organisations and individuals overseas. Their flexibility means that they can be set up with a variety of purposes in mind.

Some are very actively maintained, such as the Micropezid & Tanypezid site (which I also use to augment Bulletin resources), Barry Warrington’s Agromyzidae (where you’ll find all his newsletters) and Iain MacGowan’s Lonchaidae (where he tries to conquer the world.) Others have been set up by schemes as a useful resource and reference point which users can use to browse flies, examples being Stuart Ball’s Scathophagidae and Chris Raper’s Tachinidae.

There’s a list of all of them at <https://tinyurl.com/mryw9w33> (an example of using a Scratchpad site to augment this Bulletin)

Throughout the period when Barry and I were developing our sites (we’re the latest two) we’ve had support from staff at the Natural History Museum to help us along. Sure we’ve hit a couple of difficult patches and glitches but we’ve surmounted those with the help of Ben Scott & Vince Smith (NHM’s Science Informatics boss) who operates the Lice site at <https://phthiraptera.myspecies.info/> Recently however, they’ve

Conservation

Phase 2 of the Wildlife & Countryside Act QQR7 consultation: Schedule 5 and Diptera

The 7th quinquennial review of the WCA (1981) is well underway as part of the Environmental Bill to be considered by parliament in 2022 (<https://tinyurl.com/yu4vbf7>) Following on from the initial stakeholder consultation phase in April-July 2021, DEFRA working with the UK JNCC, NatureScot, Natural Resources Wales and Natural England, have drawn up a revised list of invertebrates that they are considering for Schedule 5 designation. All those with Critically Endangered status will *de facto* be assigned Schedule 5 status. Schedule 5 designation relates to species for which there is a risk of extinction from a wide range of threats that includes destruction of breeding/sheltering sites, collecting and trafficking. For Diptera the risks that might be relevant relate to loss by destruction or disturbance of breeding or sheltering sites and from collecting (Schedule 5, Section 9a). Note that it is illegal to even touch or disturb a Schedule-5 species, even to photograph it. Hence, there are some significant and imminent implications relating to Schedule-5 species that could seriously curb the activity of the “amateur” recording community, which forms the backbone of biological recording in the UK and Ireland. Our response as part of Phase 2 of the WCAQQR7 is the last chance (for another 5 years) to make a clear statement (again) regarding Schedule 5 and its implications for recording and conserving Diptera.

In the DF stakeholder response to Phase 1 of the consultation in July 2021, we recommended that no fly species should be considered for Schedule-5 status. This recommendation was based upon the anticipated serious impact that such designations would have upon recording Diptera and, thereby, their conservation. It is almost certain that if such designations were made, then specialists using “indiscriminate” passive methods of trapping (vane traps, Malaise traps, water traps, pitfall traps) and vacuum-sampling, would be excluded or need to be licensed to carry out such activities on sites where Schedule-5 species have been recorded – with no guarantee of a permit being approved. Such methods are, for example, fundamental to the success of recording species-rich families comprising a high proportion of small-to-tiny species. Sweep-netting alone samples a limited subset of fly families.

DEFRA now proposes the following 15 flies for Schedule 5 status:-

- *Blera fallax* (Syrphidae)
- *Callomyia elegans* (Platypezidae)
- *Chrysotus monochaetus* (Dolichopodidae)
- *Cyrturella albasetosa* (Dolichopodidae)
- *Dolichopus latipennis* (Dolichopodidae)
- *Eristalis cryptarum* (Syrphidae)
- *Myolepta potens* (Syrphidae)
- *Neoitamus cothurnatus* (Asilidae)
- *Neomochtherus pallipes* (Asilidae)
- *Odontomyia hydroleon* (Stratiomyiidae)
- *Ortochile nigrocoerulea* (Dolichopodidae)
- *Paragus albifrons* (Syrphidae)
- *Sciapus heteropygus* (Dolichopodidae)
- *Tachytrechus ripicola* (Dolichopodidae)
- *Villa venusta* (Bombyliidae)

Dipterists Forum is preparing a further response to these proposed designations for a 30th January 2022 deadline. This response will have to conform to the QQR7 pro forma. I am coordinating this response in consultation with DF members who have considerable experience of such reviews and who are specialists in the families concerned. These members include

increased that support and their new member of Scratchpad support staff, Rob Davis, joined the team on 20th September.

Rob is very keen to support efforts by us dipterists, responding to Vince Smith’s offer “*Our new Developer will be responsible for helping to develop this plan, and getting community engagement with this is critical. If you or any members of the Dipterist community have any ideas in this respect, do let me know*” Rob gave a presentation to us at our Annual Meeting, following which I filled him in on the extent of Dipterists Forum’s involvement and investment in Scratchpads (pew! the longest email I’ve ever written - at 1½ pages.)

More Diptera Scratchpads needed

We could do with a few more of these Scratchpad sites. Now that Rob Davis is aware of the high level of interest amongst us dipterists the potential for more of these amazing resources is considerable.

Take a look at the examples of those groups we’ve already set up and imagine how useful it would be to set up others. We’ve got our eyes on UK Sciomyzids, the non-recording scheme Acalypterates and maybe even Conopids. Perhaps the Cranefly crew could be persuaded into setting one up for that group now that they’re so popular. Kelp flies and Anthomyiidae have also been suggested.

Dipterists Forum is a large community and as such we’re of considerable interest to this NHM team. By supporting their initiatives (which I offered back in September), as Vince Smith stated “*the most useful thing is to have messages of support like this, which we can cite to testify to the value of the system.*”

You can find the NHM’s account of what Scratchpads are all about at <https://scratchpads.org/> and if you want to develop one yourself, we’ve also our own guides plus support from the NHM ready to help anyone get started. Once you’ve got one up and running you’ll find it easy to maintain and great for answering enquires about a particular species (NBN Atlas maps, images, even original descriptions once you’ve found them.) They support multiple editors so if you’re even slightly tech-savvy then offer your skills to a Recording Scheme.

In the meantime I’m eagerly on the lookout for anything new or better that Rob comes up with.

Darwyn Sumner

NBN Atlas update

a Dipterists have had an exceptional year as regards uploading records to NBN Atlas. I’ve sent 36,158 of your records to Sophie Ratcliffe from a variety of sources ranging from Recording Schemes through data extraction projects and Field Weeks. Many more have arrived there via several Recording Scheme’s activities on iRecord.

A summer of IT tinkering meant that NBN Atlas underwent some improvements. There’s now a new mandatory ‘overview and download tab’, adjacent to ‘charts’ on the Occurrence Records web page which prompts users to check their data requirements first before downloading. Users can now exclude or include absence, dead, unverified, fossil and CC-BY-NC licenced records as required.

The purpose of the change is to ensure users do not use CC-BY-NC licenced records for commercial purposes ...

If you’re doing a download they are things to watch out for, you probably don’t want “absent” records appearing in your work, nor “unverified” ones either. Preventing commercial use of our efforts is the default on iNaturalist and all my DF uploads, other Schemes & agencies may prefer different provisos.

Darwyn Sumner

Martin Drake, Martin Harvey, Roger Morris, Alan Stubbs, Peter Chandler and Rob Wolton. Judging from the comments that I have received so far, it is mystifying how most of these species could have been proposed for Schedule 5 status – other than by blindly applying the Critically Endangered status criterion. It is yet another example of how both national and international conservation criteria aimed primarily at more familiar (and traditional) classes such as Mammalia and Aves are inappropriate for the conservation of most invertebrates.

With regard to the 15 species listed above, some examples of the specific points raised are:-

1. At least seven require microscopic examination and, therefore, need to be taken.
2. The dolichopodids *Chrysotus monochaetus*, *Cyrtorella albosetosa* and *Ortochile nigrocoerulea* are small/tiny (<2 mm) flies that could easily be taken unnoticed until the catch is sorted.
3. One comment was that it is unclear how Schedule 5 listing for the dolichopodids could help their conservation in any meaningful way and rather would “get in the way” of studying them.
4. *Blera fallax* and *Odontomyia hydroleon* might be the only species to benefit from Schedule 5 listing given the tiny, localised populations involved.

A further significant likely consequence of a clamp-down on amateur specialists would be the exclusion of novices, many of whom are the specialists of the future and, thereby, fundamental to the continued success of biological recording in the UK. There is, of course, a risk that novices will take some of the more cryptic species as vouchers – even larger species such as *Villa venusta*, which they could confuse with *Villa modesta* until keyed out. However, there is a balance to be struck between nurturing/training future specialists – a key and urgent priority – and careless oversampling.

Let's not forget that the vast majority of records upon which the professional ecological community, NGOs and government depend is provided by “amateur” specialists who, in most cases, do this as unpaid volunteers and very competent, dedicated enthusiasts.

Strathspey Diptera Review by Cairngorms NP

The DF committee was approached by Hayley Wiswell, Conservation Officer of the Cairngorms National Park, regarding advice and input for a proposed review of Diptera for the catchment of the River Spey, with the aim of informing land management for Diptera in the future. This review would be a desk-top exercise involving collating records, ancient and modern, for flies recorded in the catchment. DF has agreed to provide advice and records for this review.

BAP: Is there still a role for BAP-type thinking for the conservation of Diptera?

There seems to be a lull in the submission of items for the BAP Species section of the Bulletin. I would be very grateful if “BAP Species Adopters” would send me any new information on their species for the autumn Bulletin. Please also send me (m.welch@nhm.ac.uk) your current email addresses – many of the old ones that were passed on to me do not work.

With regards to BAP, I would like to initiate a conversation within DF concerning the value of BAP species within the rapidly evolving new “Biodiversity Network” agenda that focuses more on conserving habitats for assemblages, rather than individual species. The recent NECR reviews of Diptera,

with their assignment of “provisional” status (pNT, pNS etc), are well-suited to accumulating a site list that includes such species. A key question might be: “Is there still a role for single-species, BAP-type thinking for the conservation of Diptera?” I recognise that some members have a long-standing attachment to BAP, but it would seem to be timely to consider “thinking outside the box” and evaluating alternative “strategic” approaches to increasing the coverage of fly families and thereby their conservation.

I am guessing that most of us recognise the potential downsides of engineering a habitat to prioritise a single non-keystone species (bitterns and reedbeds come to mind!), but I would like to hear what members consider to be the most effective ways for promoting the conservation of Diptera in the UK and Ireland. So, please send your comments – candid or otherwise (!) – to me and I will collate them (anonymously) for inclusion as part of a regular item in the Conservation News section of the Bulletin. I am hoping that such a “discussion slot” will stimulate wider engagement with this issue within DF.

What do we do with Data Deficient?

At the moment the answer would seem to be “nothing”; they are the also-rans of every NECR. As someone who is particularly interested in ecologically diverse and species-rich fly families, such as Phoridae, I have been pondering how it might be possible to recognise the importance of such “anonymous” flies within a formal conservation context. Clearly, increasing recording levels is essential. However, challenging and/or less-popular families, comprising mostly dark, small-to-tiny flies (<2mm) often require dissection and slide-mounting for species determination – something that may deter many people. There are good keys to the British and Irish faunas for families such as Sphaeroceridae, Phoridae and Ephydriidae. How might DF increase the level of interest and recording activity for some of these ecologically important, yet under-studied, families? In many cases there is very little information about the phenology of these flies and so field and “laboratory” (at-home) observations can be very rewarding to undertake - and publish in Dipterists Digest!

Regular local “patchwork” throughout the year can sample diversity and fluctuations, and so unravel phenologies; sampling immatures could be a valuable component of such studies. Patchwork recording could target one or two less-studied families for detailed study. Again, I would appreciate feedback and ideas concerning how the study of these “neglected” families could be promoted within DF. If a consensus emerges, then it will be discussed by the DF committee.

Biodiversity Net Gain consultation

This consultation closes on April 5th. See <https://tinyurl.com/2p92bz5y> and discussion in Bulletin #92.

Mark Welch

Habitats

Water

We should be concerned overall about water pollution, we've raised the matter of Chalk Streams occasionally and our rivers and seas are in a sorry state as evidenced by the recent £90M fine imposed upon Southern Water by the Environment Agency for their horrendous and continual discharge of sewage across the region (they were fined £137M in 2019 too.)

Guy Linley Adams gave an excellent summary of the situation in British Wildlife (Vol 33 No.3 December 2021 p230-231) entitled "A heady mix of sewage and politics" where he tells of weak economic regulation by OFWAT and weaker environmental inspection, monitoring and enforcement by the Environment Agency.

Though associations of Diptera to aquatic habitats such as Chalk Streams may be hard to establish, there are surely many affected by the state our other rivers, they affect all wetlands and debris.

Peat

Peatlands too are of considerable interest to Dipterists. There are currently two excellent introductions to this habitat. Clifton Bain's book "The Peatlands of Britain and Ireland" and an account by Alisdair Lane "For peat's sake" in New Scientist (1st January 2022)

Darwyn Sumner

The productivity of different habitats

A year ago, in Bulletin 91 (Spring 2021), in a piece about budget emergence traps, I remarked that a wet woodland on our farm in Devon might generate 34 million flies a year per hectare and asked if anyone knew how this compared with other habitats.

I am grateful to Robert Aquilina for telling me about a project he was involved in whilst working at Pond Conservation (now Freshwater Habitats Trust). They set emergence traps in agricultural ditches around farms in Loddington, Leicestershire, emptying them fortnightly between April and August 2005. Each of the 320 traps was 0.1m² consisting of a floating mesh pyramid with a bottle trap at the apex. The contents of each trap were emptied by pooting as well as collecting the preservative from the bottle. A total of 99,936 Diptera were caught, working out at 31 million flies per hectare (without extrapolation for the rest of the year as the numbers were declining significantly from their peak). So it seems that those agricultural ditches and my wet woodland were about equally productive. Is this true for other wetland habitats?

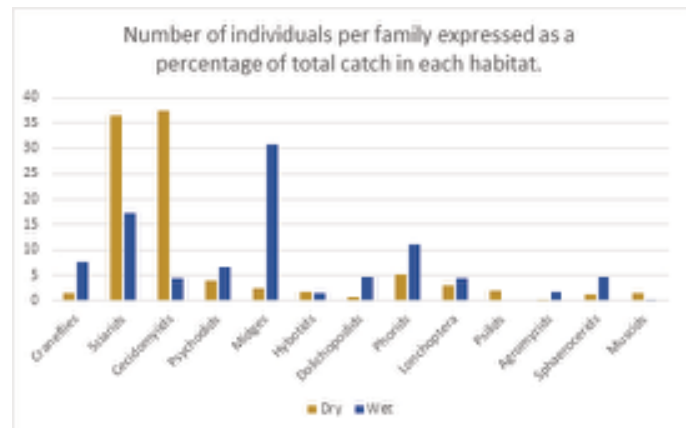
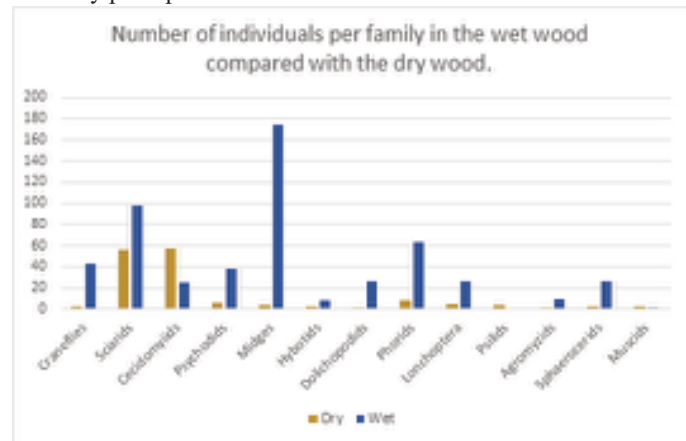
In 2021, in April, I set two traps in the same wet woodland (National Vegetation Classification W7b), to get some data for that month (in 2020 I ran the traps only in May, June, July and September). As a result, I am upping my estimated productivity to 38 million flies per ha.

Also in 2021, I put a couple of traps in a small well-drained ("dry") Ancient Semi-Natural oak-ash-bluebell wood (NVC W10a) on the farm, just a few hundred metres away from the wet wood, to get an idea of the productivity of this habitat. The traps were in place from 10 April to 9 June and again from 14 July to 7 November. I did not check or relocate the traps as regularly as I did for the four in the wet woodland in 2020, so I would not like to pretend that a rigorous comparison can be made between the results. Still, they are indicative. In all 1,849 flies emerged into the two dry woodland traps. Extrapolating the results for the whole season (taken as early April to early November), this equates to some 10 million flies per ha, three or four times less than for the wet woodland.

The two figures below compare the number of flies per family

emerging from the soil and ground flora in each habitat, firstly in terms of the actual numbers caught, and secondly as percentages of the total catch in each habitat. The figures given are per trap per average month (so try to take account of differences in sampling intensity and regimes between the two sites) and cover those families where the number of individuals caught exceeded 1% of the total catch in at least one of the two habitats.

The figures reveal that only for cecidomyiids, psilids (all *Chamaepsila rosae*) and muscids were more individuals caught in the dry woodland than the wet woodland – for all other families the wet woodland was more productive than the dry one. In proportion to the total catch in each habitat sciarids and cecidomyiids were far more abundant in the dry wood, and hybotids slightly so: all other families, especially craneflies, midges (chironomids and ceratopogonids), dolichopodids and phorids, were more abundant of the wet woodland. All this is much as might be expected from our knowledge of the ecology of the groups concerned. The high numbers of mostly tiny sciarids and cecidomyiids found in the dry wood may perhaps be related to the abundance of bluebell bulbs!



One of the two emergence traps in the "dry" wood in May

Does anyone have, or know of, any further information on habitat productivity? Do please let me know. I should also be keen to do some biomass calculations, if anyone knows of a source for typical weights of flies within a range of families?

Rob Wolton

Fly-fishing

If you are interested in supporting Dipterists Forum's activities or engaging in projects of interest, this section summarises various wants and appeals:

A. Rob Wolton:

Is anyone interested in documenting the Diptera of a site?

Following on from the publication of Peter Chandler's outstanding account of the Diptera of Windsor Forest and Great Park as a Dipterists Digest supplement, committee is interested to know if anyone has it in mind to do something similar for another site? Do let us know!

As Alan Stubbs has pointed out, such detailed reports, collating and analysing records, are invaluable as descriptions of current and past fly faunas, allowing future change to be assessed and facilitating any necessary recovery. Alan has proposed an initiative to produce further reports and suggests sites to consider are iconic places which have been well recorded like the New Forest, Strathspey or the Black Isle (all of which have been subject to a number of field meetings). He stresses the need for ecological information, often missing from records on national databases such as the NBN.

One of the most daunting tasks might be the prospect of many hours of primary historical research to be on par with the account for Windsor Forest and Great Park. However, that level of detail may not be essential and could be prepared by someone other than the data collator(s). For example, the New Forest has many accounts of its history, including a New Naturalist book, so a primary detailed account is not necessary. A summary version with emphasis of aspects pertinent to Diptera would be sufficient.

If you are interested, please let a member of committee know, with an indication of any resources you might require, including publication. We cannot guarantee anything at this stage but hope to be able to facilitate any proposals.

Publication of Michael Ackland's Anthomyiidae work as a handbook – can you help?

Would you be willing to consider taking a lead on this? Michael has left us with a legacy of excellent keys for the British Anthomyiidae accompanied by very fine drawings of their genitalia: as yet, however, these are all unpublished. It would be hugely valuable for them to be pulled together as a handbook and we hope that someone will come forward to lead on this. His family, Adrian Pont, as executor of Michael's entomological estate, and Oxford University Museum, where his papers and collections are now housed, are all supportive of the idea.

You need not be a specialist in anthomyiids or a taxonomist – Michael has done all the work needed in this respect. A general interest in and knowledge of the family would though be desirable. Michael did not produce a key to females at the genera level, considering it near impossible: others have tried without much success. The handbook would not attempt to fill this gap, to do so would be likely to delay publication for many years, perhaps indefinitely. So, not a job for a perfectionist, rather someone who is willing to lead the project through to completion within a year or perhaps two.

Members of the Anthomyiidae Study Group have offered to help, in particular Howard Bentley and Phil Brighton who pulled together Michael's keys and illustrations, with some other useful documents, into handouts for a 2018 training

workshop into this family. They can help with the introductory chapters (on biology and life history, collection and morphology), with identifying known problems with the keys (most of which can easily be sorted), and with proof reading and so forth. Darwyn Sumner has offered to help with advice on good software for managing PDFs and, if necessary, for preparing publication-ready documents.

The Dipterists Forum will be willing to cover the costs of any expenses involved, such as travel to the Oxford Museum to see Michael's original documents.

If you think you may be able to help, please do let me know. You would be a joint author. The publication of Michael's work as an anthomyiid handbook will be a huge boost to the study of the family and doubtless lead to many more taking an interest in it. After all, it is a family of great economic, biological and ecological interest.

B. Bulletin editorial team requests:

Bulletin 94

- Following the death of our friend and naturalist Jon Cole we intend to publish Eulogies in Bulletin 94. Let us have your recollections please.
- Brief reviews of books. My reading schedule includes **Britain's Habitats** by Lake, Liley et al., **Heathland** by Clive Chatters, Clifton Bain's **The Peatlands of Britain and Ireland** and **Ecology and Natural History** by David M. Wilkinson. You may spot others. Volunteers for any of those please.
- More from our ecologists please. Articles relating Diptera to various habitats. We've got Rob Wolton, David Heaver & Mark Welch touching on this subject in this issue but given the recent publication of the above library would be good if we featured more habitat-specific articles.
- As a follow-up on this issue's Archive article we'd like to know more from museums about a) their policies and systems as regards legacy collections, b) their database systems, c) crowdsourcing data extraction initiatives.
- Presenters at our Annual Meeting may wish to provide us with brief write-ups of their presentations. I negotiated two (Donald Smith & Rob Davis) for this issue.
- Photographs
- Feedback on any Bulletin topic
- The Bulletin editorial team is looking to expand. We'd like to find features editors, journalists etc. to help investigate, report, compile, collate and so on. Contact us to discuss areas of interest to you.
- Copy Judy Webb into all Bulletin submissions & messages please.

Darwyn Sumner, Editor

C. Recording team:

Dipterists Forum's team dealing with recording includes Martin Harvey, Jane Hewitt & Darwyn Sumner with Chris Raper in his UKSI role. Our list of requests are:

- Anything the Recording Schemes are asking for.
- Site datasets for publishing as Open Data to NBN Atlas (e.g. Diptera of Windsor Forest) as requested by Judy Webb, Mark Welch and others.
- Records from Summer Field meetings as detailed in the Recording section of this Bulletin. Particularly Epoch 2 and Epoch 3.
- The Steve Falk digitisation project.
- Stories arising from your use of Open Data (e.g. maps from NBN Atlas) be the context regional or taxonomic.
- Additional experts to sign up to verify groups on iRecord. A good eye is all you need.

Recording

Though the late winter is a quiet time for recording it's a busy time for dealing with all those records that have been submitted.

The main features in this Bulletin are:

- It's a record ... by Donald Smith
- Verification: article by John Kramer from a Crane fly perspective
- Martin Harvey's iRecord update
- Orphaned Families - not covered by Recording Schemes
- iNaturalistUK update
- The Bulletin's customary run-through of what the Diptera Recording Schemes are getting up to
- Reports on Dipterist Forum Field Weeks and datasets that are now on NBN Atlas as Open Data
- A treasure trove of publications from historic field meetings

It's a record! ... or is it?

As an innocent in the world of flies, I am still unhealthily fixated on the presence of dots on maps. Once I have identified something unfamiliar, my next step is to excitedly check the NBN Atlas map to see if it is a first for East Lothian - or even Scotland! Of course when it's the latter, that's a good sign that I have gone wrong somewhere. More usually it's a widely distributed species and I will put the record details along with supporting photos onto iRecord and turn to the next specimen in my burgeoning backlog.

But what happens next is confusing - sometimes the iRecord dots appear a few months later on the NBN maps (the glory!), but in other cases they don't. I have also experimented with sending the organisers of recording schemes spreadsheets of my records, photos of awkward customers, or the specimens themselves. Whether or not these records then become spots on the NBN maps is again erratic. Obviously, the recording landscape is not quite as simple as I had first imagined, with hidden processes and complications that get between an identification and a dot on a map.

So when in late 2020 I set up the Kelp fly recording scheme under the umbrella of the Dipterists Forum, it wasn't just to encourage others to rummage about in piles of rotting seaweed - I also thought it would be a good way for me to find out how recording schemes work in practice. A year on, the way it works is that Kelp fly records sent in to iRecord (and now to iNaturalist as well) are forwarded to me for verification. Where these are accompanied by photos of sufficient quality I can, at least for the five distinctive species covered by the recording scheme [*Coelopa frigida*, *C. pilipes*, *Malacomyia sciomyzina* (Coelopidae), *Heterocheila buccata* (Heterocheilidae) and *Helcomyza ustulata* (Helcomyzidae)], accept them and they will then soon appear on the NBN maps. Where I can't confirm the identification from the photo, or if no photo is provided and I don't know the expertise of the recorder, I query the record through iRecord and usually then get a better photograph or

information that allows me to approve the record.

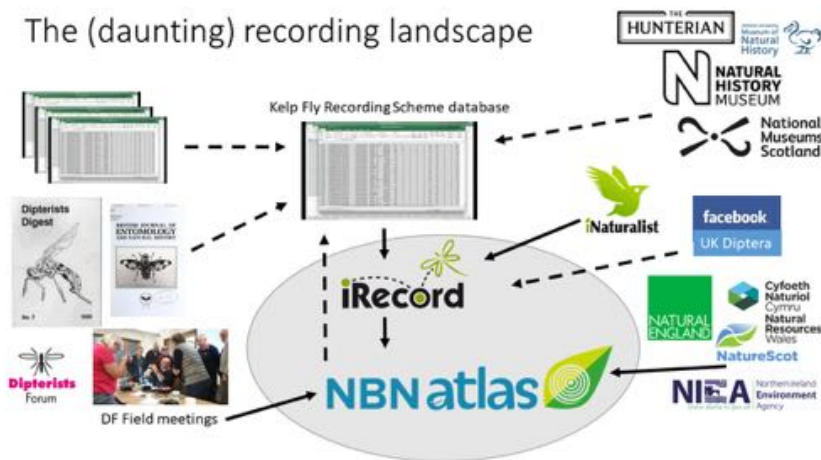
But it's not quite that simple. NBN also receives information directly from a variety of sources - Local Records Centres, survey work carried out on Nature Reserves or SSSIs, historic records and from Dipterists Forum Field meetings. Most of the records from these sources will be reliable even if they are not subject to my "expert" scrutiny. Then there are other sources of information that could provide additional records. For example, many people keep personal spreadsheets of observations and specimens. With their permission, it is relatively easy to reformat these spreadsheets and submit them in one step to iRecord - several people have already been kind enough to send me their Kelp fly records, and I would welcome more! Another, more difficult source is museum collections - difficult because extracting specimen details and checking identifications is very labour-intensive. I have made a start going through the NMS collection in Edinburgh, but it will take several more visits there to get down all the details and I will never make it round all the museums in the country. Another rich source is published records - from species lists for particular localities (islands are often very well-documented), but also in theses and scientific papers on kelp flies. Some records pop up unexpectedly - for example *Coelopa frigida* and *C. pilipes* were mentioned as being a food source for migrant waders in the Orkney Islands (Douthwaite et al., (2021) Wader Study 128:274-279 - thanks to Charles Dewhurst for putting me on to this) and *Heterocheila buccata* was noted as one of the species of Diptera that can be found as adults in winter (Robert Blackith and Ruth Blackith (1990) Dipterists Digest, First series 3: 33-37).

Taking these records on trust isn't problematic for the Kelp fly recording scheme because the species covered are all large and distinctive with a relatively stable taxonomy and with a widespread but more or less exclusively coastal distribution. However, a recording scheme dealing with more tricky taxa would find it much more difficult to include unsupported records. And what happens when

one well-established species is split into two, or if a similar new species is found on our shores? Apart from specimens that can be re-examined, and records that are associated with photographs that capture just the right features, all historic records would then become doubtful and the maps emptied.

I am beginning to realise that perfection and completion are impossible goals, even for the five characterful species of the Kelp fly recording scheme. But nevertheless, I think that we owe it to the flies we have observed, photographed or collected to convert them, through one means or another, into dots on maps. Equally, we owe it to our fellow dipterists, who provide the context in which to make sense of our own observations, to make sure that the information provided by these maps is widely and quickly available. Specimens in boxes, records in notebooks, spreadsheets on computers and photos on flash drives won't help fill in those gaps. I had better get back to my backlog ...

Donald Smith



Verification

The verification of biological records

Recording schemes or organisations setting up a survey have a responsibility to take the lead with setting standards for identification. They should define agreed levels of 'difficulty' over the identification of the species being recorded. Trevor James NBN

The late Trevor James in his paper 'Improving wildlife data quality' (James, 2006) discussed the process and the purpose of records. He also discusses the need for data verification – 'ensuring the accuracy of the identification of the thing being recorded'. Entomology is a science, and science is an evidence-based activity. We use visual evidence in identification. The level of evidence needed to verify a species record varies from species to species from common to rare and from simple to complex. We usually accept records of common easily identified species in their usual habitat but if the recorder is a novice or the habitat abnormal we may ask them for the diagnostic character that they observed. However, any claim for a record of a 'difficult', rare or a new species needs the presentation of supporting evidence. This may be for a County (or Vice-County) Recorder, or for the National Recorder. The evidence may be the specimen itself, or it may be a photograph of the diagnostic features. Important reasons for this are that structures can be missed or misinterpreted by the original observer or the taxonomy may change and if the evidence is there, the misidentification can be corrected. It goes without saying that any recorder should be able to describe the diagnostic character which led them to their identification, in a similar process to the way that the ornithologists' British Birds Rarities Committee operates. What should we, as a recording community, accept as sufficient evidence? This paper is offered as a contribution to that debate.

Guidance for Validation

The levels of difficulty shown below can be used to sort species into groups. The statements below refer chiefly to males. For many genera a satisfactory key to females has yet to be published and in those cases, where a voucher specimen is female it should be noted and the site searched further for confirmatory males.

Levels of identification difficulty - Criteria

Level 5. Microdissection of male genitalia necessary to display apodeme or other character. e.g. *Tasiocera*, *Paradelphomyia*, *Ula mixta*.

Level 4. Some genitalia dissection needed and/or genitalia complicated and/or difficult to see. e.g. *Gonomyia*, *Idiopyga*, *Rhabdomastix*.

Level 3. Binocular microscope needed to see small features such as male styles. e.g. *Erioptera*, *Ormosia*.

Level 2. Diagnostic characters distinct with hand-lens. e.g. Male *Lunatipula*, *Limonia*.

Level 1. Diagnostic characters distinct with naked eye. e.g. *Acutipula*, *Limonia nubeculosa*.

Species in Group 5. Voucher specimen or drawings or photos of diagnostic characters necessary to confirm the record. e.g. *Tasiocera jenkinsoni*, *Paradelphomyia fuscula*, *P. dalei*, *Rhabdomastix laeta*

Species in Group 4. Voucher or drawings or photos of diagnostic characters necessary to confirm the record. The genus *Gonomyia* have complex genitalia which can be difficult to make out. Parts change shape or are concealed according to the viewing angle. This means that evidence such as is

demonstrated by photomicroscopy is hard-won, and difficult to present.

Species in Group 3. A description of the diagnostic features observed may be requested, especially if the species is rare or in an atypical habitat.

The National Rarity Indices

The National Rarity Indices are other criteria relevant to the evidence required. If a species is common and widespread (NRI 1 or 2) the record is usually accepted without any anxiety. If however it has only previously been found in a few hectads then it would be necessary to present the full evidence with the record.

- NRI 1 = Species found in > 100 hectads
- NRI 2 = Species found in 30 – 100 hectads
- NRI 3 = Species found in 16 – 30 hectads
- NRI 4 = Species found in 6 -15 hectads
- NRI 5 = Species found in 2 – 5 hectads
- NRI 6 = Species found in 1 hectad.

Some examples of Verification Levels (VL) with the National Rarity Indices (NRI)

	VL	NRI	
<i>Gonomyia bifida</i>	4	4	Voucher
<i>Gonomyia conoviensis</i>	4	4	Voucher
<i>Gonomyia dentata</i>	4	2	
<i>Gonomyia hippocampi</i>	4	6	Voucher
<i>Gonomyia lucidula</i>	4	2	
<i>Gonomyia recta</i>	4	2	
<i>Gonomyia simplex</i>	4	2	
<i>Gonomyia tenella</i>	4	4	Voucher
<i>Gonomyia abbreviata</i>	4	5	Voucher
<i>Gonomyia edwardsi</i>	4	4	Voucher
<i>Hoplolabis areolata</i>	4	4	Voucher
<i>Hoplolabis vicina</i>	4	4	Voucher
<i>Hoplolabis yezoana</i>	4	6	Voucher

There are no hard and fast rules. A species like *Ctenophora ornata* is very distinctive and it appears to be spreading northwards. When it appeared in Sherwood Forest at light, fortunately the Pembertons were able to photograph it and remove any shadow of doubt as to the validity of the record. (CN 26. 2013). There is a specimen of this species in the Wingate collection in Newcastle, from a site in the north east. The specimen looks authentic and has a layer of soot characteristic of specimens from that time and place. It is simply labelled 'Bishop Auckland, --07, Wingate.' and there are no other details with the specimen. (CN 24 2012) Did it come from imported timber, or was it a gift from one dipterist in the south of England to one in the north ? So the locality is as important as the species name and despite the presence of a labelled specimen, the presence of *Ctenophora ornata* in Bishop Auckland has not been accepted.

References

James, T. 2006 'Improving Wildlife data quality: guidance on data verification, validation and their application in biological recording. National Biodiversity Network

John Kramer

iRecord updates

iRecord (irecord.org.uk) is maintained and developed by the UKCEH Biological Records Centre (BRC). iRecord and the related Indicia systems provide online tools to collate records for checking and sharing.

Dipterists Forum field meetings.

In 2019 iRecord was used for the first time to collate records from the DF summer field meeting based at Stirling University. As a result 5,627 Diptera records from the meeting have been collated (plus 1,035 records of non-Diptera species). These have been available to national recording schemes and local environmental records centres since they were first added to iRecord, and in addition will be shared with the NBN Atlas as a DF field week dataset, to add to the collection at registry.nbnatlas.org/public/show/dp172

Records from the 2021 summer meeting at Falmouth are being collated at the moment, see the update from Jane Hewitt in this Bulletin. Many thanks to Jane and Darwyn for their help with gathering and sharing these records.

Import of records from iNaturalist

iNaturalist (uk.inaturalist.org) is a global online system for collecting wildlife observations. It uses a crowd-sourcing approach to provide help with species identification, and can also suggest identifications on the basis of image-recognition from photos. Use of iNaturalist in the UK has been growing, and in April 2021 a UK portal for iNaturalist was launched. The NBN Trust is working with BRC and the Marine Biological Association to steer this project and make the records available more widely.

iNaturalistUK currently holds over 2 million records (compared to over 17 million in the iRecord data warehouse). Records from iNaturalistUK are now being imported into the iRecord data warehouse, so that they can be made available for verification and shared with national recording schemes, local environmental records centres and the NBN Atlas.

The iNaturalist records will be included in the downloads available to recording schemes and records centres. More information about this process is available on the iRecord Help pages (irecord.org.uk/linking-inaturalist) and via the NBN Trust website (nbn.org.uk/inaturalistuk).

Diptera recording schemes and verification on iRecord

Darwyn Sumner has provided a spreadsheet list of recording schemes with this Bulletin, which includes a column showing which schemes are actively verifying records on iRecord. Many of the schemes on iRecord also make use of the automated process to update the records to the NBN Atlas following verification. This enables records to be updated every month or two, and as a result when I last checked (in November 2021) over 90% of the Diptera records on the Atlas for year 2021 had been supplied via the iRecord route. Further Diptera data will arrive via other routes over time, but this does indicate that the iRecord is enabling records to be checked & shared very promptly, so that they can be used for a wide range of conservation and research purposes.

Many thanks to all the recording scheme coordinators and other people involved in this, as well as to all who send in their records. For more information see the iRecord/NBN Atlas data sharing page (www.brc.ac.uk/irecord/nbn-sharing).

Martin Harvey

Recording Methods



iRecord & iNaturalistUK

An announcement on the iRecord site at <https://tinyurl.com/hy6t5pxz> tells of the cooperation between these two systems and in September iRecord sent out a message to say that the two systems were now linked.

I tried it out on their opening day. What you get as a verifier, is a drop-down list on the menu bar where you can choose to verify either the regular iRecords or the iNaturalist records. Choose the latter and it's the same familiar list but this time there's a button to take you to the original iNaturalist. That's worth doing so that you can see who confirmed it there and raised it to Research Grade. Jonas Mortelmans for some Sciomyzids, so that's fine; European expertise working on our UK material. There were initially a mere 7 Sciomyzidae records out of iNaturalist's 2112 European total and the UK's iRecord backlog at the time was 1024 so the iNaturalist records are just a drop in the ocean.

Not many initially for the Micropezids and Tanypezids either, it took a week or so for the 40-ish to find their way across. I'd verified on iNaturalist already so it's not quite a repeat job on iRecord, just a matter of ticking a box indicating that one agrees with oneself. This of course achieves the Open Data objective of adding the record to our NBN Atlas (providing the group is set up to operate in that way) rather than the previous iNaturalist system which only sent it to GBIF.

It figures

If you're registered to receive the NBN newsletter, you'll notice that they give a few figures at the foot of their page. There are some curiosities listed there but the iNaturalistUK figures show a monthly rise of 1,571 to 12,181 users in October. So it's very popular amongst naturalists yet oddly underused by us dipterists.

The Hoverfly team have looked closely at trends in iNaturalist usage, their report is in the attached Newsletter #71.

Darwyn Sumner

How iNaturalist users can help iRecord verifiers

There are a number of steps that iNaturalist users can take if they wish to make their records as compatible as possible with the UK recording schemes:

- Choose an open licence for your records: CC0 or CC BY will enable your records to be used as widely as possible; CC BY-NC (non-commercial)* can prevent records being used by some schemes and records centres. Other licence choices (such as SA and ND) are difficult to interpret for individual records, and cannot be used in iRecord or the NBN Atlas (nor on GBIF). More info is on the iNaturalistUK blog (<https://uk.inaturalist.org/blog/58298-licensed-to-share>).
- Provide your real name if possible; this can be added as the "Display name" in your iNaturalist profile, and will then be used as the recorder name on iRecord
- Avoid obscuring locations unless absolutely necessary, as this can prevent them being linked to grid references of suitable precision for recording scheme use
- Now that the record import is in place, it is helpful if you can avoid adding the same record to both iNaturalist and iRecord, to avoid duplication of both records and of verifiers' time

Martin Harvey

* CC BY-NC is designed to prevent commercial users exploiting work that volunteers do for free. The unscrupulous are ubiquitous. For NBN's tactic to meet this challenge see p6. We'd be interested to learn which schemes consider themselves commercial - not one of ours. All Local Records Centres are "not-for-profit" too, so not them either. Ed. (ALERC Co. secr., ret.)

Orphan Families

As a result of an investigation by several of us to summarise the status of Diptera Families we've finished up with a spreadsheet containing several useful pieces of information. Chris Raper provided the core of the spreadsheet (adding that he and Peter have yet to discuss one or two items.) I've done my best to link them to current Recording Schemes and Martin Harvey consulted all of them to discover who is doing the iRecord verification for each one. Figures for the Steve Falk digitisation project have also been added.

Download it from our Bulletin page at
<https://tinyurl.com/mryw9w33>

The orphans

One useful outcome is the following list of Diptera Families which don't have a Recording Scheme:

Nematocera	Anisopodidae	5	Freeman 1950; Hancock 1989
Nematocera	Bibionidae	18	Freeman & Lane 1985
Nematocera	Cecidomyiidae	662	see spreadsheet
Nematocera	Ceratopogonidae	175	Handbook in prep. by Borkent & Dominiak
Nematocera	Chaoboridae	6	Freeman 1950
Nematocera	Mycetobiidae	3	Hancock, Robertson & MacGowan 1996
Nematocera	Psychodidae	99	Withers 1989 and subsequent papers
Nematocera	Sciaridae	268	see spreadsheet
Nematocera	Scatopsidae	46	Freeman & Lane 1985
Nematocera	Simuliidae	32	Davies 1968
Aschiza	Phoridae	355	Disney 1983, 1989 and subsequent papers
Calypttrata	Fanniidae	61	d'Assis-Fonseca 1968; Rozkošný et al 1997
Calypttrata	Muscidae	294	d'Assis-Fonseca 1968
Acalypttrata	Acartophthalmidae	2	* Ozerov 1986
Acalypttrata	Asteiidae	8	* Chandler 1968; Gibbs & Papp 2007
Acalypttrata	Aulacigastridae	1	* Papp 1998
Acalypttrata	Braulidae	2	* Dobson 1999
Acalypttrata	Camillidae	5	* Papp 1985
Acalypttrata	Campichoetidae	2	* Chandler 1986
Acalypttrata	Canacidae	11	* Collin 1966, Irwin et al 2001
Acalypttrata	Carnidae	13	* Collin 1930, 1937
Acalypttrata	Chamaemyiidae	32	Smith 1963, Collin 1966, Tanasijtshuk 1986
Acalypttrata	Clusiidae	10	* Stubbs, 1982; Withers 1985
Acalypttrata	Cnemospathidae	1	Ismay & Smith 1994
Acalypttrata	Diastatidae	6	* Chandler 1986
Acalypttrata	Drosophilidae	69	MS key based on draft handbook by Beuk & Pitkin
Acalypttrata	Dryomyzidae	3	* Falk 2005
Acalypttrata	Ephydriidae	154	MS keys by Irwin and Drake
Acalypttrata	Lauxaniidae	57	MS keys by Clemons, Stubbs and Mitchell
Acalypttrata	Milichiidae	19	* MS key by Chandler
Acalypttrata	Odiniidae	9	* Collin 1952; Cogan 1969; MacGowan et al, 2002, 2004
Acalypttrata	Opomyzidae	16	* Drake 1993, 2001
Acalypttrata	Periscelididae	4	* Duda 1934
Acalypttrata	Piophilidae	16	* Stubbs & Chandler 2001
Acalypttrata	Stenomericidae	3	Merz & Roháček 2005

Keys: Peter Chandler kindly provided the above short references to identification keys, the full references are in the Dipterists Handbook (pp 17-80). Of course the Families key recently updated by John Ismay (available on the members area of the DF website) will take you each individual Family.

You'd have to be very brave or knowledgeable to take on some of the above as Recording Schemes but several are feasible.

Smaller Acalypterate Families

One idea discussed was to bundle together a whole bunch of the smaller Acalypterate Families and manage them with some sort of consortium of dipterists. Few are familiar with many but we do have expertise and keys in one or two of them. For example I've found and photographed our one Aulacigastridae and reckon I know a little now. Other dipterists have written keys, some relatively recently.

To give you an idea of the species involved I've set up an iNaturalist project for most (*) of those Acalypterates at <https://www.inaturalist.org/projects/smaller-acalypterate-families> where you can take a look at pictures of the 360 UK records already there.

Remember these iNaturalist projects are simply filters on existing posts when they are first set up. They can stay as simply curiosities or act as jumping off points for more organised activities if anyone chooses. The first obvious thing of note is that you can identify dipterists in the habit of posting images of that group, some indication of potential interest.

Darwyn Sumner, Martin Harvey & Peter Chandler

Recording Scheme News

NEW Smaller Acalypterates Project

In a departure from the usual study group or recording scheme formats this is simply an iNaturalistUK project.

<https://www.inaturalist.org/projects/smaller-acalypterate-families>

These are Families not currently served by Recording Schemes and the "smaller" refers to the number of UK species in that Family (see list above or on the site) so at the moment it does not include Chamaemyiidae, Drosophilidae, Ephydriidae or Lauxaniidae. The nature of such projects is that these could easily be added later if necessary.

If you've an interest in any of them or you've found one or two then simply join the project using your standard iNaturalistUK methods. You don't need to have a relevant image in order to join.

Photographs will be only around 5% of all collected records of these taxa so it's not ideal but it does serve as a focus point and a forum, may attract experts who know something about keys and serve as a handle in future Bulletins to discuss the occasional fly. I've got my eye on *Aulacigaster* and if you want to get a picture on the site then *Dryomyza* must be amongst your photos somewhere.

iNaturalistUK has its own forum too so it's possible to discuss identifications etc.

Darwyn Sumner (not an organiser)

thanks to Nigel Jones, Ian Andrews & Sam Rees for support

Sciomyzidae Recording Scheme

The total Open Data upload count for 2021 was 13,156 records.

Matt and I still have a lot of iRecord material to verify, some 1,002 to work our way through with a further 50 finally drifting through to iRecord from iNaturalistUK via the new system set up by the NBN/iNaturalist/BRC partnership.

Our target, as you may have gathered from the Newsletter #7 is to recalculate the statuses of the UK species from that Open Data. Natural England's Dave Heaver calls these recalculations "assessments" and they are taken into account when the formal IUCN Red Data categories are updated and reassigned. Back in 2015 Dave was asking me "How big is the sciomyzid dataset now?", the answer is in that Newsletter. We're close but clearly the more complete the better.

So if you've any more records then let us know. Spreadsheet datasets can be uploaded to iRecord and bulk verified straight away, otherwise just use iRecord in the normal way or pop the pics onto iNaturalistUK.

The last newsletter seems to have stimulated regional accounts too. Ray Morris has produced an excellent article, complete with distribution maps and images for Leicestershire & Rutland (Leicestershire Entomological Society.) Derek Whiteley is also working on a Sorby Invertebrate Group set of maps.

Darwyn Sumner

Stilt & Stalk Fly Recording Scheme

They said it couldn't be done, they said they wouldn't publish it!



Sumner, D. P. (2021). **Biogeography, Phenology & Status of Micropezids & Tanypezids in the UK (Diptera, Nerioidae & Diopsoidea). In Dipterists Forum Report: Stilt & Stalk Fly Recording Scheme.** <https://doi.org/10.13140/RG.2.2.35312.38407>

Natural England counts it as an assessment thus making it a key component of future "Reviews of scarce & threatened ..."

It's what Recording Schemes do, some are already published and there are others in the pipeline.

"Superb maps!" R. Wolton

Get it from ResearchGate at <https://tinyurl.com/hctay5c> (select More | Download)

More in Newsletter #4 in this Bulletin.

Darwyn Sumner Darwyn.sumner@ntlworld.com

Anthomyiidae Recording Scheme

Moves are afoot to develop an Anthomyiid Handbook. Rob Wolton is looking for someone with an Anthomyiid interest to take the lead on this, supporting the call from Phil Brighton and Howard Bentley who have gathered together all of the work by the late Michael Ackland and are also looking for good representative photographs. The idea is to assemble this into a print-ready handbook using the same sort of technologies we use to put this Bulletin together. If you've DTP aspirations then I'm happy to advise (Ed.)

Newsletter #13 in this Bulletin

Contact Phil Brighton, Howard Bentley & Rob Wolton

Cranefly Recording Scheme

Newsletter #38 in this Bulletin.

John Kramer john.kramer@btinternet.com

Conopidae Recording Scheme

David Clements has begun a project on ResearchGate at <https://tinyurl.com/bcyj274k>

In it he states the goal of "Distribution and ecology of British species" and that he has over 15,000 records to date.

An innovative use of ResearchGate for messaging, it's the first time I've seen such a thing amongst the Recording Schemes.

(Ed.)

Hoverfly Recording Scheme

Newsletter #71 in this Bulletin + a notice of the 11th International Symposium on Syrphidae (see Meetings)

David Iliff davidiliff@talk21.com

Hippoboscidae and Nycteribiidae Recording Scheme

This Recording Scheme becomes Dipterist Forum's 7th on our NBN Atlas page with 169 records. Send more via iRecord to

Denise Wawman & Erica McAlister

Kelp Flies Recording Scheme



Following Donald Smith's presentation at our Annual Meeting he sent us the above article and also set up an iNaturalist project at <https://www.inaturalist.org/projects/kelp-flies-of-europe>

Scheme Organiser: Donald Smith KelpFlyRS@gmail.com

Lesser Dung Fly Study Group



Newsletter #2 in this Bulletin

Mark Welch m.welch@nhm.ac.uk

Pipunculidae Study Group

David Gibbs has given me an excuse both to mention his study group and pop this fly image into the Bulletin.



Cephalops sp. Southrepps Common, Norfolk 2010=06-30. Photo D. Sumner, identified by David Gibbs on iNaturalistUK.

Take a look at the study group's website at <https://davidjgibbs.webs.com/pipunculidae.htm> where you'll find keys and maps. A group to target for next season perhaps.

Muscid Recording Scheme

In Bulletin 77 (2014), James McGill announced this as a Recording Scheme. At the time he was looking for specimens and records. We've had no communication with him since then so the Bulletin editors are not treating it as a formal Recording Scheme on our lists. Those interested in this Family should contact him:

James McGill j.mcgill@outlook.com

Dipterists Forum Expeditions

Amongst the responses to the appeal for records in the last Bulletin were a number who showed interest in some of our older expeditions. Prompted no doubt by Laurence Clemons' publication of one from 1981. Interest too in our Autumn Field weeks.

Accordingly we needed a good list of all our organised trips so, starting with Alan Stubbs' account in Bulletin #47, I began a list in spreadsheet format to serve as a guide. It turns out that there were a lot of them, it got to 148 after the addition of many recent Spring & Autumn expeditions. Way too many to list in the Bulletin or even to construct a sensible web page so a spreadsheet it remains, downloadable from <https://micropezids.myspecies.info/node/375> for anyone wishing to cast their eye over it or use it to figure out whether or not they attended (or have records.) Use it too to get the reference to which Bulletins provided notices and accounts and which we've been able to publish as Open Data by uploading to NBN Atlas.

Though the list can be divided up in several ways (e.g. Spring, Summer and Autumn) there's also a fairly obvious chronological one, based on the technologies deployed to record and on the people doing that. It was suggested to me that these could be called "dynasties" (the Stubbs Dynasty etc.) but I've termed them Epochs: periods characterised by distinctive technologies, particularly emphasising open data publishing methods. Here's how they divide up:

- Epoch 1:** From our first in 1973 (Forest of Dean) to 1987 (when our Summer meeting was just a couple of days each in the Wyre & New Forests.) As regards records we've not much chance except for the occasional treasure troves or legacy field note books (see **Archives** in this Bulletin.) This epoch predates any Biological Recording applications and spreadsheets meant Lotus 123 back then.
- Epoch 2:** 1987 to 1996. The professionals stepped in at our 1987 Bangor meeting when Stuart Ball started adding records to Recorder whilst at the actual meeting. This was presumably a formal part of JNCC & English Nature initiatives, the beginnings of a drive to work on the Invertebrate Site Register (published to NBN Atlas). During this period Recorder was devised and developed by Stuart who last recorded species occurrences in this way at our 1996 York meeting.
- Epoch 3:** 1997 to 2018. This starts with Mike Howe, working for the then CCW. Just how he managed to get records out of every single person attending is a puzzle as I don't recall him badgering. Nonetheless he achieved it and produced a fine published report and even carried on to do the same in the following year in Dorset (aided by Mick Parker.) This period attracted the help of other professionals as compilers until our Stoke 2018 meeting. This epoch is within the period of the memory (and saved computer records we hope) of participants and thus the main source of requests from those keen to rescue all the records from obscurity.
- Epoch 4:** The automated era, 2019 onwards. The above data management methods are unsustainable in the long term. The skills and time available from Dipterists Forum volunteers are not on the increase, some of those professionals have retired and agencies now receive a lot less financial support for such projects. So for our expeditions we now rely on automated data gathering systems such as iRecord & iNaturalist. Contributors upload their data there, verifiers check some and data management is simply a matter of BRC sending the results from their silo to NBN Atlas who publish as Open Data.

These categories serve the administrative function of permitting us to focus on different eras. We can now provide accounts in this and future Bulletins without having to give detailed explanations of why each period of time is significant or different in terms of our efforts to trawl for records.

Epoch 1

The remarkable example from this epoch is the Kent 1981 summer expedition dataset by Laurence Clemons. Keith Alexander now tells me there is some prospect of his being able to supply records from the 1983 Summer Field meeting in Cornwall (14 participants, Bulletin #15)

Epoch 2

Our last visit to Norfolk was in 1993 (34 participants, Bulletin #36) We plan to visit again in 2022 and hope to use information from those times to help us prepare site visit lists. Enquiries have been made.

Epoch 3

The response to the appeal in the last Bulletin for data from the Dipterists Forum field weeks was strong. Within a couple of weeks of publishing, six explorers had offered data, from way back into the 80s right up until 2014. Another 15,472 Field Week records of which 4,134 were added to the NBN Atlas by the end of 2021.

The table below now shows progress since the last Bulletin:

Year	Region	NBN Atlas	#
2003	Suffolk	ongoing 🧑🧑🧑	1284
2004	Wiltshire	uploaded (November 2021)	4134
2005	Durham	2 nd to 9 th July	0
2006	Lewes	24 th June to 1 st July	0
2007	Aberystwyth	14 th to 20 th July	0
2008	Cairngorms	ongoing 🧑 (of 17)	281
2009	Swansea	ongoing 🧑 (of 30)	1127
2010	Pembroke	ongoing 🧑 (of 26)	545
2011	Exeter	ongoing 🧑🧑 (of 28)	1714
2012	Speyside	ongoing 🧑🧑🧑 (of 33)	1550
2013	Lancaster	ongoing 🧑🧑🧑 (of 26)	1742
2014	Bangor	uploading 2022 🧑🧑🧑🧑🧑	2982

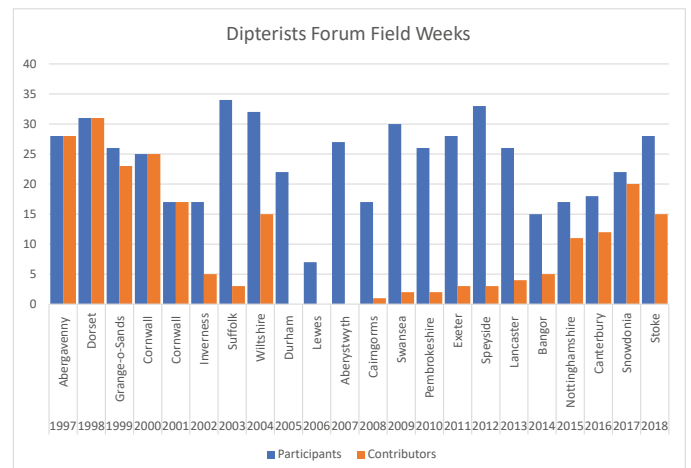
Open Data: <https://registry.nbnatlas.org/public/show/dp172>

Those shown in green are scheduled for NBN Atlas. Amber colour indicates ongoing collation work. 🧑 = contributors so far.

Further details at <https://micropezids.myspecies.info/node/375>

Bangor is an iNaturalist project at <https://tinyurl.com/mrys4s3b>

Contributions



Erratum: The wrong dates were given for the Pembroke 2010 meeting in the last Bulletin. They were actually 12th to 19th June

I was working in a Local Records Centre throughout most of this epoch, building up datasets from across all flora and fauna so as to provide a county-based set of information which would help with conservation. This was the heyday of Biological Recording when vast numbers of species occurrences were being gathered via biological recording applications such as MapMate and Recorder and through modern spreadsheets.

The response rate of records contributors for a standard Summer meeting is around 80% of those attending. I'm defining "standard" as meetings where the records have been gathered within the first year or so of the event. That averages at around 230 Diptera records per attendee per meeting.

Based on the numbers attending the above incompleted meetings then we're **missing around 55,000 Diptera records**.

It is hoped that potential contributors to the above incompleted expeditions haven't lost that data on their home systems. Keep looking please. **iNaturalist projects** have been set up for some of the above if you'd care to add pictures.

If archiving home data is a problem then we've an article on that subject later in this Bulletin.

Response to our appeal

A sufficient number of records were submitted from two of the above Field Weeks to warrant NBN Atlas uploads. We found the full dataset from all attendees at the 2004 Wiltshire expedition (see below) and I sent these to NBN in October. The 2014 Bangor records weren't complete but 5 contributors made it feasible, this one will go to NBN early next year.

Thumb back through the Bulletins for those years and you'll find accounts of those expeditions, many organised by Roger Morris, though with write-ups by others too, like Judy Webb, Ivan Perry, Chris Spilling and Alan Stubbs. They list many interesting finds. A few will have found their way into Recording Schemes datasets, but Open Data datasets for entire expeditions are the things of particular value, they are what we asked for at the time and promised to publish.

If you attended any of the other Field Weeks and kept records at the time then it's still possible to progress the above. Four or five datasets from a meeting is enough for an NBN Atlas upload So please have a dig through your old spreadsheet lists and see what you can do. Don't worry about low numbers, I'd be lucky to achieve 10 per expedition after I went camera-only in 2010. We're most grateful for those who have responded.

Darwyn Sumner

Spring & Autumn Field Meetings

I'm well out of my comfort zone in commenting on these, having attended only one of each. There are strong teams of regulars on them however. Roger Morris does all the organising and Rob Wolton seems to be a regular on the Spring ones and Peter Chandler (together with the Craneffy crew) on the Autumn ones. I've seen a couple of compilations that Peter has produced.

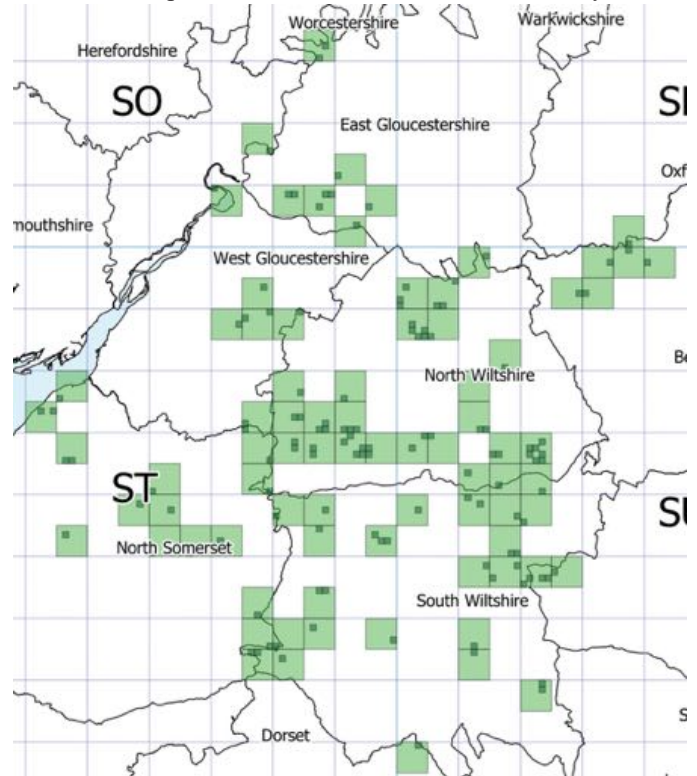
In November Roger informed us that he's got all the Spring and Autumn field meetings data up to 2016 digitised.

Darwyn Sumner

Wiltshire 2004 (30th May to 4th June)

This Field Week was organised by Peter Chandler who wrote the preliminary account in Bulletin 58 (p30). Participants submitted records to Peter afterwards and these form the source of the complete dataset - or at least as complete as one would normally expect from one of our expeditions. Added to Peter's archive were two further sets of records by contributors. Bear in mind that at the time, Biological Recording Applications were not as extensively used and spreadsheets not so

commonplace, indeed some of the participants did not have access to computer systems at all (and don't to this day.) Consequently much of the data was amassed in word documents by participants or compiled by Peter from snail mail contributions. Converting and collating these to structured & validated spreadsheet records ready to upload to NBN Atlas was challenging* but with collaboration from Peter Chandler & Andrew Halstead in verifying the material - bringing the old taxon names up to date, this was achieved satisfactorily.



Darwyn Sumner & Peter Chandler

Epoch 4

As Martin Harvey indicated in the last Bulletin, iRecord is now being used to collect and collate records. After a certain period of time the number of submissions trails off as do the proportion which become verified through iRecord's verification system. At this point, in order to make them available through the NBN Atlas Open Data system (and on our Dipterists Forum page on NBN Atlas), the entire collection will be sent as a single dataset to NBN. Certainly there will be some duplicates because some records verified by the Recording Schemes will have already seeped through to NBN Atlas via the systems and arrangements they already have in place with BRC. But this will do no harm.

Martin sent me the Stirling dataset extracted from the BRC's iRecord silo just before Christmas 2021. He asked me to submit it to NBN. A very simple job, just a matter of preparing the metadata sheet containing the title, date range etc. (example pdf at <https://tinyurl.com/mryw9w33>) and sending it and the dataset to Sophie Ratcliffe at NBN; which I did by the end of the year. You should find it there by the time this Bulletin is published.

Year	Region	NBN Atlas	#
2019	Stirling	uploading early 2022	5627
2021	Cornwall	ongoing until Autumn 2022	2383
2022	Norfolk	Scheduled 2 nd to 9 th July	
2023	Forest of Dean	50 th Anniversary proposal	

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



Stirling 2019

The full report for this meeting, organised by Jane Hewitt, is in Bulletin #88. As Martin Harvey promised, he's extracted all the Diptera records from iRecord. That's the last you're going to see of this expedition in these Bulletin pages but the memories will last forever as Open Data once they're uploaded in mid-January.

Darwyn Sumner

Cornwall 2021

Reported in Bulletin #92, records submissions are ongoing and may be added by the following methods:

1. **iRecord:** instructions at <https://tinyurl.com/2p9f2756>
2. **iNaturalistUK:** at <https://tinyurl.com/2p9fbpkd> easiest method for photographs but avoid using 1. + 2.
3. **Spreadsheets:** upload these to iRecord (guidelines at <https://dipterists.org.uk/field-meetings>)

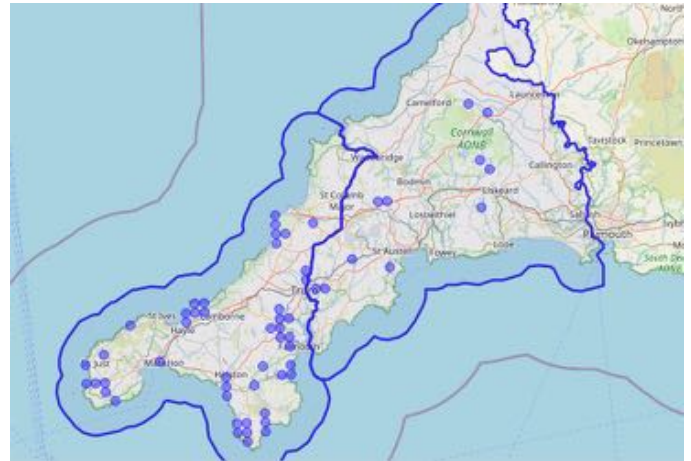
It seems reasonable to assume that by the time you're attending our 2022 Norfolk field meeting, you'll have sorted out all your records for the previous year. Accordingly we'll be uploading to NBN Atlas in Autumn 2022.

An opportunity to try iNaturalistUK. Any Cornwall record added to iNaturalist which falls between our expedition dates will finish up in the project at <https://tinyurl.com/2p9fbpkd> provided they are diptera, symphyta, coleoptera, lepidoptera or mollusca (ask me if you want more.) They'll also end up on iRecord.

Darwyn Sumner

Falmouth records

Records for this meeting are being submitted to iRecord via a DF field meeting "Activity". I would like to thank all those who have already submitted their data. At the time of writing (December 2021), 2,383 records (1,718 of which are Diptera) have been uploaded. The number of records will undoubtedly increase over the winter as people work through their specimens. The map below shows the distribution of these records within VC1 (West Cornwall) and VC2 (East Cornwall). If you have an iRecord account, you keep up to date with the field meeting activity by searching for Dipterists Forum in the 'Browse all activities' tab in the Activities menu.



Jane Hewitt

Publications from field meetings

My attempts to track down some older publications related to Dipterists Forum's Field Weeks over the past years has caught the attention of Martin Drake so there's two of us at it now. Martin is finding stuff because he's clearing out the old stock of Dipterists Digest and Bulletins of course. None of it is born-digital so we've been doing a lot of scanning and pdfing.



Here's what we've come up with so far:

Howe, M. A. (1998). Field Meeting of the Dipterists Forum at Abergavenny, June 1997 (Report No. 98/5/2). Natural Science Report, 98/5/2.

- [Summarised in Howe, M.A. & Howe, E.A. 2001. A review of the Dipterists Forum summer field meeting at Abergavenny, 1997. Dipterists Digest. 8: 31-48.]

Mike Howe found this for us. It had previously only been circulated to CCW officers (now NRW) and attendees at the Field Meeting. I added the pretty cover, rescanned the pages containing maps and reduced the size to 11Mb. Get it at <https://tinyurl.com/puvdyexs>

Howe, M. A., Parker, M. J., & Howe, E. A. (2000). Dorset Field Meeting 27 June to 4 July 1998. Dipterists Forum Occasional Publication, 1, 167.

- [Summarised in Howe, M.A., Parker, M.J. & Howe, E.A. 2001. A review of the Dipterists Forum summer field meeting in Dorset, 1998. Dipterists Digest. 8: 135-148.]

I do recollect designing the front cover for this and making lots of copies for mailing out. I remember this expedition well as it's one on which Tom Mawdesley and I gatecrashed both a wedding and an awards ceremony for medical graduates on the same night in Dorchester.

Get it at <https://tinyurl.com/2ytrc3h5>

As regards the records from the above, both batches were placed on the NBN Gateway by the authors at the time (now transferred to NBN Atlas) but they'll take a bit of investigation. Both will be found in Natural Resources Wales' Welsh Invertebrate Database located at <https://registry.nbnatlas.org/public/show/dr1212> It's tricky to filter just the records from our field meetings. For Abergavenny I managed to narrow the stuff down from 590,000 to 11,000 using the NBN Atlas advanced search between the dates of our expedition but have to admit defeat as regards narrowing it further to the Vice Counties we visited. NBN have a plan to improve the mapping tools on the site, the above will make a good test when they do.

Martin discovered some that are even older and scanned them for us:

Chandler & McLean 1984 A Diptera Recording Schemes field meeting October 1983.

An Autumn Field Meeting in Norfolk organised by Alan Stubbs in which 6 participants visited 11 sites between 12th & 16th October. Bulletin notices & reports in nos. 15 & 16. As this report includes a number of ISR forms it is presumed that the records are Open Data within the NBN Atlas' [Invertebrate Site Register dataset](#).

Get it at <https://tinyurl.com/5bnps27b>

Ball & Drake (1993). Diptera Recording Schemes field meeting report 1993 - Norfolk. a preliminary report.

This Field Meeting was organised by Martin Drake and held between 4th & 11th July. The 33 participants generated 7363 records from 83 sites, many were entered onto Recorder by Stuart Ball at the meeting. Frequent reference to "ISR site" in the document suggests that some records may be found as Open Data in the Invertebrate Site Register dataset though many are outstanding. A summary is also to be found in Bulletin #36.

Get it at <https://tinyurl.com/3ntc9pd7>

Locations map at <https://tinyurl.com/vm3ahmp8> (opens in Google Earth)

Darwyn Sumner, Martin Drake & Mike Howe

Recording Projects

Project to digitise Steve Falk's Records

Progress with this project has been steady. I've received no further information from schemes which extracted data prior to the project but full data for four have been extracted (Heleomyzidae (1410) + Sarcophagidae + Sciomyzidae + Micropezids & Tanypezids) and uploaded to NBN Atlas. Work has begun on the Rhinophorids & Calliphorids, is well underway on Tephritids and it is hoped that the Conopids can begin soon. We're also studying the material to look for non-Recording Scheme Acalypterates (see above.)

Steve himself is proactive regarding this project and is happy to help any Scheme who wants to extract records. He expressed surprise at the number of Sarcophagidae & Helomyzidae records and is going to have a stab himself at Anthomyiidae & Sepsidae.

The scanned folders and full instructions are available at <https://micropezids.myspecies.info/node/307> and any volunteers are welcome to have a crack at digitising. More details are in Bulletin #92. Contact a Recording Scheme if you want to help with this job.

Good solid progress with this project, some figures in our Families spreadsheet. More details in the next Bulletin.

Project to digitise Jon Cole's Records

Following Jon's death in 2021, Rob Wolton began to investigate the provisions that Jon had made for the disposal of his entomological legacy. Both his collection and records files (handwritten A4 folders) are at Oxford Museum.

Rob and I discussed this with Zoe Simmons who hopes to obtain the services of an intern to scan those notebooks. They're of particular interest to the museum because all the specimens are meticulously cross referenced. So digitising records of the collection is the sort of job that's squarely in ball park of the things that museums do. Consequently this job is an Oxford Museum project which they will carry out "in a manner appropriate for direct upload into our collections management system and from there out to the wider world via collections on-line."

Dipterists Forum have offered to help with the verification of this material through our volunteers and Recording Scheme expertise. Just how that might fit into their formal collections management system is currently unclear but we shall monitor progress from time to time and keep Dipterists Forum members informed.

Rob Wolton & Darwyn Sumner

Photography

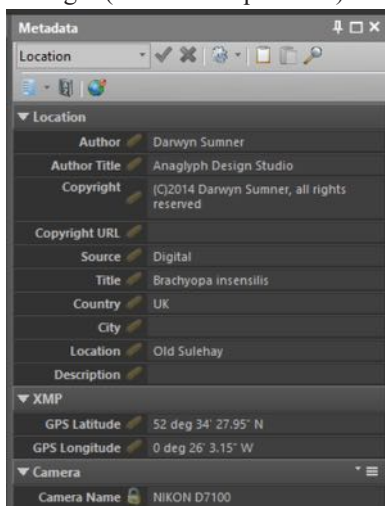
Leaf through a box of family photographs and on the back will be handwritten the place and year, maybe even more. All dads did that when those expensive prints came back from the chemists - they'd cost such a lot. Transparencies were a little harder to label but then along came digital and the task of labelling thousands of them seems even more daunting, especially when you've neglected it for a few years. You've either got or you need a "digital asset manager" (image organiser) to label them properly. In particular it's the location that's not automatically recorded on that digital image at the time that it is taken - geotagging provides a solution.

Photographs and the 4 "W"s

With a little care and attention there's enough space in a digital image for you to store all the information you need for it to constitute a biological record. The four "W"s of When, Who, Where & What needed for it to be a species occurrence.

Surprisingly there's not yet one specific biological recording application dedicated to allowing the photographer to manage their own photographs on their own desktop PC along biological recording lines in this way¹. The nearest to it is Photoool's iMatch, partly because it allows you to assign taxon names to each photo using an hierarchical tree which you construct yourself - then subsequently use as a filter to easily find all your images of *Brachyopa* (or whatever.)

Here's how a full set of the four "W"s looks in a digital asset manager (iMatch or equivalent)²:



And here's how to get them all into your image:

1. When

Easy, that's stored in your picture when you take it. Take care to ensure that your camera has the correct time in it and if it's a specimen you shoot under a microscope several days later, change the date back to the time you caught it.

2. Who

That's your name, a setting you put in your camera when you first

started to use it. It's worth spending a little time on this in your camera settings, invent a company name too if you wish, and add a copyright notice.

3. Where

Naming the location is up to you, using your chosen image organiser. Geotagging (see the following articles) will add the Lat/Long coordinates but if you insist on keeping a record of the OSGR grid references then Ordnance Survey's online tools will do that for you. So will iRecord if you post the image there.

4. What

You either know this or you find out using iSpot, iRecord or iNaturalist.

Add this to your image's Title and/or use the iMatch categories. The Description field is also useful, it shows up in both Flickr & iNaturalist postings. For the latter I use it to provide the image's filename so that I can find it again once it's been identified.

Geotagging

Where did I take that photo?

Some images are automatically tagged with the geospatial coordinates (geotagged) when they are taken. So uploading to iNaturalist is a breeze because the image has all the four "W"s. Not quite so easy with images taken with a camera, a handful have their own GPS but those are rare or expensive. For a photographer to geotag their own images taken with a camera they need to geotag the image themselves afterwards.

I did a little investigating to check how prevalent geotagging is. Flickr isn't a recording site but if the image is geotagged when it's posted it'll read it and show it. I take the trouble to ensure that all mine are geotagged before I upload there but what about other photographers who upload images there? I looked at a random set of 10 field images from 10 of those I follow on Flickr and discovered that only 3 of them routinely geotagged their images (two Russians and a Portuguese.) I didn't find anyone from the UK.

Bung your image on iSpot and you have to type out the coordinates for each one. Geotag your images first then bung on iNaturalist and you've no typing to do at all (as have 53,000 European dipterists.)

So if you've a desire to organise your collection of photographs a little more along geospatial lines and smooth the path to turning them into Open Data records then read on...

1. The Google Earth solution

If you've access to the Latitude & Longitude fields in your image organiser (see above) and you can put a pin on a Google Earth map then you've access to the **fastest method of geotagging**. Simply copy each value from the Google Earth pin's display and paste them into the respective fields in your organiser. You will have to delete the trailing degree symbol.

This method worked exceedingly well for a number of batches of Morris dancing images I had to do recently, they invariably meet at pubs and Google Earth displays all those.

2. The GPS solution

The methods here all require that you possess and use some kind of gadget that can create a GPX track.

Use a hand-held GPS, and record **tracks** throughout the time you're in the field. You can then use those saved **tracks** to punch the coordinates onto your downloaded images (it matches to the exact time you took the picture so it's accurate to 5m.) Far more precise than the map and pin method below, it's what surveyors would use to map things on a reserve.

The list of available gadgets is quite extensive:

GPS units, notably Garmin. The range of these is large but before acquiring one do ensure that it can record **tracks** and that these can somehow be uploaded to your PC or wherever you keep your collection of images. Some older GPS models apparently function OK as do the eTrex series and the Fenix 3 watches allegedly. Many second-hand models are appearing on the market so acquiring one may not be expensive. One issue to bear in mind is that the tracking feature should remain running throughout your survey - so keep an eye on the batteries and take spares.

If your GPS gadget is a mobile phone then using GPS continuously may take it out of your battery, so take a good charger with you in the field.

Methods are simple and inexpensive:

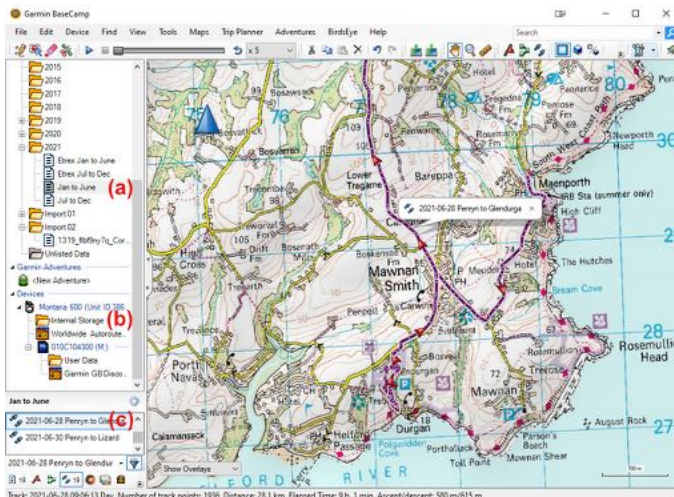
¹ I investigated this on the iNaturalist Forum at <https://tinyurl.com/mr3np96t>

² Technically an EXIF metadata editor, several free ones listed at <https://tinyurl.com/y5enunza>

Basecamp (Garmin's free application)

If you've paid for expensive OS maps for your GPS then leave it connected to the PC, you can then get OS maps on screen.

One very useful trick that several iNaturalists used was to take a photograph of any gadget (mobile phone, GPS) when starting out at a site. The gadget of course should be showing the current co-ordinates (it needn't be your own gadget) and if you have a GPS then show the time too, and use it as an opportunity to check the clock on your camera. It's also a useful habit to take a shot of the reserve signpost on each visit.



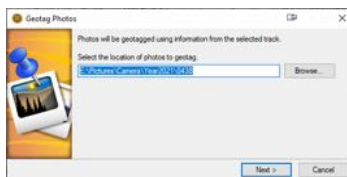
Basecamp set up ready to geotag images.

Setting up:

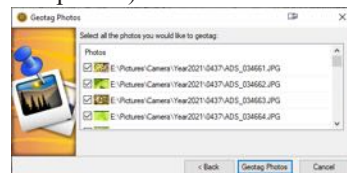
1. Connect your GPS unit to your PC. If you have OS maps on your device then enable them using Maps on the menu.
2. Look for your tracks on the connected GPS unit (b) and copy them into your local folders (a) using Basecamp.
3. Select one track (c) - which then shows up on the map.

Geotagging:

4. Edit | Geotag Photos using Track. Find the folder containing photos from the same day



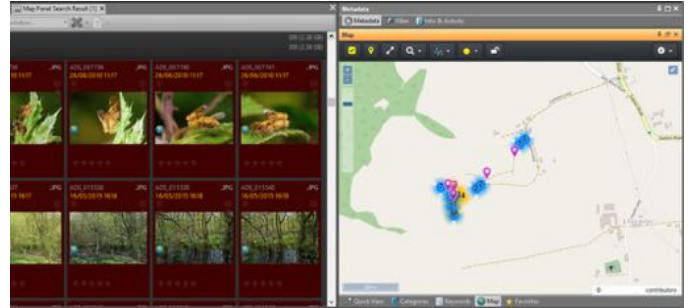
5. Next (don't tick the Import box or you'll fill your GPS with photos)



6. Geotag Photos - job done.

3. The map & pin solution

The concept is that you locate and select old photographs, stick a pin in the exact location on a displayed map then press GO. Hey presto another set of shots from your back garden that you can easily bundle together later into a big batch of "my garden" images using search routines based on drawing a circle on a map.



iMatch example: East Walton Common. All the 300 photographs I've taken there over the years, selected by drawing a circle. The map shows I've used GPS tracks a lot as the images are clustered in different places, the map and pin method would put them all in exactly the same spot.

This technique works regardless of how old the images are (maybe scans of pre-digital transparencies) or whether you happened to use a GPS out in the field when you took the original photo. In particular this would be the method you would choose to geotag your studio images.

Though there are numerous applications and methods available I'll refer to 3:

1. iMatch (£97)

A feature-rich image organiser, reviewed in Bulletin #81

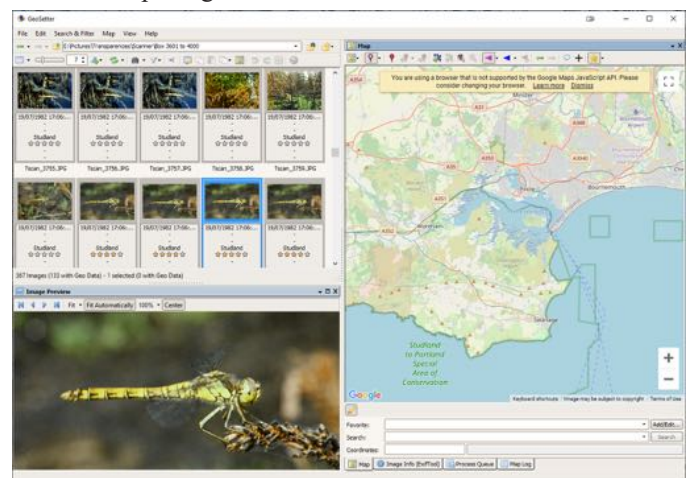
2. Lightroom (£subscription)

Image organiser, drag & drop + tracks supported

3. Geosetter (free)

To start the process off I've chosen image files consisting of scanned transparencies from 1982. Rephotographed recently and with dates and location names added from my contemporary field notes.

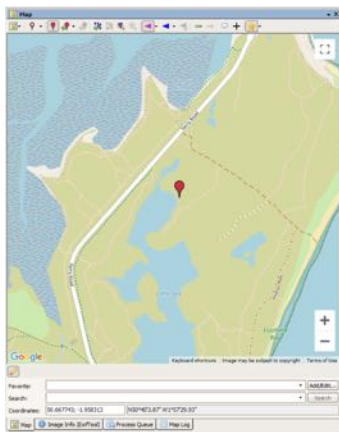
Here's the opening screen in Geosetter:



Notice that I've navigated to the folder containing the images I wish to work with. Geosetter is displaying thumbnails from that folder and the selected image, the one I'm intending to send to iNaturalist, shows up in the viewer. There's a bar too that tells me I've already geotagged some of that folder.

To the right I've positioned the map in roughly the right area for

Studland.



Step 2: Find the position marker and move it to your chosen location, zooming in on the map. Forty years is a long time to remember exactly but it had to be near Little Sea and not too far from the road.

Note that Geosetter is already giving you the coordinates in two formats at the foot of the map. Not OSGR of course, it's not a UK tool.

Step 3: Click the second red pointer button (Assign position marker to selected images) Immediately the text below your selected image updates and the text rail tells you you've changed 1 image.

Step 4: Select the rest of the images you want to change (select first thumbnail | hold down shift | select last) and press the assign pointer again. All the text under the thumbnails change.

Step 5: Press the Refresh button to save those changes (text changes from red to black).

Now all you now need to do to post on iNaturalist is drag and drop. That particular image is at <https://www.inaturalist.org/observations/101883920>

Explore the other functions in Geosetter. It's nowhere near as powerful (or as multi-functional) as iMatch but it does have a number of other useful features, including the facility to read tracks in a similar fashion to Basecamp.

... other solutions

Trawl through the internet or forums such as iNaturalist's and you'll find a whole host of other techniques. Ranging from an abandoned Google Earth/Picasa system to online tools where you send them one image and they geotag it and you download the amended file (!), through cyclists gadgets to a variety of mobile phone applications and other strange stuff (PhotoTracker, GPicSync, GEOPhoto, Enny Geotagger, GPXLogger etc..) Confuse yourself with them by all means but don't go there if you've found something that works or unless you've found a mobile phone app that records tracks, in which case use the Basecamp technique.

Beware too of Nikon's NX Studio - it writes to a different part of the image's metadata and any geotagging you apply using this system cannot be read using anything else. Curiously if you edit and resave using Affinity Photo it reads from either and writes back to both, a rather laborious solution though.

Security warning: Many mobile phone users may not be aware that their devices automatically geotag. You will give away your home location if you upload such images to public sites, same with threatened species' locations.

Darwyn Sumner

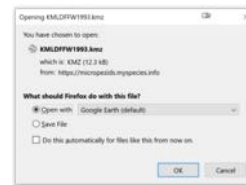
Sharing with Google Earth

A rather neglected tool, but it does help with some tasks. Not much liked by dipterists judging by recent responses (0/50) but it is free (paid for out of your taxes) and can be useful for sharing site information. Writing your own Google Earth files is well within the skill set of those familiar with Excel spreadsheets. All you have to do is register at the Earth Point utility at <https://www.earthpoint.us/ExcelToKml.aspx> and follow their guide.

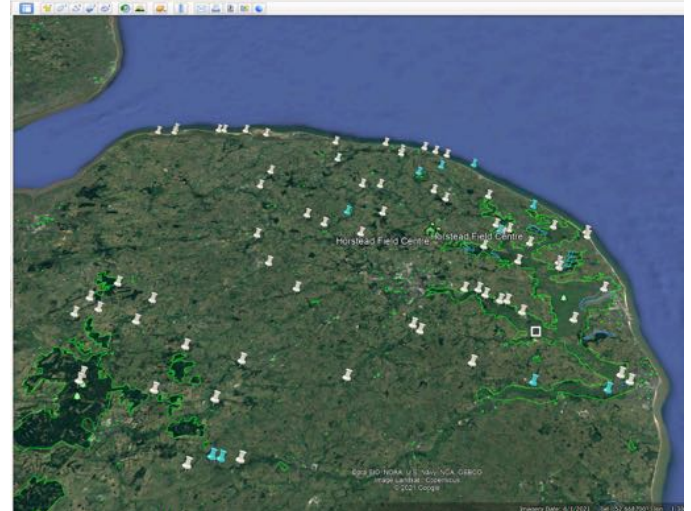
Reading Google Earth files

Assuming the writer has carried the above and sent the file to you, here's what to do with it:

Open the kmz file you were sent, either directly in Google Earth (as the dialogue suggests) or save it somewhere and open that.



The results pop up in the Temporary Places section of Google Earth as the following clip shows:



So instantly you have markers of all the Norfolk sites we visited in 1993.

Hover over one to get its name, click on any of them and the Grid reference plus Stuart Ball's site description from his 1993 report shows up too. In the search panel you can also select or deselect the sites according to each of the Vice Counties.

Just what Tony Irwin asked for as he began putting together his list for our forthcoming 2022 Field Week.

The final job is to make sure you save this temporary file in Google Earth. A few more details and suggestions from other Norfolk naturalists and we've a very useful guide for anyone joining us this year. Simply load the .kml file into your copy of Google Earth.

What could be simpler? Derek Lott used to joke with me about wanting a 1 button application - I reckon the above to be two clicks. Make your first click at <https://tinyurl.com/2p9ry4v5> Now what was the name of that chap in the bible who strewed seeds across the land?

Darwyn Sumner

Photo sharing

There was a brief flurry of messages amongst DF members looking into the range of photo-sharing sites during the summer. We've discussed several ideas over the years in the Bulletin, with a few pros and cons of Flickr discussed by Steve Falk and myself in the last one. So far it's the best available but there are situations where Dipterists Forum would like something more.

The ideal for us would be a site where registered members could all post a range of their images. Not just fly shots but habitats, laboratory pictures, scenes and group shots.

As Bulletin editor I do get to see this range of photographs, indeed I maintain quite a complex and copious library of images of Dipterists Forum activities across 20 years or so, including some contemporary stuff that didn't make it to print. This all thanks to the generosity of numerous members. I'd hesitate to call it a comprehensive archive, there is bound to be a large amount of very relevant Dipterists Forum imagery held by a number of people spanning many more years.

Examples would be the images I was sent for our Cornwall meeting, the Flickr batches sent me by Andrew Cunningham of various meetings or Alan Outen's fantastic mixed batch of Diptera. All I can do is print a selection. A website where many people could have posted their images from our expeditions would be very good to see.

We cannot use the current crop of social so called "sharing" sites though. They're all strictly single-person "vanity" sites where one person shows off their pictures to others. Like Flickr.

The only way to set up a multi-contributor sharing site is to erect a website dedicated to this purpose, this is because with several contributors you need to implement some sort of "permissions" controls or moderation. There are such "off the shelf" things that use the same methodology that one would use to set up a discussion forum (such as FSC's Biodiversity Forum at <https://forum.fscbiodiversity.uk/> or NBN's old style PunBB at <https://forums.nbn.org.uk/index.php>) Instead of being designed for structured chat, these are designed for a structured picture (+ pdf) library.

One such is Piwigo (<https://www.piwigo.org/>), they've a few examples on their site showing how users of their system have set up their own photo-sharing websites. I was particularly impressed by one of those examples (<https://tyt.lt/about.php>), a photographer from Lithuania, Tomas Tarvainis, who has used Piwigo's web structuring tools to organise his images using a taxonomic tree. Find 1430 Diptera pictures on his site, all beautifully arranged by Family and each geotagged so that you can show its position on a map, and display the coordinates. Just one contributor involved here though, for multi-contributor sites you'd have to check out Piwigo's other examples (no flies on those though.) **Piwigo is Open Source** and thus free.

Nice though it all looks, the whole concept of a Dipterist Forum Pictorial Archive would require a deal of volunteer effort, from web skills through management to moderation and the recruitment of contributors. Perhaps it's a somewhat overambitious idea at the moment. Maybe if there were an enterprising member who can comprehend Piwigo's instructions - do let us know.

In the meantime do keep sending images of flies and expeditions to me for consideration in the Bulletin, or just set up an album on Flickr and send me the link. And many thanks to those who have already sent me stuff.

Darwyn Sumner

Archiving

Following the sad death of Michael Ackland which we reported in the last Bulletin, one topic that emerged amongst all the messages of condolence and appreciation was that of "what happened to all his lifetime work?" We did hear that Michael had made good arrangements and that all his stuff had been safely archived or passed on to a museum. The same fate was also true of Phil Withers work, Jocelyn Claude worked closely with Phil and was able to finalise important articles after his death.

Alan Stubbs wrote about an incident concerning the fate of the collection of the late Peter Crow who collected widely in North Wales. Despite all Peter's efforts things didn't go exactly to plan and some store boxes of Diptera were rescued from a skip. You can read the full story in Bulletin 26 but the advice that Alan offered back in 1988 bears repeating:

1. Pass on your collection once you feel unable to curate it. Collections quickly deteriorate if neglected.
2. Ensure that all boxes, cupboards etc containing your collection, and notebooks, are clearly marked so that whoever clears your effects can easily recognise items relating to your collection. Make sure that an entomological friend close to the family knows the lay-out.
3. If you have a will, make sure that the fate of your collections/notebooks etc is specified. If you feel undecided, then name at least two entomologists you trust who have authority to advise the executor of the estate. The latter course is essential if you have no next of kin or if your only relatives could all go under the same bus.
4. If you have no will (a weak position), then ensure that your immediate relatives know what to do or who to turn to. (Note that relatives with no concern for entomology have in many instances taken precipitate action and thrown out even the collections and notebooks of leading specialists.)
5. The safest custodians of collections are those with foreseen continuity of entomological curators. The national museums and a number of provincial and county/local museums meet the criterion, plus a few University Museums (e.g. Oxford, Cambridge and Manchester). Be very cautious of museums without entomologists or with only temporary posts; university teaching collections are very prone to untimely fate.
6. Note that books/keys etc are important effects; traders are often criticised for giving a pittance and many books become beyond the reach of the next generation (financially or physically). It is best to try to make provision to pass these on (a fair sum can still be sought by relatives if required.)

Dave Goulson in his book **Silent Earth** states that "*scientists around the world have been searching for other long term data sets, data from forgotten studies languishing unpublished in notebooks or old Excel files*" which neatly connects the above pre-computer advice concerning collections and notebooks to the practises of modern entomologists in the digital era.

Digital assets

Many will have made arrangements for collections to end up in particular museums. But what about electronic assets?

Two pieces of work on this subject make good reading:

Explore "Principles of archiving" at the US Library of Congress at <https://tinyurl.com/798p3fn>

Enjoy Gabriela Redwine's highly readable pdf on "Personal Digital Archiving" at <https://tinyurl.com/y9zpgwob> though written in 2015 it remains very up-to-date.

Organising your stuff

There are further actions you can take to help look after your digital stuff. Even if your computer ends up in a skip, the **spare hard drives** that you label “Family photos”^{*} and bung in your shed or slip into your pocket or camera bag when you go on holiday should finish up being rescued by family. Plenty of space on one of the modern slim drives for a “Museum” folder containing an archive of important electronic notebooks and spreadsheets.

^{*}Queen Victoria was the first to shorten the word photograph to photo - so it's not slang.

And of course it's a straightforward job to either scan or photograph any hard copy field notebooks and collection notebooks you might have and pop those images into that folder too. Nice to know they are safe if your house burns down whilst you are on holiday, can't say the same for your collection though.

You'll find backup software helpful in keeping these up to date, examples include Acronis which will backup to both local drives and online (cloud), Amateur Photography also suggests Backblaze (<https://www.backblaze.com/>) if you feel confident about online storage.

Housekeeping

Finally, the computer equivalent to a Filofax, Microsoft's **OneNote** (well, except the diary). You've all got it as it came with your MS Office suite. I find it amazingly useful to organise all my stuff. Procedural guides and identification keys with links to relevant pdfs, all neatly organised by topic. Notes on where all the bits and pieces I need for articles and Bulletins are located, tracking all the tasks involved in collating record datasets for upload to NBN Atlas. Details of what software & utilities I have installed. Matt Harrow even uses it to make links to EasyMap maps of Sciomyzidae he's interested in.

For anyone doing a complicated bit of writing, a good Desk Top Publishing application can be excellent at compiling a variety of components, as with this Bulletin. Combine that with iMatch for tracking photographs and you've got a good substitute for an eidetic memory. If you're not blessed with one of those then OneNote may help you keep track of untidy jumbles of material when assembling some lengthy report or other.

It does sums too, quicker than opening Excel and entering a formula, just type your sum out and add an = sign.

It's an amazingly useful bit of kit that no-one talks about. If I were tasked with looking for legacy digital material on the PC of a deceased person then OneNote is the first place I'd look.

Darwyn Sumner

Advice from Museums

A major role of Museums is archival, they look after collections and other important materials. For example I deposited all the Manchester Entomological Society archives at Manchester. If you happen to make enquiries at your favoured museum (Natural History Museum, Liverpool, Manchester, Oxford, Edinburgh, Cardiff etc.) then do let the Bulletin editorial team have their stories. Perhaps we'll have something to tell in our next issue.

Darwyn Sumner

Review

Open Access

We've addressed the issue of Open Access in this Bulletin on past occasions. There was a substantial introduction in Bulletin #87 (p20) and the topic also featured in Ritchies book “Science Fictions” which we reviewed in Bulletin #91

The issue has cropped up again in a big way. Log on to ResearchGate now and you'll see a substantial announcement by their organisers that Wiley publishers have demanded they take down all articles posted there that are published by them.

Books

Ecology & Natural History

David M. Wilkinson (August 2021)

~£30 (paperback)

The latest in the New Naturalist Library. Wilkinson uses a number of sites scattered across the UK to illustrate all the aspects of Ecology he wants to discuss. Best place really as this is where much of the science started off. Beginning with Darwin's “entangled bank” the author takes us through a series of significant sites ...

Darwyn Sumner

De vliegenfamilies met drie voetkussentjes The fly families with three foot pads



At a time when more and more guides are (also) published digitally, the field guides of the Juegdbond publishers remain a breath of fresh air on the market. This time again with a guide that deals with species that are not easily found in another Dutch guide. In this guide eight fly families have been described that have three foot pads as a common characteristic. Arms flies, horseflies and snipe flies are the largest families. The guide covers the more than 150 species that occur in northwest

Europe. They show a great diversity in shapes, colors and way of life.

The guide consists of no less than 256 pages and weighs 710 grams. In terms of size, this fits neatly in the Cabinet next to the other field guides of the Youth Union Publisher, 17 x 24 cm. The guide consists of high-quality colour photos and line drawings.

Flies have claws and cushions at the tips of their Tarses (their feet), which allow them to stick to the substrate. Most flies have two cushions per tars, but eight families have three cushions. This guide is about these families. These are mostly old fly families with very diverse, often colourful species; from the large horse carrion to the unknown Spider flies. This guide deals successively with the Spider flies, Agar flies, scented flies, snipe flies, arm flies, horseflies, Bast flies and wood flies. The guide offers an illustrated identification key for each family and extensive species descriptions with detailed photographs.

Every fly that has three cushions on the tarsi, should be found in this guide. In total, all 157 species found in northwest Europe are treated. The guide is complete for the Netherlands, Belgium, Luxembourg, Denmark and the British Isles. Furthermore, the guide covers most of Germany and the north

of France, the part north of the Paris – Nuremberg line. Strict mountain species, which only occur above 800 m, are excluded.

The lifestyles of the larvae vary widely, from aquatic and semi-aquatic to terrestrial, wood-dwelling (wood flies) and parasitic (Spider flies). Many species have very specific requirements for their habitat. Especially in the arms flies and horseflies, many species have recently become rarer and disappeared from our cultural landscape. It is the wish of the authors that this accessible Field Guide helps to (further) monitor the trends of these fly families

Species discussion follows a fixed pattern. That will benefit every field guide. Per species you can read about: length, recognition, similar species, habitat, behaviour, occurrence, status and trend, flight time, occurrence by country and flight time. Illustrations are often in color and that is necessary because these fly families are often flies with the most beautiful colors. A guide you should not miss if you want to know more about three-foot fly families. For only 14,00 euro you can order this guide at Youth Union Publishing.

Translation from Waarneming.nl Newsletter

I cannot find a UK reseller for this, you'll have to visit <https://jeugdbondsuitgeverij.nl/product/de-vliegenfamilies-met-drievoetkussentjes/> and cope with ordering in Dutch.

Darwyn Sumner

Reports

La Planète Revisitée en Corse

Many of us will have been involved in working on the material arising from this expedition. Mark Pollett was responsible for getting us all involved and one way or another we've been receiving messages about the fate of all the flies that were caught.

We now have a report:



Ichter, J., Canut, M., & Olivier, G. (2021). Bilan scientifique des expéditions terrestres 2020 Agriate, Capicorsu et Saint-Florent Février 2021. In *La Planète Revisitée en Corse*. <https://doi.org/10.13140/RG.2.2.21003.62246>

You can download it at <https://tinyurl.com/2terkahr> it's written in French of course but well constructed so is easy to follow if you don't speak that.

The English summary explains it all:

The *Planet Reviewed in Corsica* is an expedition by the MNHN in partnership with the Collectivité de Corse and the French Office for Biodiversity. Between 2019 and 2022, several teams of scientists are undertaking an inventory of terrestrial and marine diversity of Corsica. The objective is to establish a reference state of a series of sites of high biological value and to modernize the collections of the French national Museum of natural history.

This report provides a quick overview of terrestrial expeditions from three emblematic sectors of North

Corsica: Agriate, Saint-Florent and southern Capicorsu. From March to October 2020, 26 participants took part of the inventory of 10 sites.

The first results show 1920 species inventoried with many rare species and several remarkable discoveries including 7 species new to science and around 30 species new to Corsica. The expedition is a significant contribution to the national inventory of natural heritage with 9,533 data entered in the national biodiversity database. Finally, 2,400 individuals were sequenced during the Barcoding campaign which will not only contribute to taxonomic determinations and revisions but also enrich the Barcode of Life information system.

Well illustrated throughout its 70 pages with fascinating habitats and a wide range of taxa, this amounts to a Natural History book of Corsica - or at least all the best bits.

Darwyn Sumner

Countryside Access

"Criminalising trespass would create a massive chilling effect on visits to the countryside" (Shrubsole.)



Ramblers Association

The Ramblers Association have a good historical summary article on **Right to Roam**, all the way up to the Countryside and Rights of Way Act (CroW) Act in 2000. Read it at <https://www.ramblers.org.uk/get-involved/campaign-with-us/past-campaigns/right-to-roam-crow.aspx>

National Trust & Elitist Access

Their director of operations, Andy Beer was interviewed on BBC Radio 4's "You and yours" shortly after (23rd September) our last report on restricted access in the last Bulletin. It emerges that there have been a lot of complaints by members of the public regarding restricted access, one of them terming it "elitist access". Dunham & Lyme Parks are out of bounds now unless, as he proposed, one pays £6 per month. He listed a few such grounds but failed to include Felbrigg, claiming that 95% of NT sites are unrestricted. The access status of such sites are still not marked on their online maps though, so walkers have no way of knowing. Tim McNulty's report in the Express refers to them as "parking charges" but in fact as I experienced, they are actually "walking charges". NT is currently financially supported by government grants as they were when they received UK taxpayer money when these properties were originally acquired. As a UKBAP habitat, expect the recording from Parklands to decline now.

Don't criminalise trespass!

It's also worth paying a visit to "Who Owns England" author Guy Shrubsole's website at <https://whoownsengland.org/> to read about proposed discriminating UK legislation and sign that petition.

Darwyn Sumner

Membership Matters

Firstly, may I apologise to some of our EU members who have received their journals late this year. We have had a number of issues where post has been returned to us or has just disappeared. I hope things will settle down next year and we can resume the good service we try to offer.

By mid-December 2021 we had 469 paid-up members and 401 subscribing to the Dipterists Digest. We have received new subscriptions from 76 people this year continuing the increased rate of new subscribers we saw last year. Unfortunately this has not been supported by renewals of subscriptions so we are down on our membership numbers at the end of 2020.

It does help us greatly with planning print runs if members can pay their subscriptions in the first three months of the year. Subscriptions fall due on 1st January each year. Late payments after March do cause extra work for us in distributing back numbers. I am happy to answer any email queries about subscriptions if you are not sure you have paid.

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 2022 are unchanged:

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

UK

Dipterists Forum: £8 per annum. This includes the Bulletin of the Dipterists Forum.

Dipterists Digest: £12 per annum.

Both of above: £20 per annum

Overseas

Dipterists Forum only (includes the Bulletin): £14 pa

Dipterists Forum and Dipterist Digest: £25 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.

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:

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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:

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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.

PayPal payments can be made to:

dipteristsforum@outlook.com

or through our website:

www.dipterists.org.uk

Please e-mail me to let me know when you pay by PayPal unless you do it via our website, which automatically emails me.

John Showers

Flesh Fly - Sarcophaga Species © Ed Phillips



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Contact 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 his 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.

Contributors

Bulletin

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

email **both** [Darwyn Sumner](#) & [Judy Webb](#)

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

Dipterists Digest

Contact Peter Chandler

Recording Schemes

As for flies in particular, bring those to the attention of the Recording Schemes. Contact details for all 28 of them 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.

Meetings

Regional Groups

Northants Diptera Group

The number of regularly attending members has fallen over the past couple of years so we are hoping to encourage more attendees by extending our scope to include all invertebrates. We certainly need to encourage younger people to become involved in the study and recording of invertebrates or we will gradually lose our ability to track the rapid changes to our fauna that are happening. Apart from climate change, Northants is seeing a huge increase in house building, distribution warehouse parks, road and rail building and mineral extraction. HS2 and the Oxford-Cambridge Crescent developments will no doubt add to this.

Since the last report we have had several more meetings and individual recording. The highlights include Kev Rowley's find of *Callicera aurata* in Castle Ashby Gardens and Bob Gill's find of a male and female *Nemotelus uliginosus* at Yardley Chase. The soldierflies were found in an area of swampy ground close to a small flooded quarry pit. Although normally associated with coastal saltmarsh, this species has been recorded in the floodplains of both the River Nene and River Great Ouse. Yardley Chase lies along the ridge separating these important catchment areas. The area around this pond was cleared of scrub over the last couple of winters and is proving quite remarkable with *Odontomyia ornata* and the crane fly *Erioconopa diuturna* also being recorded there.



Callicera aurata [Kev Rowley]



Nemotelus uliginosus [Bob Gill]

John Showers

Meetings

Devon Fly Group

Another year flies by! Thankfully, Covid was not restrictive enough to curtail our activities this year. In fact, we had quite a few extra field meetings on top of the usual monthly fixture to make up for last year. We started off with our usual indoor meeting which was held online via Zoom as opposed to Woodah Farm. Mike Ashworth kicked things off with some photographs of his star flies from last year. Martin Drake followed with a summary of *Chrysopilus* swarms in his garden of which the longer version will appear in the Digest soon. Rob Wolton discussed the impact of cattle on flies of a wet woodland which included a demonstration of emergence trapping ingeniously using small pop-up tents for children. Richard Lane gave an interesting overview of phoretic mites on the cranefly, *Ula sylvatica*. The day was rounded off with the annual DFG Fly Bingo contest compered by Andrew Cunningham and won by Nicola Bacciu with Mike Ashworth coming in second.



Devon Fly Group (Prawle Point)

The extreme southerly tip of Devon was the venue for our first field meeting of the year, in April. It was a glorious sunny day, with the gorse and bluebells in full flower on the dramatic coastal cliffs and slopes. It was also blowing a stiff gale, so the headlands were impossible to work. Fortunately, a couple of small streams and scrub-lined paths gave us a chance to net and sweep as well as observe mating swarms of St Mark's fly. A rock face with water flushing its surface yielded *Dicranomyia goritiensis* (Spotted-vein Crane), which is something of a Devon and Cornwall speciality, together with *Dolichopus signifier*, a scarce coastal species with a darkened wing tip. The wonderfully named psychodid *Pericoma pseudoexquisita* turned up at several places.



Devon Fly Group, Stover CP

We visited Stover Country Park near Bovey Tracey in May. It was hard work finding good flies due to the unusual early weather of 2021 but altogether, we recorded 98 species of 27 different families. Before we discuss the dipteran highlights, it is worth pointing out that we had a fantastic turn out of eleven members on the day! The meeting started off under ideal conditions with sunshine and our coats tucked away in our bags before rain moved in during our late lunchtime gathering after which we decided to call it a day. The star species of the day was without a doubt, the leaf miner *Agromyza johannae* (Agromyzidae) found on the leaf tips of *Ulex europaeus* (Common Gorse). It was the first record for Devon according to the Agromyzidae Recording Scheme! Other rewards for our endeavours were *Dasydorylas horridus* (Pipunculidae), *Metopia argyrocephala* (Sarcophagidae), *Sphaerophoria taeniata* (Syrphidae), *Tephritis matricariae* (Tephritidae), *Symplecta hybrida* (Tipulidae), *Ramonda spathulata* (Tachinidae) and *Psacadina verbekei* (Sciomyzidae).



Stover Country Park

An extra midweek meeting was arranged for late May at Burrator Reservoir on Dartmoor. It was another well attended field meeting under clement weather conditions where we produced 278 diptera records of 28 families and 140 species. Habitats that we investigated included reservoir shore, waterside deciduous woodland, conifer plantation, upland river, seepages, sphagnum beds and cattle dung! When reviewing the species list for the day, it is not easy whittling it down to a select few worthy of a mention but the star flies of the day were *Myopa pellucida* (Conopidae) swept from flowering Sycamore trees along with *Myopa testacea*. The pick of the hoverflies was undoubtedly *Criorhina floccosa* feeding on the aforementioned Sycamore flowers. No less than six species of *Rhamphomyia* were caught collectively including *Rhamphomyia albigennis*,

R. crassirostris, *R. hybotina*, *R. stigmosa*, *R. tibiella* and *R. umbripennis*. Muscidae were well represented today by *Coenosia pudorosa* (a Devon Special Species), *C. campestris*, *Gymnodia humilis*, *Hebecnema vespertina*, *Lophosceles mutatus*, *Macrorchis meditata*, *Phaonia villana* and *Polietes domitor*. Sampling of cattle dung with a compact modified cordless vacuum cleaner produced thirteen species of Sphaeroceridae of which the highlight was *Trachypella bovilla* which does not exist on our database. A couple of larvae were collected from the feathers of a decaying Heron corpse and one of these quickly pupated and emerged as *Hybomitra distinguenda* (Tabanidae).

Two field meetings were arranged for June with the first being an add-on midweek event at **Woodah Farm**. The Devon Wildlife Trust runs this place as a farm that is sympathetic to nature. They have started a programme of enclosing some areas of the farm from cattle and sheep. Our visit produced some records they could use as a baseline for this venture. Provisionally, between four of us, we accumulated 369 diptera records of 39 families and 160 species. Woodah Farm is predominantly pasture with no arable farming evident and is based around a large hill with a wonderful sloping woodland on one side (**Stanniclift Copse**). The farmland itself includes some spring fed strips of mixed woodland which we explored Sallow blossom had fallen in the first wet carr strip we looked at and the ground was carpeted in this white fluff which resembled a surreal winter scene. Of the flies we recorded there was a broad range of common species with no exceptionally rare stuff but *Hercostomus parvilamellatus* (Dolichopodidae) is not something we come across a lot. There were twenty-nine species of cranefly, the notables were *Lipsothrix remota* and *Thaumastoptera calceata*. For a few of us we took home the pleasant memory of stumbling across what we presume were Fallow Deer fawns hiding in the long grass at a few different parts of the farm.

The second and 'official' June field meeting started at **Molland Common** on the Devon part of Exmoor before moving over to nearby **Whiterocks Down**. From our meeting point at Anstey Gate we dropped down into a moorland valley where a small watercourse runs from **Soakey Moor** (acid mire with floating bogs) and into **Dane's Brook**. A few specimens of *Microdon* were swept and despite being unidentifiable as adults, they were still nice to find. Using a modified hand vacuum cleaner around mainly dry pony dung produced *Crossopalpus humilis* & *C. minimus* along with just six common species of sphaeroceridae including *Minilimosina gemella*. After a pleasant lunch meeting back at **Anstey Gate** we all moved over to **Whiterocks Down**. After the difficulty in finding a decent number of flies at **Molland Common**, we were all amazed by this superb location. The open moor ran down to the road we had parked along before changing into a north facing steep slope with a stream, fenny mire, mature mixed woodland, neutral grazing pasture with a rich assortment of wildflowers before reaching a decent stream (**Dane's Brook**) at the bottom containing sphagnum and lots of dead wood. The most notable species here was *Bombylius canescens*, of which there were lots present at flowers as well as attending nest holes of solitary bees. We still haven't completed our identifications from here but other highlights were the 'Nationally Scarce' *Tabanus maculicornis* (Tabanidae), *Sericomyia lappona* (Syrphidae) and the distinctive robberfly, *Leptarthrus brevirostris*. The group certainly intend to return here soon at a different part of the year.

There was just one field meeting in July and we were back on Dartmoor, this time at **Fernworthy Reservoir**. We met up at **Sandeman Bridge** at the south western corner which is dominated by conifer plantations. These do not encroach too close to the reservoir though and we covered a range of habitats

such as small pockets of deciduous woodland, wildflower grassland, waterside mixed carr, rhôs pasture, streams and sphagnum mire. We were in the middle of the heatwave so it was extremely hot and uncomfortable. In the afternoon, some of us retreated to the shade offered by the trees. There is no doubt about the highlight of the day which one even proposed as the fly of the year. This was a spectacular female *Atylotus fulvus* also known as the Golden Horsefly.



Atylotus fulvus

Currently, we have come to 174 species of 42 families and these included *Diogma glabrata* (Cylindrotomidae), *Rhipidia uniseriata* (Limoniidae), *Xylota jakutorum* (Syrphidae), *Leptarthrus brevirostris* (Asilidae), *Pseudocoenosia solitaria* (Muscidae) and *Callomyia speciosa* (Platypezidae). Richard Lane specialises in the tinier aquatic diptera in both adult and larval forms. His expertise today produced some excellent lesser recorded stuff such as *Simulium cryophilum* (Simuliidae), four species of Ceratopogonidae (*Palpomyia distincta*, *Atrichopogon winnertzi*, *Forcipomyia glauca* & *Stilobezzia gracilis*) and seven species of psychodidae (*Psychoda cinerea*, *P. phalaenoides*, *P. gemina*, *Trichomyia urbica*, *Boreoclytocyclus ocellaris*, *Pericoma trivialis* & *Telmatoscopus ambiguous*). There were a few stands of flowering Common Valerian present and we found the leaf miner, *Liriomyza valerianae* which was recorded new for Devon only a few years ago.



Bovey Heathfield

Meetings

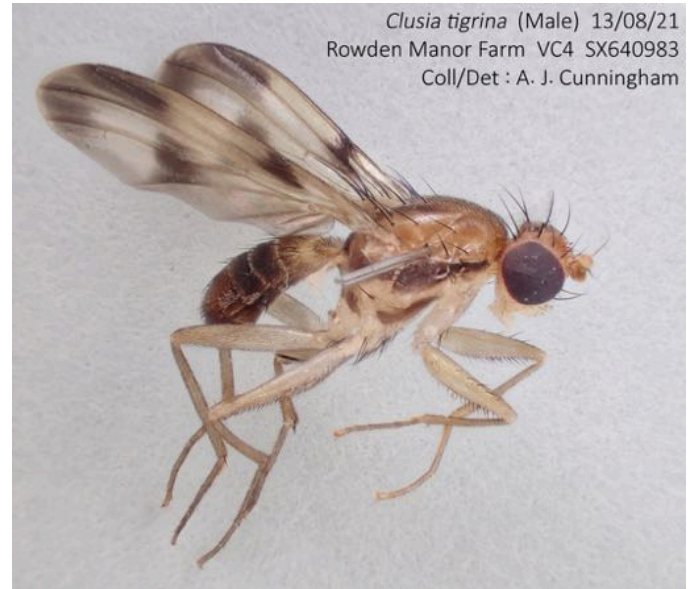
August was special as we held three field meetings and the first involved two sites, **Bovey Heathfield** in the morning then **Emsworthy Mire** in the afternoon early in the month while the heatwave was still running. The open heathland at Bovey Heath was too exposed to the sunshine which encouraged us to seek our flies in the cooler and wetter habitats shade. The reserve is split into two sections by a road. The northern half was the most interesting with lush ponds, wet mossy patches, shaded woodland and a small stream. The southern half was far too open but the boundary was predominantly lined with birch and offered some reward. Three species stood out from the morning and they were two dolichopids, *Chrysotus pulchellus*, *Dolichopus virgultorum* and the distinctive tachinid, *Cylindromyia interrupta*. During lunch we agreed we had covered the whole site and decided to move over to nearby **Emsworthy Mire** on Dartmoor. It was still very hot there but the edge was appreciably taken off by a slight breeze. The main habitats we explored were moorland mire, small floating bogs, wet carr, a narrow stream and a man-made pond. One of us had the pleasure of a surprise knee high slip into one of these bogs! There is no argument at all amongst us as to the finest fly found on the day. Despite it being late in the season, a female *Eristalis cryptarum* (Bog Hoverfly) was swept from the grassy edge of the aforementioned pond. Being a Critically Endangered species and more so a female capable of producing offspring, this would normally have been released but it was fatally damaged during sweep netting. With kind permission from the reserve manager, the specimen was sent on to the Darwin Tree of Life project at the Natural History Museum for DNA barcoding. Other flies of interest from our short visit here were *Dolichopus phaeopus*, *Syntormon monile*, *Tachytrechus consobrinus* (Dolichopodidae), *Parhelophilus consimilis* (Syrphidae) and *Tetanocera punctifrons* (Sciomyzidae).



Martin & Rob, Emsworthy

Our second meeting of August was to an organic farm near **Sampford Courtenay** in Mid-Devon managed by Sam and Gemma of The Rowden Wildlife Project. The farm has a nice mosaic of habitat pockets that complement each other such as culm grassland, organic pasture, herbal leys, arable fields, wood pasture, mixed woodland, tree lined farm tracks, hedgerows, ponds, streams and a shallow upland river. On the day, we just enjoyed ourselves sweep netting flies from as much of the farm as we could and didn't have any expectations or impressions as to what we had caught. It was therefore a surprise that this could be the most productive field meeting of the year despite just four of us turning up! We have so far produced 524 records of 41 families and an impressive 227 species! This clearly demonstrates the value of moving away from industrial profit maximising farming that is unsympathetic to nature. There were not many rare species but a healthy assortment of species

and families. The highlights included the beautiful *Clusia tigrina* (Clusiidae), *Rhaphium fascipes*, *Diaphorus oculatus*, *Medetera pallipes*, *Syntormon aulicum* (Dolichopodidae), *Homoneura notata*, *Pseudolyciella pallidiventris* (Lauxaniidae) and *Cinochira atra* (Tachinidae). We will probably want to return to this wonderful location earlier in the season.



Clusia tigrina

For our designated meeting we were back at one of our favourite locations, the Axmouth to **Lyme Regis Undercliffs** including **Goat Island** and **Ware Cliffs**.



Lyme Regis Undercliffs (a very dangerous site - Ed.)

In this tiny coastal strip of East Devon are the classic landslips of a calcareous nature supporting a rich assemblage of species that we don't come across often in the rest of Devon. It was not easy with the weather remaining very hot. Furthermore, Ware Cliffs was very different from our last visit, drier and quite overgrown. It needs another slippage with more frequent rainfall. We welcomed a new member on the day, Dave Brice, a specialist in sphaeroceridae who had just moved from Norfolk to Devon. The result of our endeavours were 145 species of 36 families. There were no really extraordinary species found but the gems were *Stomorphina lunata* (Rhiniidae), *Thecophora atra* (Conopidae), *Dioxya bidentis*, *Tephritis leontodontis* (Tephritidae), *Syntormon fuscipes*, *Medetera impigra*, *Xanthochlorus ornatus* (Dolichopodidae), *Coenosia atra* (Muscidae) and *Tetanocera punctifrons* (Sciomyzidae). Ware

Cliffs was excellent for soldierflies in previous visits but today the only notable species was the tiny *Oxycera pygmaea*. Richard kindly invited us all back to his pleasant garden nearby in Kilmington for tea, coffee, biscuits and banter.



Water Cleave (River Bovey)

For our September meeting we visited the **Bovey Valley** woodlands at **Water Cleave** near Bovey Tracey. This is a multi-branched stretch of steep sided deciduous woodland valley along the River Bovey on the edge of Dartmoor below the well-known **Yarner Woods**. These riverine woodlands are managed by Natural England and the man in charge, Albert Knott, kindly joined us to give an overview of the site as well as start us off in the right direction. A stony path flanked by hedges in line with a spring took us down through predominantly oak woodland to a damp riverine wooded valley bottom with some sphagnum bogs. The river itself was a typical picturesque upland river with large mossy covered boulders scattered along its length and overhanging trees. Unsurprisingly given the amount of damp shaded understorey, the river and the boggy areas, craneflies and fungus gnats dominated the catch. Three species of *Rhypholophus* were present, *R. varius*, *R. bifurcatus* and *R. haemorrhoidalis*. The distinctive *Pedicia rivosa* was a delightful cranefly to see. Normally one catches *Lonchoptera lutea* everywhere but here, *L. tristis* dominated. After lunch by an ancient clapper bridge over the river, some of us moved on to Yarner Wood for a couple of hours whilst the rest of us carried on exploring the site. *Syntormon zelleri* (Dolichopodidae) was the best record from Yarner Wood.

Our final field meeting of the year was at **Knapp Copse** on the Honiton to Seaton road in East Devon. This small reserve is managed by East Devon council which contains various habitats within a very steep sided valley including a stream, mature woodland, species-rich grassland, springline mire and a network of hedgerows. It was a lot milder than our October meetings usually are which helped us record 174 species of 36 families. Three approaches were responsible for the high number of species. Standard sweep netting scored *Campsicnemus pusillus* (Dolichopodidae), *Paradelphomyia fuscula*, *P. senilis*, *P. nielsenii* (Limoniidae) and *Limnophora scrupulosa* (Muscidae). Cattle were present which enabled vacuum sampling of the plentiful fresh dung for seventeen species of sphaeroceridae and *Spelobia cambrica* stands out in

terms of rarity. The third approach was searching for leaf and stem miners and it was a very productive site with no less than nineteen Diptera species. The less frequently recorded miners were *Amauromyza morionella* (leaves of Woundwort), *Chromatomyia ramosa* (basal rosettes of Teasel) and *Phytomyza brunnipes* (leaves of Sanicle). Since this was our last field meeting of the year, we hung around the car park at the end chatting away longer than we typically do before saying goodbyes and heading our separate ways home.



Devon Fly Group (Kilmington)

Anyone is welcome to become a member of the Devon Fly Group through the simple step of joining our newsgroup (email Andrew Cunningham via ajc321A@hotmail.com). This will alert you to field meetings we organize as well as items of interest. As we all know, many people come on holiday to Devon so, if you do then you are most welcome to join us on a field meeting. We have already arranged our usual indoor meeting for next year at Woodah Farm on Saturday 5th March 2022 where several members bring exhibits, presentations and photographs. There will also be the annual DFG Fly Bingo with prizes up for grabs!

Andrew Cunningham

Reports

Annual Meeting 2021

Webinar 20th November 2021

List of committee members elected

Officers

Chair	Erica McAlister (proposed)
Vice Chair	Robert Wolton (ex Chair)
Secretary	Jane Hewitt
Treasurer	Phil Brighton
Membership Secretary	John Showers
Indoor Meetings Secretary	Zoe Adams
Bulletin Editor	Darwyn Sumner
Assistant Bulletin Editor	Judy Webb
Digest Editor	Peter Chandler
Publicity Officer	Erica McAlister
Website Manager	Martin Harvey
Conservation Officer	Mark Welch
Training Coordinator	Marc Taylor

Ordinary Members for re-election

Tony Irwin John Mousley (new committee member)

Ordinary members already elected (in 2021)

Victoria Burton, Matt Harrow, Chris Raper, Malcolm Smart

Meetings

Forthcoming

Spring Workshop 2022

Friday 11th to Sunday 13th February 2022

Identification workshop on British Craneflies

Summer Field Meeting 2022

East Anglia

2nd July to 9th July 2022 (Saturday to Saturday)

We are now taking bookings for our summer field meeting in East Anglia. If any further Covid restrictions are introduced that will affect this meeting, information will be posted on the DF website. The meeting will be based at the University of East Anglia campus in Norwich. We plan to visit a range of locations (including many wetland sites) in Norfolk and North Suffolk. The cost of attending the meeting will be £287. Please note that this is for B&B only. Our package does not include dinner so attendees will have to make their own arrangements - there are several restaurants/bars etc. on and near the campus.

What's provided?

- A single en-suite room.
- Use of a shared kitchen.
- Full breakfast.
- Access to a workroom for specimen pinning, meetings etc. This will be located in a teaching laboratory at the university.

We have a small number of half-cost bursaries for this meeting available for Dipterists Forum members. For details on how to apply, see <https://www.dipterists.org.uk/bursaries>

We have block-booked 25 rooms. To book a place on the meeting a deposit of £50 is required, with the remaining amount payable by 1st June 2022.

The preferred method for payment of your deposit is by bank transfer using the following details:

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

Please add your name to the payment reference AND send an email (including any dietary requirements) to both the Treasurer (Phil Brighton) and the Secretary (Jane Hewitt), who will be coordinating the administrative arrangements.

For those who would prefer to pay by cheque, this should be sent to the Treasurer. Again, please email the Secretary to let her know you are planning to attend.

Jane Hewitt, Secretary

See page 21 for a detailed site list (*Ed.*)

The following notice has been received from Gabriel Nève on behalf of the local organizing committee for the Syrphidae Symposium:



11th International Symposium on Syrphidae

Barcelonnette, France

5-10 September 2022

The Mediterranean Institute for Biodiversity and Ecology (IMBE, Marseille) is happy to invite you to the 11th International Symposium on Syrphidae. It will take place in Barcelonnette (Alpes de Haute Provence, France) from Monday 5th to Saturday 10th September 2022. <https://syrphidae11.sciencesconf.org/>

The schedule is as follows :

Monday 5 September 2022: **Welcoming** of delegates at Marseille or directly in Barcelonnette. Transport by bus from Marseille (departure 15:30) to Barcelonnette.

Tuesday 6 September 2022: **Start** of the Symposium

Thursday 8 September 2022: **Closure** of the Symposium

Friday 9 September 2022: **Excursion to the Mercantour National Park or the Ubaye valley.**

Saturday 10 September 2022: **Dispersal** of delegates. Bus from Barcelonnette (departure 09:00) to Marseille

The talks and poster presentations will be organised in the following themes :

- 1) Taxonomy and systematic
- 2) Phylogeny and DNA barcoding
- 3) Conservation and monitoring
- 4) Faunistics and biogeography
- 5) Functional and applied ecology
- 6) Open topics on Syrphidae

A separate room equipped with binocular microscopes will also be available for workshops or expert advice. The Symposium web site <https://syrphidae11.sciencesconf.org/> will soon be open for formal registration and submission of abstracts. In the meantime, you can pre-register at : <https://syrphidae11.sciencesconf.org/registration>. If you have any question or suggestion regarding the Symposium, feel free to contact us at syrphidae11@sciencesconf.org

David Iliff



Expeditions - Summer Field Weeks 2006 to 2013



2007 Aberystwyth



2008 Cairngorms



2013 Lancaster



2009 Swansea



2012 Speyside



2006 Sussex



2011 Exeter



2010 Pembroke

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	

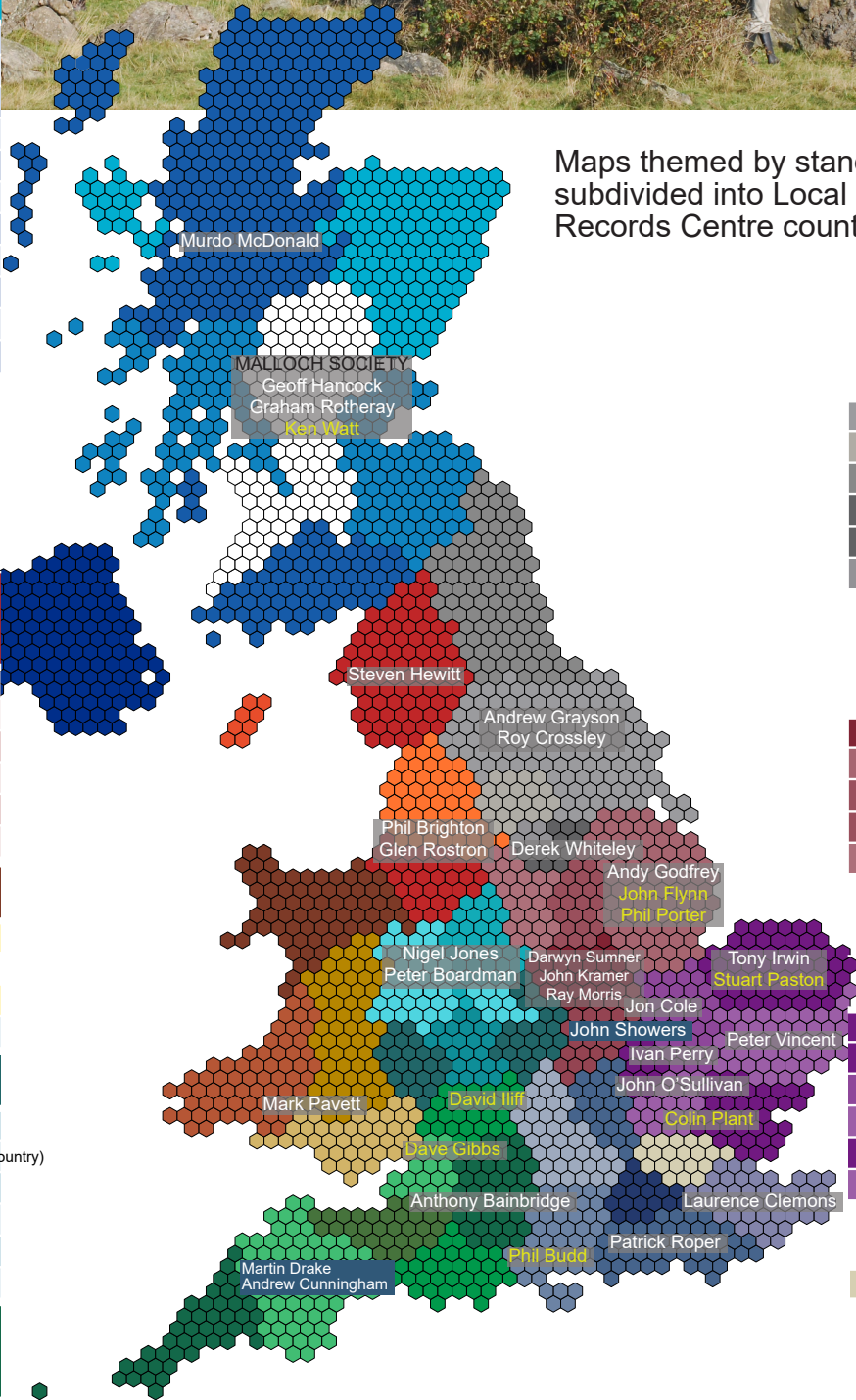
Ireland	
CEDAR (Ulster Museum)	

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

Micropezids & Tanypezids Stilt & Stalk Fly Recording Scheme

Newsletter 4

Spring 2022

Recording Scheme - News

Open Data updates: UK

The UK database on [NBN Atlas](#) has been updated in recent months. In August the number of Scheme records stood at 4073; it rose to 5386 in September. Spreadsheets submitted by scheme contributors since 2016 were processed and 526 records added. In June 2021 we gained access to the scans of Steve Falk's field note and survey folders (to 2014) and using the methods detailed at <https://tinyurl.com/7kfh5u5d> I was able to add a further 777.

Scheme Publications

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

The following preprints are now accessible ...

Sumner, D. P. (2018). Vernacular names: European Micropezids & Tanypezids (Diptera, Neriodea & Diopsoidea). Preprint, A 3(3 V2), 1–14. <https://doi.org/DOI:10.13140/RG.2.2.10298.31688>

Sumner, D. P. (2018). Observations on *Phytomyza orobanchia* Kaltenbach, 1864 (Diptera, Agromyzidae) and *Chyliza extenuata* Rossi, 1790 (Diptera, Psilidae), both new to Wales, on Ivy Broomrape (*Orobanche hederaceae*). Preprint, 1(2:V1), 7. <https://doi.org/DOI:10.13140/RG.2.2.31761.35686>

Sumner, D. P. (2018). Biogeography, population dynamics and status of *Micropeza lateralis* Meigen, 1826 (Diptera, Micropezidae) in Europe. Preprint, 1(3 V1). <https://doi.org/DOI:10.13140/RG.2.2.15823.00160>

Sumner, D. P. (2018). European Atlas: Micropezids & Tanypezids (Diptera, Neriodea & Diopsoidea). Preprint, A 1(1 V5), 1–94. <https://doi.org/DOI:10.13140/RG.2.2.34834.99529>

The above ResearchGate preprints have been read widely by researchers (over 500 times) and even cited once or twice.

Atlas, phenology & revised status

The UK Atlas has now been updated:

Sumner D.P. (2021). Biogeography, Status & Phenology of UK Micropezids & Tanypezids (Diptera, Neriodea & Diopsoidea). Dipterists Forum Report: Stilt & Stalk Fly Recording Scheme, A(11 V1), 48.

<https://tinyurl.com/ve2f2wrx>

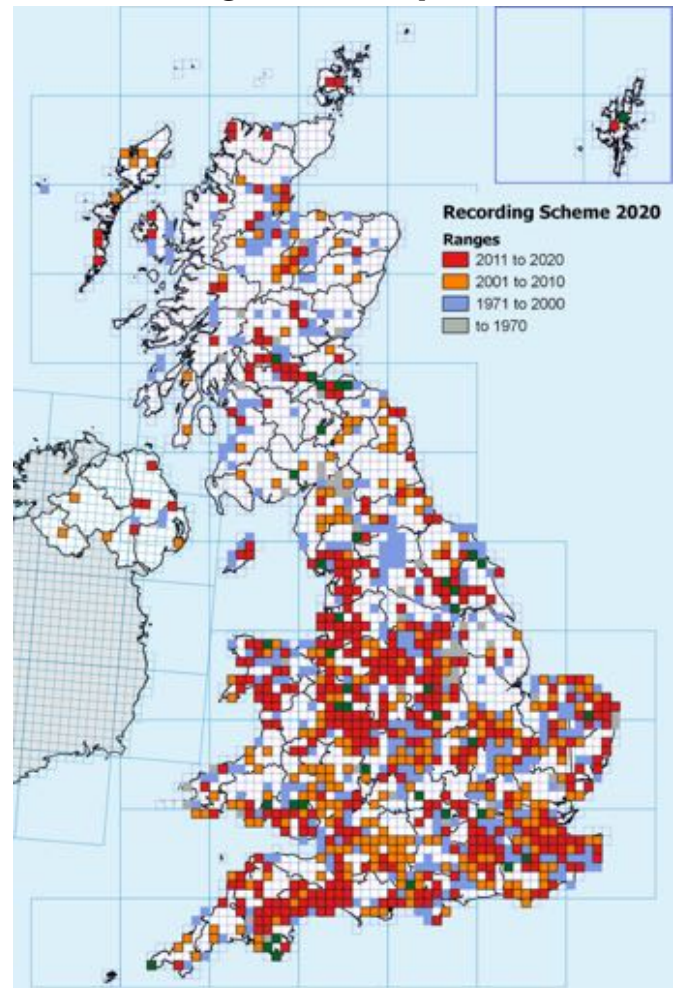
As regards UK status this qualifies as an assessment rather than a full IUCN revision. The analyses revise the status of a number of species, removing *Micropeza lateralis* & *Megamerina dolium* from the threat lists and downgrading the threat status of *Rainieria calceata* whilst indicating that the Scottish specialities *Cnodacophora stylifera* and *Strongylophthalmyia ustulata* are under-recorded.

Current UK distribution maps are to be found on the Scratchpad site.



European Harlequin (*Tanypeza longimana*) photo ©Barry Webb (on iRecord)

UK Recording Scheme Open Data 2020



Status of records to 2020. All are publicly accessible through NBN Atlas. Dark green 10km squares are 2021 records (60), mainly through iRecord & iNaturalist. The colour patterns are indicative of changes in recorder effort over the decades, for example the blue and grey regions haven't been investigated (successfully) since last century.

Contact the Recording Scheme if you've any more or simply add them to iRecord.



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

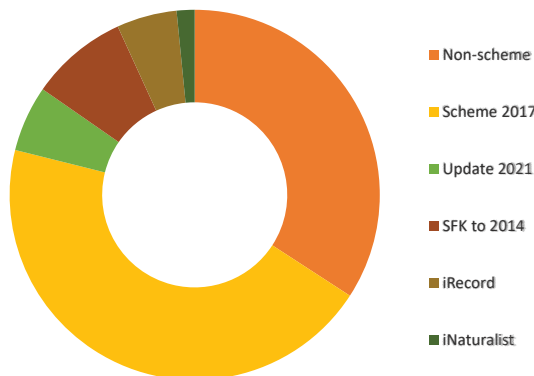
Online version (with hyperlinks) on [Newsletters](#) page at <http://micropezids.myspecies.info/>

Darwyn Sumner

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

Recording: UK

Records breakdown



The above shows the source of the records used in this scheme's analyses (distribution maps, phenology etc.) The first four categories were present on [NBN Atlas](#) by September 2021. Non-scheme records (3119) are historic datasets added from various sources together with records which have not necessarily passed through this scheme's verification procedures. The scheme's records (4083) were updated in 2021 from records submitted (526) plus a digitisation project (777) as detailed on [NBN Atlas](#). Records from iRecord (480) and iNaturalist (143), all verified by this scheme's organiser, were added later. Despite careful verification, a good deal of editing and removal of invalid data was required in order to achieve satisfactory analyses.

Verification

The different means adopted by recorders in submitting records to this Recording Scheme each have their own benefits and provide different levels of networking.

Traditional: When this Recording Scheme was set up in 1999 it was supported by Dipterists Forum members who communicated by email and spreadsheet data. Most of the initial contributors still use this method and it forms the basis of the scheme's informal network.

iRecord: The shift in recorder's preferences becomes evident when examining the records posted to this online system. Some using this method are the traditional supporters, others casual or those who record across multiple taxa. Over the 2017 to 2020 period some 480 records were posted here, amounting to $\frac{1}{3}$ rd of the UK total during that period. The verification system is terrific, in particular the "plausible" option which I find much better than the yes/no consensus system in iNaturalist. The networking potential is good, recorders can be contacted if further enquiries are needed and some do respond to the verifier's comments.

iNaturalist: UK records are rising and the networking potential here is considerable. In particular, since it was set up as a European project, there has been much communication with contributors from abroad. The automated systems send records directly to GBIF and a mechanism by which UK records are placed on NBN Atlas is currently operational through iRecord.

UK Status revision

The updated dataset above was used to recalculate the status of the UK species. Full details were published (together with distribution maps and phenology) in November and are available as a preprint on ResearchGate at <https://tinyurl.com/33fk7aby>

New UK species

Roger Thomason added *Chamaepsila pectoralis* to the UK list with his report at <https://tinyurl.com/xjrperk> on Diptera.info where it was confirmed by Paul Beuk. Tony Irwin commented "The genus is in need of a thorough overhaul, going back to types where they exist, and probably using genomic characters as well. Having said that, I have no evidence to suggest that humeralis and pectoralis are not good species, so I would support adding pectoralis to the British list." So it was. Peter Chandler will be adding it to the revisions and Chris Raper added it to the UKSI. The record itself was added to NBN Atlas last autumn.



Chamaepsila pectoralis Graven, Shetland 2021-06-07 Roger Thomason

A summary of this species may be found at <https://micropezids.myspecies.info/taxonomy/term/112> and key papers are listed there, notably the following:

Shatalkin, A. I., & Merz, B. (2010). The Psilidae (Diptera, Acalyptrata) of Switzerland, with description of two new species from Central Europe. *Revue Suisse de Zoologie*, 117(4), 771-800.

Wang, X. (1988). Determination tables of the Western Palaearctic *Chamaepsila* species (Diptera: Psilidae). *Stuttgart-Based Contributions to the Natural History*, 417(Series A), 1-13.

Tony Irwin remarks that "It does seem odd that the species hasn't been found on the British mainland yet" so would UK dipterists please check their material just in case.

New European species

More Psilidae have been found in Europe too. Kaj Winqvist is working on a *Chamaepsila* new to Finland (and Europe) whilst Jocelyn Claude, in addition to adding *Psila helvetica* to the French list is working on a number of *Chamaepsila* new to science. This work has focussed the attention of a number of experts on this genus with Jocelyn busying himself figuring genitalia. Maybe the outcome will be a much-needed revision. As Jindřich Roháček summarised recently "Any precision identification of species of this difficult genus will be great."

Recording: Europe

The objective to get records of species occurrences onto **GBIF** using data from published papers continues slowly. I have the records extracted into a spreadsheet, the current problem is the absence of a handful of taxa from the GBIF backbone taxonomy, they use [Catalogue of Life](#) as their main source. The list of planned work can be found on the [Datasets uploaded](#) page of this scheme's research Scratchpad.

Denmark

One example of a country-based online recording website:

<https://www.naturbasen.dk/art/14104/neria-cibaria>

Identification

Psilidae

Two recent keys are useful to have in your library:

1. Phil Withers & Jocelyn Claude, (2021) Psilidae of France (Diptera: Acalyptrata): checklist and identification keys for genera and species.

<https://tinyurl.com/87c34yww>

2. Paul Beuk, Key: Psilidae

<https://tinyurl.com/2e6szjcr>

Loxocerini

There are consequently three keys available with which to identify the Loxocerini. The Sumner 2008 key tried a novel approach based on characters observed on UK specimens, the Withers 2019 key was based on French material and the Beuk 2020 key on other European material. Only the Withers key contains figures, all of them line drawings from previous publications.

Visual Guide to European Loxocerini

The Loxocerini may be identified from some images provided they are of a sufficient quality and cover the necessary aspects. There are several examples on both iRecord and iNaturalist, a good range of species on the gallery of Diptera.info and choice examples on <https://micropezids.myspecies.info/>

To identify from photographs, which rarely show all the features necessary to work through keys, the approach is to narrow the choices by ruling out each of the species one by one:

1. *Loxocera hoffmanseggi* (not UK)



Mediterranean Reed (*Loxocera hoffmanseggi*) by Kevin Clausen

Black thorax + red abdomen (mostly). Antennae with arista placed anteriorly.

2. *Loxocera aristata* (including the melanic form *L. maculata*)



Black-faced Reed (*Loxocera aristata*) by Malcolm Storey

Pale marking on the lower part of the occiput (below the eye) confined to a small (genal) patch

The remainder have much larger genal patches, more than half of the lower occiput:

3. *Imantimyia albiseta*



Yellow-faced Reed (*Imantimyia albiseta*) by Rasmus Allesøe (inset Malcolm Storey)

Yellow to amber face (fades to black just below the antennae.) Humeri dark + scutellum pale (tan or amber.) **Arista with distinct hairs** (needs a clear photo.) Postgenal stripe present.

4. *Imantimyia fulviventris*



Atlantic Reed (*Imantimyia fulviventris*) by Geoff Foale (inset John Hallmén)

Black face. Humeri dark + scutellum pale. **Arista with shorter hairs.** Postgenal stripe absent.

Differentiating the above two relies either on characters rarely visible in photographs (detail of aristal hairs or face colour below antennae) or on microscopical character on the occiput - a shimmer stripe on the lower occiput (the gena or “cheek”)

Consequently it is not safe to identify the above two from most field photographs.

5. *Imantimyia sylvatica*



Yellow-shouldered Reed (*Imantimyia sylvatica*) by Steven Falk

Humeri pale + scutellum pale (tan/yellow).

Tan/yellow rather than amber in colouration, humeri tan/yellow, more or less pigmented tan/yellow markings on the frons above the antennae and a distinctive long black stripe on the thorax.

European Micropezids & Tanypezids

6. *Imantimyia nigrifrons*



Small Reed (*Imantimyia nigrifrons*) by Patrick Eckfeldt

Humeri black + scutellum black. Weakly, but clearly infuscated wing ribs. The hind tibia can also often be coloured brown in the middle parts (Hennig 1941). *L. nigrifrons* also has a very dark thorax compared to other *Loxocera*.

Other guides

The [FSC Identikit online guide](#) on the Scratchpad site may also prove valuable in narrowing down some of the Psilidae.

Photography

If you are fortunate enough to happen across one of these in the field then the best you might manage is one or two quick shots. Even the very best of these might not be enough to confirm their identity. An effective tactic is that of Malcolm Storey who gets a fresh specimen to his studio and photographs it from all angles. For this group it's the full-frontal head shot which helps greatly, so try to bag this aspect in the field if you can, perhaps netting it then holding it in one hand whilst snapping the face using the other. Then let it go.

Verification

Very few images posted on iNaturalist can be identified, mostly the best that can be achieved is the Genus *Loxocera* (iNaturalist doesn't recognise *Imantimyia* or the tribe Loxocerini). Some warrant the comment:

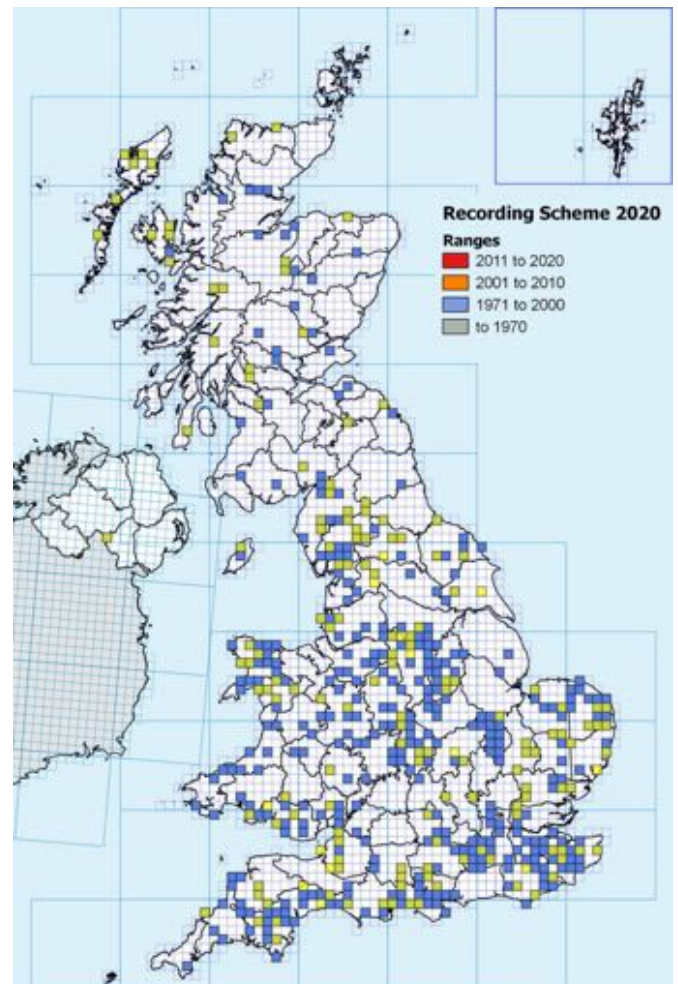
Either *Imantimyia albiseta* (<https://micropezids.myspecies.info/taxonomy/term/75>) or *I. fulviventris* (<https://micropezids.myspecies.info/taxonomy/term/76>)

To be certain which, the face below the antennae would need to be examined (yellow and black respectively)

Rarely *Loxocera hoffmanseggi* and *Loxocera aristata* get

posted there but *Loxocera albiseta* is the main one recorded. iRecord images can be similarly inconclusive but here the verifier can use the "plausible" option and add that same comment. Some then turn out to have been taken as specimens and so may readily be resolved using iRecord's notification system.

UK Loxocerini Map



Fully identified Loxocerini (blue) overlain with 161 records (yellow) which cannot be identified beyond *Loxocera* (Genus) via photographs. Overlaps appear green.

iNaturalist project



This Scheme's [iNaturalist project](https://www.inaturalist.org/projects/european-micropezids-tanypezids), set up in May 2020 at <https://www.inaturalist.org/projects/european-micropezids-tanypezids> goes from strength to strength. It now has 13 members, users signed up to keep an eye specifically on this group. By the end of the season the number of observations across Europe had risen from last year's 607 to 1100

Perhaps the project did encourage more recording. Around 20% of UK recording is now through this site. There has also

been a good deal of positive feedback occasioned by my habit of providing a link to each taxon on my Scratchpad site when confirming an identity. Hopefully contributors go and read that before confirming my ID.

I'm indebted to Sam Rees for showing an interest and helping to raise many to Research grade, a good example of the effectiveness of collaboration. Do participate by joining the project as a member, there are always many unconfirmed ("needs ID") records:

Visual Guide to European Chylizinae Chylizinae

The European fauna consists of 6 species in the Genus *Chyliza*: *C. annulipes*, *C. extenuata*, *C. leguminicola*, *C. leptogaster*, *C. nova* and *C. vittata*. They are all keyed in ...

Bygebjerg, R., Munk, T., & Elnif, J. (2011). *Chyliza leguminicola* Melander, 1920 (Diptera: Psilidae) new to the Palaearctic fauna. *Entomologiske Meddelelser*, 79(2), 73–84.

... and also in Withers and Beuk where this group (“tailcoats”) is arrived at at the start of the key, alongside the Loxocerini.

From photographs they may be narrowed down as follows:

1. *Chyliza leguminicola* (not UK but it is invasive)



Legs (femora) black.

2. *Chyliza annulipes*



Legs yellow, Femora with broad black rings

3. *Chyliza vittata*



Legs yellow. Femora without rings. Thorax mainly yellow

4. *Chyliza extenuata*



Legs yellow. Femora without rings. Thorax mainly black. Arista with dense black pubescence.

5. *Chyliza leptogaster*



Legs yellow. Femora without rings. Thorax mainly black. Arista pubescence normal. Frons mainly black, females with second antennal segment partially brown.

6. *Chyliza nova*

[no reliable photograph known]

Legs yellow. Femora without rings. Thorax mainly black. Arista pubescence normal. Frons normally much yellowed, females with second antennal segment yellow.

To reliably differentiate *C. leptogaster* from *C. nova* requires microscopical examination or a very good photograph of the fore tibia of a male.

Other guides

The keys above provide further detail. The [FSC Identikit online guide](#) on the Scratchpad site may also prove valuable.

Acknowledgements

Many thanks to the photographers whose work features in the above guides. Many of them post regularly on Diptera.info and on iNaturalist, others provide images as an educational resource on their own websites (e.g. Flickr & Bioimages.)

The Scratchpad research site also has many images kindly licensed by various photographers.

European Micropezids & Tanypezids

Neria femoralis

There have been a number of misidentification problems arising from this species. The clearest illustration is that of Lithuanian photographer Tomas Tarvainis (who makes it clear that he's not an entomologist) on his site at <https://tyt.lt/about.php> where two images of *Neria cibaria* are misidentified as *Neria femoralis*.

It's a tricky one to resolve so I'm cautious about all reports of *Neria femoralis*. A handful of UK records are being checked - they've been uploaded to NBN Atlas as "unconfirmed" and also some records which were posted on Waarneming.nl to finish up as images on GBIF don't conform fully with Czerny's description (below.)

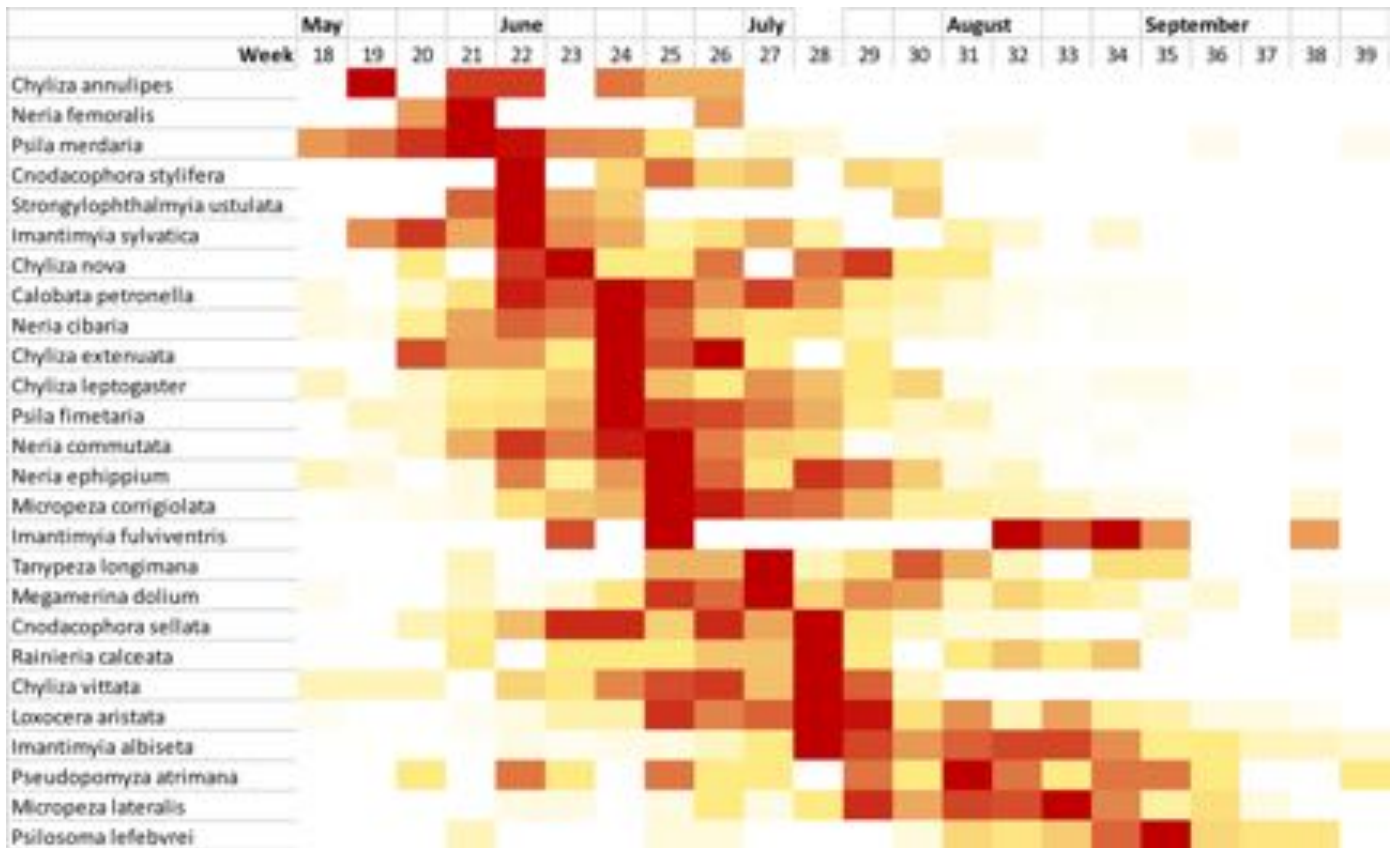
I discussed this species with Jindřich Roháček who tells me that it is relatively easy to find in the Czech Republic and kindly sent me an image. However the image (opposite) posted by Sokolkov on iNaturalist shows most clearly the head pattern features described by Czerny, 1930: **Male**: *frons narrowed anteriorly, frontal stripe rusty yellow, black around ocelli, in front of ocelli with a pointed whitish dusted triangle, reaching middle of frons. Eye margins whitish dusted anteriorly, lateral eye ridges and occiput black, with white dusting*



A case perhaps of the species not conforming to the published description. Anna Kreffer's sequence of images at <https://tinyurl.com/54k69f86> look fine, but no dusted triangle.

I tried again in 2021 to find this at its UK site in Cheshire. The rather cool spring however seems to have delayed its emergence and nothing was found.

Chronology



Timeline of UK flight times of Micropezids & Tanypezids (except *Chamaepsila*) listed in order of earliest peak occurrence (red.) Dates as week number (*sensu* MS Excel.) For fantail phenology charts see Sumner, 2021

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Copy for **HoverflyNewsletterNo.72** (which is expected to be issued with the Autumn 2022 Dipterists Forum Bulletin) should be sent to me: David Iliff, **Green Willows, Station Road, Woodmancote, Cheltenham, Glos, GL52 9HN, (telephone01242674398),email:davidiliff@talk21.com**, to reach me by 20th June 2022. 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.

The hoverfly illustrated at the top right of this page is a female *Sericomyialappona*

**HOVERFLY RECORDING SCHEME
UPDATE: Spring 2022**

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

2021 was a strange year! A cold wet spell in April and May meant that there were far fewer records for this important time of year than in previous years. The effects of this cold snap can be seen very clearly in the volumes of data extracted from the UK Hoverflies Facebook group and also in the levels of activity by the group (Figure 1).

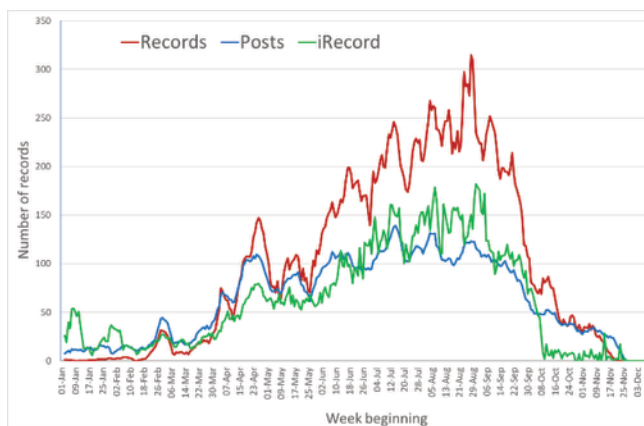


Figure 1. Seven day running average of records extracted from the UK Hoverflies Facebook page in 2021 (Red), the numbers of posts on the page (blue) and the numbers of records verified on iRecord (green). A dramatic dip can be seen between the last week in April and the first week of June.

We may never properly know what impact this inclement weather had on hoverfly populations and

the prospects for 2022. Relating experience in subsequent years to a specific event is almost impossible because each new year brings its own weather variables that may have a bearing on the year in question.

Unlike recent years, July and August did not suffer from extreme heatwaves and drought, so with any luck populations will have had a chance to recover a little bit from the ravages of past heatwaves.

At the time of writing, only part of 2021 data had been uploaded to the scheme database but, even so, the numbers of records look to be promising with just under 50,000 records imported up until early November 2021 (Figure 2). What is also very noticeable from the graph is that in 2020 the numbers of records received exceeded 100,000 for the first time!

It is fascinating to see how much coverage has already been achieved in 2021 (Figure 3) but the map also illustrates some of the problems we have in trying to ensure coverage of less populated areas. As always, mid-Wales, the southern uplands of Scotland and the Highlands are very deficient. So, if you are planning your holidays there are some obvious areas that would benefit from a bit of recording!

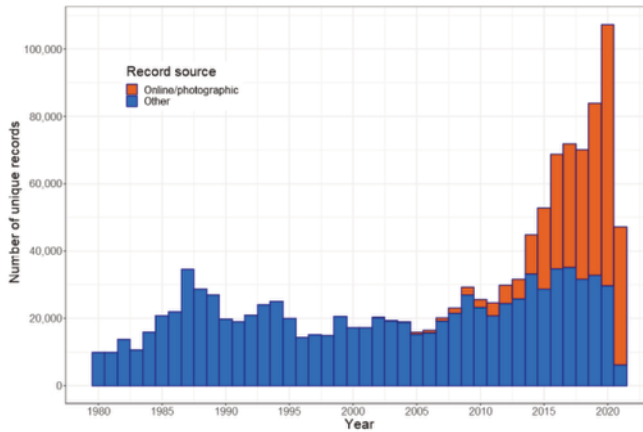


Figure 2. Numbers of unique records on the HRS dataset at the start of November 2021. The orange bars represent records based primarily on photography.



Figure 3. Coverage by records received to November 2021 for the year 2021.

The change in the level of hoverfly recording over the past ten years has been dramatic and has been accompanied by a very encouraging deepening of the capacity to engage with new recorders. We have a fantastic team who provide identification advice and extract records: thanks are especially due to Mick Chatman, Linda Fenwick, Adam Kelsey, David Rayner, Sue Kitt, Katie Stanney and Chris Sellen.

Recent developments

During the summer Roger raised the question of whether it might be possible to develop an online tool to capture ‘negative records’ i.e. those times when one goes out and find no hoverflies. Part of the rationale for this initiative was that we need to try to get a better handle on what happens during heatwaves, and recording negative returns may help to show what is going on under such circumstances. In addition, it should be possible to look in greater depth at the hourly fluctuations in hoverfly activity using a larger pool of recorders.

Andy Murdock and his colleague Ioannis Sofos responded to the challenge and offered to develop such a tool. Their company, Maploom, specialises in landscape assessment and has a lot of experience creating interactive applications for a wide variety of clients. Andy is also a very keen hoverfly recorder so is ideally placed to understand what will appeal to users of their product. At the time of writing the package is still under development, but it is being designed not only as a data capture tool but also as a way of providing immediate feedback to users. It will also help to simplify data management from the facebook group but is not intended as a replacement for other systems that recorders use (e.g., iRecord). We are hugely indebted to Andy and Ioannis. Do check out the Facebook page for updates and links.

A sad story of decline

The issue of catastrophic insect decline has become increasingly apparent in the high impact literature, with a steady stream of new papers emerging. For hoverflies, Stuart maintains a watch over trends and produces relevant graphs on an intermittent basis. The latest ones, generated in November 2021 paint quite a depressing story with more than 50% of our fauna in significant decline (Figure 4).

As yet, we have no explanation either for the rate of decline or the apparent quickening of the pace of decline. Until recently, most informed observers have placed the blame largely upon habitat loss and pesticides, but we are seeing substantial losses from the southern forest belt, which is largely buffered from both habitat loss and pesticides. So, can these really be the main factors? When you bear in mind that in recent years HRS updates have continually

reported events in which hoverfly recording was seriously disrupted by either heatwaves or cold snaps, some serious thought needs to be given to the possibility that an increasingly extreme climate is having an impact.

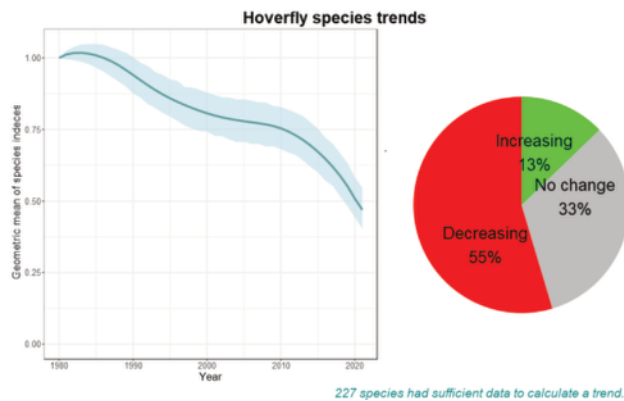


Figure 4. Trends for Britain's hoverflies: left – the overall trend with 95% confidence limits and, right, overall changes – green (increasing) 13%; grey (no change) 33% and red (decreasing) 55% (all numbers rounded up – hence 101%!).

Making sense of what is happening is hugely dependent upon good data, and there are very limited levels of monitoring other than compilation of opportunistic data by schemes such as the HRS. So the challenge we face is how to generate data that will take us closer to understanding what is happening. All records count, and, if you feel so inclined, do please make sure you record as often as possible from your local 'patch' or from your garden. Hopefully, the new data management system Andy and Ioannis are developing will make it more rewarding for people to conduct regular garden walks or walks around their 'patch'.

Unusual records in 2021

Although 2021 will not go down as a 'vintage' year, there have been a number of highlights, including the first British Record of *Chalcosyrphus piger* at West Stow Country Park (Suffolk) by Alan Thornhill (paper in press in *Dipterists Digest* at the time of writing). This species is associated with decaying conifer sap and might well turn up elsewhere in East Anglian conifer plantations. Keep your eyes peeled for a somewhat squatter version of *Brachypalpoides lentus* in which all tergites apart from T1 are red and the hind femora are somewhat shorter and fatter.

Other highlights include a new location for *Callicera spinolae* found by Vic Brown at ivy in Gamlingay; several records for *Callicera aurata* and a further record of *Dorosprofulges* from Martin Down by Sharon Towning. Possibly the most exciting one, however,

was that of *Chrysotoxum vernale* from Hartland Moor by Damian Money. Records of *C. vernale* are exceptional and this one, together with the others reported here goes to show the value of a small army of photographic recorders.

iRecord & iNaturalist

Data from iRecord up until February 2021 have been uploaded to the HRS dataset. All records for the summer 2021 have been verified and will have been uploaded to the HRS dataset by the time this newsletter lands on people's doormats. In addition, BRC has resumed downloads from iNaturalist to iRecord. This process meant that some 15,500 records were streamed into iRecord over late September and the end of October. They have all been verified and will also be uploaded to the HRS.

Initial perusal of the records from iNaturalist suggest that they are largely occasional records rather than attempts to compile detailed local lists. As such, they are far more dominated by a few very widespread and abundant species: *Episyrphus balteatus* figures strongly, as do bigger Eristalines and *Volucella* species. Overall, species diversity is far lower. Coupled with this lower species diversity, the numbers of misidentifications are considerably lower than data in iRecord (~2% as opposed to ~6.5%) but there are far more cases where at least two species figure in the post. It is very unclear, therefore, whether the peer-review process of iNaturalist is terribly effective.

When verification of iRecord first started, it was found that around 10% of submissions with photographs were either over-ambitiously identified or misidentified. This rate has declined markedly in the following years. The main reason for this decline seems to be that a high proportion of submissions now come from people who post on the UK Hoverflies Facebook page before submitting to iRecord. The vast majority of problems now arise from recorders who don't use the Facebook group (in a few cases the misidentification rate approaches 30-40%).

Analysis of common misidentifications within iRecord was produced some while ago [Morris, R.K.A., 2019. Understanding common misidentifications of British hoverflies (Diptera, Syrphidae). *British Journal of Entomology & Natural History*, **32**: 351-363]. An update is probably needed, as these sorts of analyses may help to explain oddities in the HRS dataset from previous decades.

Hoverfly conference 2022

It had been intended to run the 11th International Conference on the Syrphidae in 2021 but Covid put paid to those plans. The conference will now take place at Barcelonnette (Alpes de Haute Provence,

France) from Monday 6th to Saturday 11th September 2022. Stuart and Roger have been asked to present (try stopping them) and they hope to provide a great stimulus to delegates. These conferences are a fantastic gathering of people interested in hoverflies and may well appeal to readers of this newsletter. Don't be overawed; everyone is very friendly. It would be great to see a substantial British contingent. (Editor's note: fuller details of the symposium appear in the bulletin).

An encounter with *Sericomyia superbiens*

Martin Matthews

On 4 August 2021 I enjoyed a warm, sunny day visiting Ysgryd Fawr (aka The Skirrid) a small but shapely mountain (summit: 486m) located about 2 miles north-east of Y Fenni/Abergavenny in Gwent. In spite of its modest dimensions, the mountain is a conspicuous landscape feature which forms a narrow, mile long ridge rising clear of its surroundings along a north-south axis. Woodland extends from the southern tip of the ridge around the lower slopes of its western side, but from the east it appears quite bald and most of the ridge is exposed to the elements with a low-growing, dry upland vegetation of grass, ferns, bilberry etc. A path from the south follows the top of the ridge up to the highest point which is close to the northern end of the mountain.

It was while descending the path I became aware that I was being 'buzzed' by a flying insect of some kind. Initially it seemed to be just behind me at about head height and, of course, I immediately suspected the usual pain-inflicting culprit, *Haematopota pluvialis*, so I prepared to deter it in any way I could. The creature then flew across in front of me and I had a baffling glimpse of something unexpectedly orange and alarmingly bulkier than I was expecting. The noise stopped suddenly and I realised that the fly had settled somewhere out of sight on my back. Instinctively, I swept an arm to dislodge it but, fortunately perhaps, it was not to be easily discouraged and it immediately settled again; this time it was in clear sight on my left arm. My mind, fuddled no doubt by the heat, was still thinking about horseflies and I failed completely to realise that I was looking at a hoverfly. Because I did not immediately recognise the species I needed either to photograph or capture the specimen. My camera was inside my back pack so I doubted whether I could retrieve it without risking departure of the fly, but I was able to reach into one of the side pockets with my free hand and pull out a specimen tube. The fly seemed content to

rest on my arm and I had no difficulty capturing it for closer examination.

As I continued to walk, I puzzled over what sort of fly it might be. It soon occurred to me that it could be some sort of hoverfly, possibly a *Criorhina*, but I couldn't pin it down to any particular species. It wasn't until I got home and had a trawl through Stubbs and Falk that I realised it was a female of *Sericomyia superbiens*, a species which I have only seen occasionally in my home county of Gloucestershire and which I would not have expected to encounter at an open, hilltop site. As this hoverfly would usually be found in woodland clearings it may have strayed from suitable habitat on the lower slopes nearby, although I am not clear why it would have done so unless it was on a longer dispersal flight. Why it found my mobile form on the ridge so attractive is also a puzzle; was it the camouflage provided by my pale brown shirt, or the sweat I was producing in the heat of the day, or was I just a convenient perch in an otherwise poorly furnished environment?



Sericomyia superbiens (Photo: Martin Matthews)

Hunting for hoverfly larvae in winter leaf litter

Stephen Suttill

Last winter (2020/21) was my first venture into actively searching for hoverfly larvae at various sites within Greater Manchester. Prior to that I had found larvae opportunistically whilst looking for adults, and I had joined the UK Hoverflies Larval Group on Facebook in order to discover their identity. Posts by the group's helpful administrators, Geoff Wilkinson and Nicola Garnham, and other enthusiasts, regularly

provided an indication of when and where different species of larvae could be found.

Towards the end of October I started by examining the underside of sycamore leaves that were still on the tree and I soon found quite a few *Syrphus* larvae. By the beginning of December there were no leaves left on the sycamores, so I started to explore the leaf litter below. Most aphid predatory hoverflies remain dormant throughout the winter with most pupating the following spring or summer. I know that many folk will collect bags of leaves and take them home for careful examination on a white tray and under a strong light, but I have restricted myself to searching on site (I don't think the former approach would be welcomed in our household!). The process was very simple: pick a spot and turn over leaves making sure to unfurl any folds or curls.

I soon discovered that the best places to find larvae were in the deeper accumulations of leaf litter. In the slightly drier upper layers I would find many *Syrphus* (mostly, by now, in dormancy until adult emergence in the spring). In the deeper layers where the leaves were moister and more compacted I would find *Melanostoma* larvae. These are predators of cohabiting fly larvae, such as Lauxaniidae, Fanniidae and Lonchopteridae that feed on micro-organisms that thrive on moist, decaying leaves. On Boxing Day I found my first larvae of *Epistrophe grossulariae* in sycamore litter at what was my most productive site.

It was at this point that I discovered my first serious mistake. I was finding so many *Syrphus* larvae at one site that it was questioned whether I might be double-counting (or even treble-counting) the same larvae! I had thought this through beforehand and had taken all the leaves with larvae to one particular spot. I returned to that spot and sifted through the leaves to find that all the *E. grossulariae* were still there, but all the *Syrphus* had gone! *E. grossulariae* is known to enter a very deep dormancy which can sometimes last for several years whereas *Syrphus* remains more responsive to changes in temperature and moisture, and move around accordingly.

I widened my daily searches to other local areas with sycamore litter (I very rarely found hoverfly larvae on leaves of other trees) and, along with the usual suspects, found *Dasysyrphus albostratus* and *Leucozonaglaucia*. I also checked out the roots of older beech trees and found the long-tailed larvae of

Myathropa florea in water-filled cavities with accumulations of leaf litter. Whilst searching through frozen and snow-covered leaves was uncomfortable it was still possible to find hoverfly larvae; though some were encrusted with frost!

Typical *Epistrophe grossulariae*, *Leucozonaglaucia* and *Dasysyrphus albostratus* can be readily identified in the field and from good photographs from the dorsal aspect. *Syrphus* and *Melanostoma* cannot be reliably identified to species and I took a few to rear to adulthood. Unfortunately all my *Syrphus* failed at the pupal stage. I do still have an *Epistrophe grossulariae* larva in diapause which might not develop further for another year or more.

I can heartily recommend searching leaf litter as a winter activity for hoverfly aficionados but, beware, it can be addictive and you'll find yourself looking for larvae even when the adults are in action.



Figure 1. a) *Dasysyrphus albostratus*; b, c) *Epistrophe grossulariae*; d) *Leucozona glauca*; e) *Melanostoma* sp.; f) *Syrphus* sp.

Note: *Epistrophe grossulariae* are green coloured when actively feeding which is great camouflage on living sycamore leaves. When they have finished feeding their colour changes to autumnal hues better suited for hiding in leaf litter.

Hunting for hoverfly larvae before they hit the leaf litter

Geoff Wilkinson

There is a sweet spot between finding larvae on sycamore leaves and in the leaf litter. As the leaves fall

and autumn winds shake the trees, many larvae find themselves prematurely on the ground. Those that have finished feeding will remain there to enter dormancy for the winter but those that still hunger for aphids will climb up any nearby structure (if by fortune they haven't fallen on such a place). Fallen aphids appear to do likewise so any fence line, wall or gravestones beneath a line of sycamore or where sycamore leaves drift can be a happy hunting ground for Syrphines.

Local to me is a wooden post and rail fence about 345m in length that runs beneath a line of trees mostly composed of sycamore on the shores of the Montrose Basin in Angus. From 2nd November to present I recorded 3 – 85 *Syrphus* sp. and 1 – 8 *E. grossulariae* on twelve dates. Undoubtedly I recorded the same individuals on subsequent days but there was certainly considerable turnover among *E. grossulariae* (e.g. larvae of different sizes, difference in colour patterns and hues, position along fence, etc.). Over the last month – in addition to the almost usual *Syrphus* and *E. grossulariae* - I have also found *Dasysyrphus albostrigatus* and *D. tricinctus* on grave stones and walls under sycamore. Fences and walls under solitary trees in urban settings can often yield some larvae. The trees can even be some distance away and fences with accumulations of windblown leaf litter at their bases are also worth checking. The species count may not seem especially impressive but the technique can be used whilst searching for adults and on those days when the weather is poor it is more productive than looking for adults!



Figure 2. a, b) *Syrphus* sp. on various structures c) *Epistrophegossulariae* on fence post under sycamore

Hoverfly Lagoons 2021 – semi-aquatic hoverfly species

Ellen Rotheray

This year I asked our Hoverfly Lagoons volunteers to help me find an effective alternative lagoon container to our single-use plastic milk bottles. We use milk bottles because they are free and available to most people, they are safe and easy to use, and they are a

standard size which is important for experimental replication. However, there is evidence that as the single-use plastic degrades it could leach chemicals into the environment, and over time the plastic will shatter. I asked volunteers to compare alternatives (see hoverflylagoons.co.uk/the-lagoon-container/) with single-use milk bottles in their gardens (see images in Figure 1).



Figure 1. Hoverfly Lagoon containers, including the original single-use plastic (far left), glass jar (centre) and durable plastic (far right). Other trialled containers included cartons, ceramic pots and steel saucepans.

We had 195 volunteers sign up to the project this year, however only 14% submitted data, which totalled 179 submissions over the seven months. Those that submitted data set up Lagoons using six different types of container; the most trialled containers were ceramic pots followed by glass jars.

All trialled lagoon containers were successful in attracting gravid female hoverflies, and providing enough resources for larvae to develop to the pupal stage. Glass jars had the greatest average number of larvae and subsequent pupae reported across all container types, followed by metal saucepans and then plastic milk bottles (see Figure 2) though it's worth noting that plastic milk bottle had almost the

same maximum larval number (260 larvae) compared to glass jar (261 larvae).

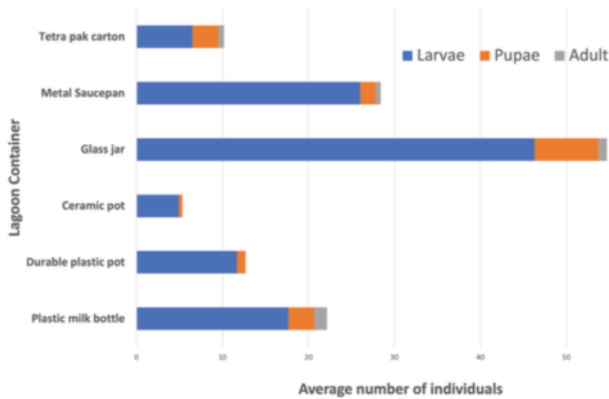


Figure 2. Stacked bar plot illustrating average number of larvae (blue bar), pupae (orange bar), and adult (grey bar) recorded from each type of container; carton, saucepan, glass jar, ceramic pot, durable plastic pot, and single-use plastic milk carton.

These containers were filled with grass only, grass + leaf litter, or leaf litter only, and a smaller number of lagoons were filled with nettles or sawdust. While grass + leaf litter, and grass only had comparable maximum numbers of larvae (260 and 261 respectively), the greatest number of larvae on average were recorded from grass + leaf litter and sawdust lagoons, followed by grass-only lagoons.

As in previous years, there was a recorded peak in larval abundance in lagoons in June and July, with a peak in pupal records in August (see Figure 3). Adult hoverfly species this year were identified as the Batman Hoverfly, *Myathropa florea*, and *Syrirta pipiens* only. We expect that larvae in lagoons recorded in October will likely overwinter, begin feeding again in spring and pupate in March/April next year.

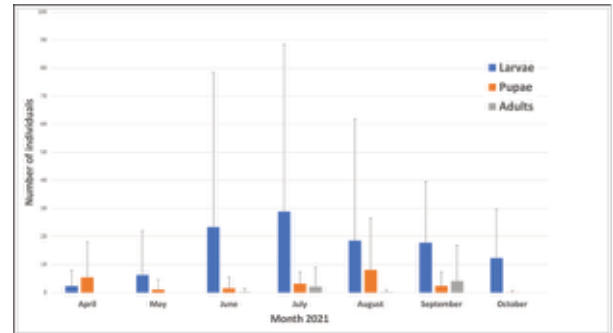


Figure 3. Bar plot illustrating average numbers of larvae, pupae and adults recorded over seven months, April until October 2021, with positive standard deviation error bars (to illustrate the range of the data).

Our results suggest glass jars are as effective as plastic milk bottles, but I look forward to digging a little deeper into these data, to determine what line of enquiry is next for the project.

A new species found in Hoverfly lagoons!

Now published in *Dipterist Digest*, we describe the pupal stage of *Rhingiarostrata* which was recorded from a densely-filled, cut-grass lagoon in June 2020 (see: hoverflylagoons.co.uk/rhingia-rostrata/). Adult oviposition preference and larval requirements for this species continues to be uncertain, and the pupal stage had never been described, so this was a very exciting find. What's more, adult *Rhingia* are known for their long mouthparts which enable them to feed from flowers with deep corollas such as red campion and ground ivy, whereas most hoverflies generally feed on open, more accessible flowers such as cherry, buttercups or umbellifers. This means hoverflies utilising lagoon habitat in gardens may also be contributing to the pollination of a larger range of wild flowering plants. Continued research into lagoon design to attract a greater number of hoverfly species is required, across a range of habitats including gardens; anyone keen to get involved in such an experiment please get in touch!

Rotheray E & Rotheray GE (2021) The puparium and development site of *Rhingia rostrata* (Linnaeus) and comparison with *R. campestris* Meigen (Diptera, Syrphidae) *Dipterist Digest*, 28:127-134, Dipterists Forum

Chrysotoxum arcuatum in Gloucestershire

David Iliff

On 11 September 2021 the Gloucestershire Invertebrate Group (GIG) held a field meeting at The Park, Tidenham Chase ST5599, during which Tony Taylor, the county Hymenoptera recorder spotted what appeared at first to be a social wasp. When he approached it he realised it was a hoverfly, and caught it in a tube which he handed to me. It was a *Chrysotoxum*— one of the “difficult five” – and noticing its rotund appearance I was immediately confident that it was *Chrysotoxum arcuatum*, which was confirmed once I had examined its antennae. It was a female and I was able to place it on a leaf and photograph it.

Page 100 of **Britain’s Hoverflies** features maps showing the distribution in Great Britain of *C. arcuatum* and *C. cautum* and graphically illustrates the geographical separation of the two species. Some doubt was expressed about the validity of this Tidenham record. However the species was first recorded in the county in 1993, also at a GIG meeting, when Keith Alexander and I found two examples (a male and a female) at nearby Poor’s Allotment. Since that date there have been seven more county records, all from the Forest of Dean area.

Chrysotoxum cautum occurs throughout the county (including in my garden near Cheltenham in each of the last six summers). The map below shows that *Chrysotoxum arcuatum* is confined within the county to the Forest of Dean area, which must represent the extreme south-eastern boundary of its range.

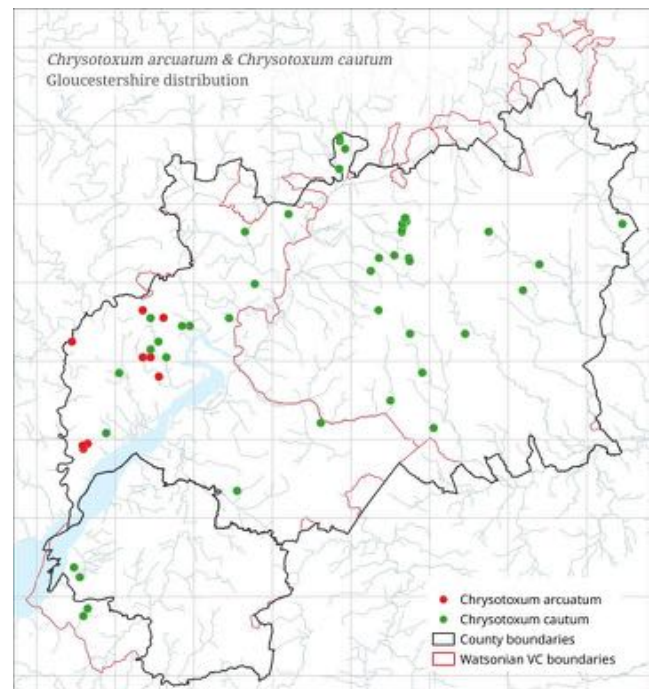
(Note: I record hoverflies throughout “Greater Gloucestershire”, which I define as the whole of the present counties of Gloucestershire and South Gloucestershire plus the whole of VC33 (East Gloucestershire) and VC34 (West Gloucestershire)).



Chrysotoxum arcuatum female (Photo: David Iliff)



Chrysotoxum cautum female (Photo: David Iliff)



The county boundary and river data are OS OpenData (<https://osdatahub.os.uk/downloads/open>) and the VC boundaries are from Biological Records Centre (<https://github.com/BiologicalRecordsCentre/vice-counties>).



Cranefly News

The Dipterists Forum

Cranefly Recording

For Superfamily Tipuloidea & Families Ptychopteridae & Trichoceridae

Newsletter No 38

Spring 2022

Editor: John Kramer



Larva of *Tipula confusa* with friends. Photo. EGH

Another interpretation of the hypopygium of *Paradelphomyia neilseni* (Kuntze) (Limoniidae) - C. Martin Drake

Paradelphomyia are distinctive crane flies quickly recognised to genus but can be awkward to identify to species. The smallest British species is *P. neilseni* whose identification seems easier to me if the genitalia characters in Stubbs (2021) are ignored. Its narrow wing with scarcely any anal lobe and very sparse microtrichia confined to the outer halves of the cells are enough to place it (Fig.1). The reason for ignoring the genitalia is that the figure of the hypopygium, reproduced from Edwards (1938) and perpetuated by Coe *et al.* (1950) and others, shows two features that are not apparent in specimens that I recently collected. These features are the very long backwardly pointing aedeagus and the tiny 'H'-shaped apodeme at the base of the aedeagus.

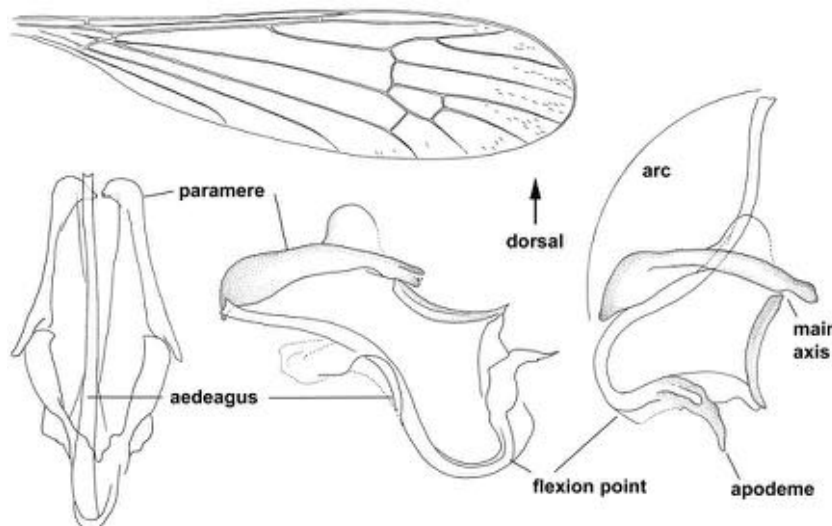


Fig.1. *Paradelphomyia neilseni* wing (flattened under cover-slip) and aedeagus and parameres in ventral and lateral views showing the aedeagus in its retracted (mid fig.) and extended positions (right fig.), with the arc followed by the tip of the aedeagus. The lateral views show the parameres in their natural position with the dorsal side uppermost.

The apodeme is the easiest to deal with. It is a tiny scrap of chitin that is not easy to make out; in dorso-ventral view, it is nearly rectangular and has no projections, in contrast to other British species in which the apodeme is conspicuous and usually diagnostic. Tjeder (1952) illustrated the apodeme of *P. nielsenias* small polygon with a slightly expanded tip but with no projections, agreeing roughly with my specimens.

The aedeagus is a more interesting structure. It clearly can change position from retracted to extended, as John Kramer (2015) noted. My sample of many males showed all states (Fig 1). In the retracted position, the tip of the aedeagus is level with the tips of the parameres, in a different orientation to that in Edward's (1938) figure, but which looks superficially similar to that of the non-British *P. nigrina* (Lackschewitz), as illustrated by Tjeder (1952) as *Oxyrhizaseptentrionalis* and reproduced by John Kramer (2015) and Alan Stubbs (2021). Hence there is a good chance of getting temporarily excited in finding this species, only to be disappointed when the key is followed more carefully. When the aedeagus is extended, it usually points upwards or diagonally backwards (dorsally or postero-dorsally) between the parameres, and in dorsal view it does not extend far beyond the paramere tips. In only one example in my sample did it point backwards as Edwards

illustrated. To check how the aedeagus moved, I gently manipulated a dissected example in viscous warm glycerine jelly (Ackland 2015). The aedeagus can be made to bend at two points, one being a main articulation where its stout forked base it meets the two parameres, and a second less clearly defined axis just distal to the apodeme where the single duct will bend but quickly spring back to its original position. If this more distal joint is just a weak flexion point and not a true articulation, except perhaps when the whole complex is under some strain during copulation, then movement of the aedeagus is usually limited between the two extreme positions that I illustrate, and the extent of its movement is shown by the arc made by the tip of the aedeagus around the single main axis with the parameres (Fig. 1). John Kramer (2015) suggested that retraction of the aedeagus caused the hair-pin bend but the whole 'hair-pin' is rigid apart from the weak flexion point. So although it is possible to force the aedeagus to point backwards, and thus extend far beyond the parameres, I feel that Edwards often-reproduced figure almost certainly shows an extreme example or even an artefact of his preparation in which he did force it back beyond its normal position. Care is therefore needed when interpreting the hypopygium of *P. nielsenii*. However, a protruding aedeagus does seem to be characteristic of this species only, although what happens in *nigrina* remains to be discovered.

Paradelphomyia nielsenii has only rarely been recorded in Devon so the 2021 find was particularly interesting because the population was large, with this species being one of the most frequent crane flies in a small patch of possibly slightly acidic hillside seepage under sparse willow (*Salix cinerea*) woodland. Some of the less common crane flies at this seepage were *Dicranota claripennis* (Verrill), *Lipsothrix remota* (Walker) and *Paradelphomyia fuscata* (Loew). (Devon: Knapp Copse, SY156953, 11 Oct 2021).

I thank East Devon District Council for permission to collect on their local nature reserve, and John Kramer for reminding me of his paper.

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Paradelphomyia dalei found in France.

In a well-presented paper by Pierre Tillier and Clovis Quindroit specimens of *P. dalei* have been reported from five sites in France. This species had been previously recorded only from sites in the UK and was previously thought to be endemic here. The habitats reported conform to the 'calcareous wet woodland' described in 'British Crane flies' as typical in Britain.

Reference

- Tillier, P. and Quindroit, C. 2021. Découverte en France d'une espèce de Limoniidae supposée endémique de Grande-Bretagne : *Paradelphomyia dalei* (Edwards, 1939) (Diptera). *Bulletin de la Société entomologique de France* 2022

Ed.

Vertical movement of *Tipula (Savtshenkia) confusa* van der Wulp, 1883 larvae in response to flooding.

E.G. Hancock,



This behaviour is described in order to ask if any similar observations have been made elsewhere. After some persistent rain *Tipula* larvae (identified as *confusa* from specimens collected) were seen on the wall of my house possibly moving to a drier place to avoid drowning. They had developed in moss covering part of the surface of the concrete yard; samples of which contained many larvae. The yard concrete comes right up to base of the wall, which is rendered and painted, so there is no refuge on the horizontal plane for the larvae if threatened or disturbed. A considerable number of larvae were first noticed on 12th November 2021 (Fig. 1) after two days of rain.

The next day I was cleaning moss and slippery algae from stone steps at the back of the house using a hose pipe and stiff brush. Having soaked the steps and partially completed the job upon returning to finish an hour or so later three larvae were seen crawling up the adjacent wall.

Clearly, they had been disturbed by this activity; it was not raining at the time. Having become aware of this 'migration' it has been seen several

Fig.1 Position of larvae high up on the house wall.

times since. The temperature was about 10 degrees C., quite mild compared to sub-zero temperature during intervening clear nights. On all the dates it had been raining or drizzling for several hours prior to seeing the larvae. Another sighting on 11th December was in the evening when five larvae were performing this feat in darkness.

I have not seen this behaviour before which may be due to my lack of attention or have been too diligent in previous years in sweeping the yard free of moss earlier in the season. At a natural site it would be difficult to witness such an event, if there is a situation which required such movement, as tree trunks or rank vegetation would conceal any larval activity from view. There are a number of questions to consider. Do they go back down again, and if so when and how soon after it stops raining? The walls get wet from the rain but on drying the larvae would be less able to grip the vertical surface with reduced surface tension. I have not witnessed an entire journey but seen them stop, move sideways or just sit on a windowsill that provides a horizontal ledge as a resting place (Fig. 2). Obviously, there is opportunity for experimentation here. The hypothesis is they avoid temporary flooding by equally temporary vertical movement. The larvae lack abdominal prolegs but appear to move by peristaltic contractions of the body which remains in contact with the wall. The head seems to act as a forward anchorage point, lifting off the substrate to reach out to a suitable part of the surface for gripping. The last segment has lobes ventrally about the anus which in contact with the surface may provide sufficient purchase to assist forward progression during the wriggling (Fig. 3). Video close-up imaging on a glass plate may help with defining movements. Any comments are welcome.

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



Fig. 1 Habitat of *D. radegasti*. Photo K.M Olsen

More on *Dicranomyia radegasti*

In Cranefly News #37 there was a description of a specimen of *Dicranomyia radegasti* Starý 1993, caught and identified in Scotland by Kjell Magne Olsen. All of the male diagnostic characters described by Starý in his 1993 paper. were shown as photographs, apart from the hind tarsal claw. This is shown in Starý's specimens as slightly longer than in *D. chorea*, and slightly undulating, something to look out for in future British specimens.

Kjell Magne sent some more details of the habitat in the Glen Nant NNR, which is shown in the adjacent photo, and which is very similar to that described by Jaroslav Starý.

Observations on the phenology and sex ratios of crane flies (Limoniidae) and a few other Diptera found in emergence traps. Robert Wolton

In 2020, I ran four emergence traps in a wet woodland on our farm in Devon between the beginning of May and early October (excepting the month of August), as detailed in Wolton and Field (2021). In addition, the following year I ran a couple of traps in the latter half of April to get some early season data. For those taxa I was able to identify to species or genus level, I recorded the numbers of each sex caught. This information has enabled me to explore both flight times (phenology) and sex ratios, with the outcomes explained below.

The traps captured 30 or more individuals from 15 taxa – I reckon 30 to be the minimum necessary for meaningful analysis. Eight of these taxa are crane flies: *Austrolimnophila ochracea* (30 individuals in 2020), *Dicranophragma adjunctum* (31), *D. nemorale* (37), *Euphyllidorea dispar* (46), *Paradelphomyia senilis* (63), *Phyllidorea fulvonervosa* (69), The *Erioptera* species emerging into the traps were *fuscipennis* (6 males) and *lutea* (57 males), while the *Molophilus* species were *appendiculatus* (3 males), *bifidus* (6 males), *flavus* (13 males), *griseus* (34 males), *medius* (13 males), *obscurus* (2 males) and *ochraceus* (58 males). *Erioptera* (76) and *Molophilus* (209) (females of the last two genera cannot be identified confidently to species level). (The names of the other seven taxa are given in Figure 2.)

Figure 1 presents phenology charts, using 2020 data. Assuming generations do not overlap seamlessly, three species have one generation (*A. ochracea*, *E. dispar* and *P. fulvonervosa*), four taxa two generations (*D. adjunctum*, *D. nemorale*, *P. senilis* and *Erioptera* spp.), while together the seven *Molophilus* spp. have three, possibly four, generations.

Males emerged earlier than females in each generation for most species. In *E. dispar* six males and no females emerged in April 2021., a frequently observed phenomenon in flies (e.g. Buck 2001, Hadley 1969), so no surprise there. However, *A. ochracea* is an exception, the females emerging earlier than the males, as they do in *P. senilis*, at least in the autumn generation. I caught no males of *D. adjunctum* at all in the spring generation, but the probable explanation for this is that trapping in 2020, commencing on 1 May, did not cover the beginning of their season: in 2021 a single male was caught on 19 April (no females were caught that month). Why should females ever emerge before males? Are my results for *A. ochracea* and *P. senilis* anomalous, or is this a real phenomenon in these species? Earlier emergence of females is said to be a rare occurrence in Diptera and insects in general (Buck 2001).

The sex ratios of these crane flies are given in **Figure 2**, again just based on the 2020 data. While those for three crane fly taxa are not significantly different from that expected from a 1:1 ratio of males to females, for *Erioptera* and *Molophilus* significantly more males than females were caught, the converse being true for *A. ochracea* and *E. dispar*.

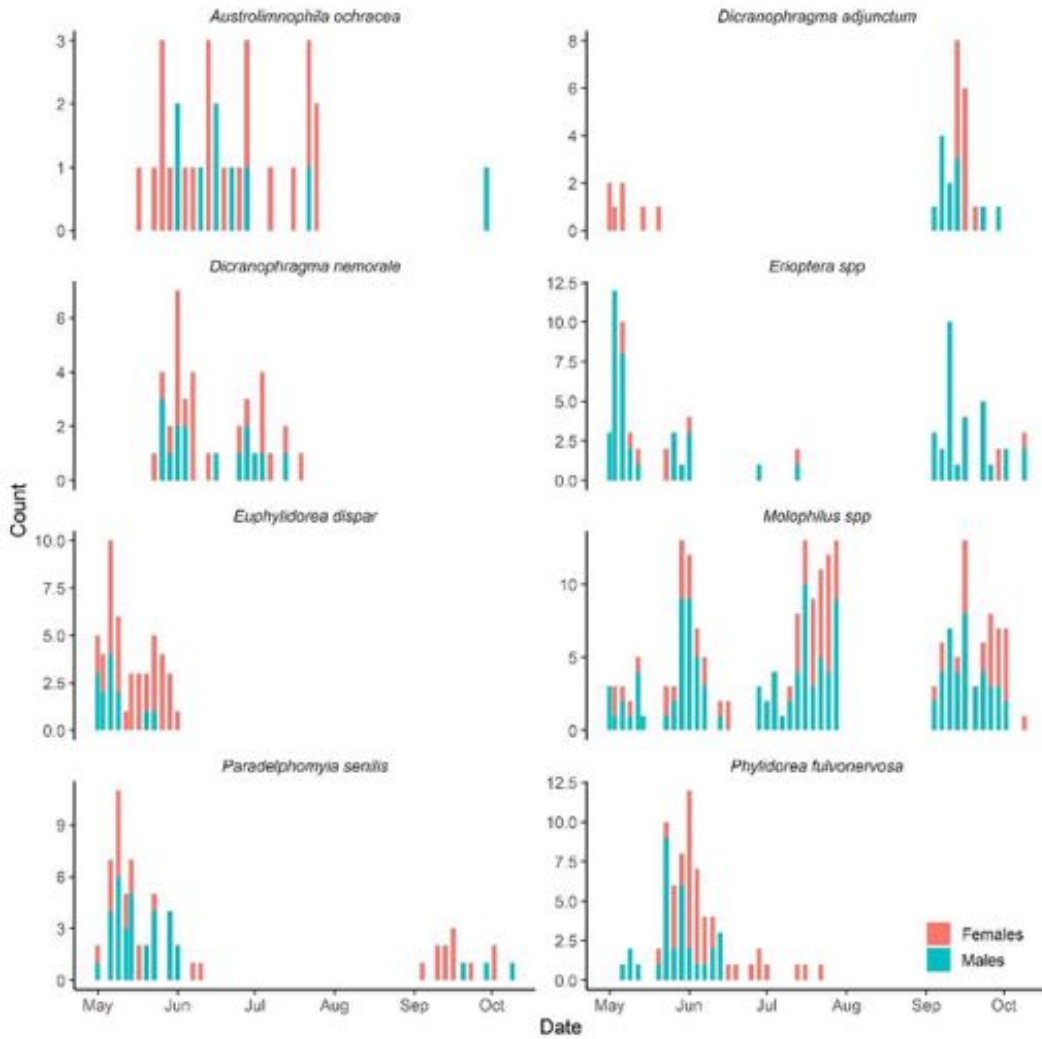


Figure 1. Phenology charts for the eight most numerous cranefly taxa caught in emergence traps in 2020 in a wet woodland at Locks Park Farm, Devon. The traps were operational between 1 May and 9 October, excepting the month of August.

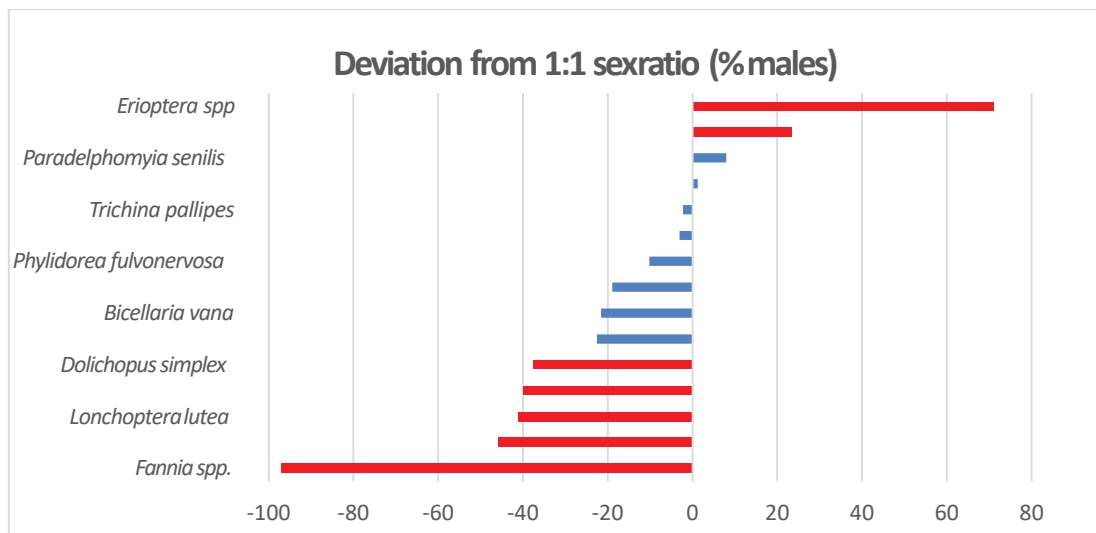


Figure 2. Sexratios of the 15 taxa identified to species or genus level where 30 or more individuals caught in emergence traps in 2020. Central vertical line is 1:1 male:female ratio. Extreme left line indicates 100% female, extreme right 100% male. Red bars show significant differences from 1:1 at 5% level (χ^2 test).

Some of these variations away from a 1:1 M:F ratio could be explained by trapping taking place only between early May and early October: if more of one sex than the other emerged earlier or later in the season this would skew the results. Examination of the phenology charts suggests that this might be true for *E.dispar*, especially since between 10 April and 1 May 2021 six males of that species were caught, but no females. The strong bias towards females in *A.ochracea* cannot easily be explained in this way and continues to baffle me.

I also remain perplexed as to why more male *Molophilus* and many more male *Erioptera* emerged than females. It is unlikely to be an artefact of the trapping season not starting early enough, since in April 2021 all 18 *Erioptera(lutea)* caught were male bar one, and the three *Molophilus(griseus)* were all male too. The bias could perhaps be explained by the majority females never flying or crawling up the sides of the emergence traps, so avoiding capture. They may be mated soon after emergence, perhaps even while still teneral, and, finding the surrounding medium suitable for oviposition, never move more than a few centimetres. However, as Alan Stubbs has pointed out to me, in *Erioptera* the males form swarms to attract females, so presumably here the females must usually fly to find mates; at least some *Molophilus* also swarm. Another possible explanation is that the females are more crepuscular or nocturnal than the males, being inactive when I visited the traps. That this too may not be the answer is suggested by an extraordinarily detailed study of *Molophilus ater*, a flightless species, conducted by Malcolm Hadley (1969). He also found a strong male bias: 65% of newly emerged individuals and 55% of those which pupated in the laboratory were males. Perhaps it is a characteristic of the genus that more male than female eggs are laid, or, more likely, that mortality rates differ between the two sexes at larval or pupal stages. Hadley himself was unable to account for the preponderance of males in *M. ater*.

To stray briefly from craneflies, every one of the 69 *Fannia* (*F.aequilineata* (1 individual), *F.genualis* (3), *F.lustrator* (1), *F.serena* (35), *F.similis* (22), *F.umbrosa* (7)) (Fanniidae) appearing in the emergence traps was female, the sole exception being the single *F.lustrator*. What happened to the males? If anyone can cast any light on this, I should be pleased to hear from you. Perhaps the most likely explanation is infection by male-killing parasitic microbes. The common bacteria *Wolbachia*, for example, are known to result in extreme female sex biases in some insects and have been found to occur in wild *Fannia*, including *F.serena* (Martin *et al.* 2012). Perhaps they also infect *Austrolimnophila ochracea*! My thanks to Alan Stubbs for insights and especially to Ben Field for producing Figure 1 using R software.

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Idiocera sexguttata in the New Forest – Paul D. Brock



As a keen photographer, I like to set myself a challenge and survey insect species new to me each year. Having been asked for a photograph of the globally endangered cranefly *Idiocera sexguttata* to use for conservation purposes, also seen the report by Lovegrove *et al* (2018) referring to the last known record in the New Forest (2000), this species fitted the bill, with distinctive wing spots enabling identification in the field. Contact with Jack Potter (Natural England) established that he had found them at Stony Moors (approx. SZ2199) on 8 June 2018, but only recorded one in June 2019, indicating they may be elusive. As stated in *British Craneflies* by Stubbs (2021), the Forest site is an outcrop of marl (a very calcareous clay). The species also occurs in Wales and there are old records in

Dorset c. 1860 and Cornwall in 1912. Recent records from a few areas of Dorset and Wales are listed in Howe (2016). My first visit to the site was a brief recce of the site on 12 June 2021, when a male *I. sexguttata* was swept. Colin Easton and I visited on the morning of 16 June 2021 and after an hour of methodical searching had found several specimens of both sexes by sweeping and searching vegetation. Although difficult to find at rest, they were observed on bog myrtle *Myrica gale* and bramble, on leaves (including upperside) or branches. If disturbed, the slow ghost-like flight can be carefully followed, the specimen landing on nearby vegetation. Some were photographed in situ, one was brought home for more detailed photos and released on site next day. In order to minimise disturbance of the habitat, this brief survey was concluded on 16 June. The New Forest site mentioned above is small but supports good populations of craneflies in general. If looking for this species, other boggy areas and seepages in the Forest and elsewhere should be surveyed in about mid-June (a permit from Forestry England is required for the New Forest), as there is every probability they will be more widespread but overlooked, due to their small size and short flight period.

Howe, M. 2016. A new Welsh locality for the cranefly *Idiocera sexguttata* (Dale) (Diptera, Limoniidae) in 2015. *Dipterists Digest* **23**(1): 47-48.

Lovegrove A., Gillingham P. and Harrison A. (2018). New Forest HLS Scheme Specialist Habitat and Species Surveys: Survey and assessment of Six-spotted cranefly. BU Global Environmental Solutions (BUG) report (BUG2772) to Forestry Commission. Higher Level Stewardship Agreement, The Verderers of the New Forest AG00300016. 19 pp.
www.hlsnewforest.org.uk/app/uploads/sites/3/2018/03/Six_spotted_cranefly_survey.pdf

Can you help us with targeting revisit maps for craneflies?

Our friends over at the UK Centre for Ecology and Hydrology (UK CEH) have added craneflies (via the UK Cranefly Recording Scheme) to the list of groups they are collecting data upon under the target revisit mapping project. This is an online mapping tool that is helping to model trend analysis in insect populations but will double as a way of helping us gather more cranefly data for the Recording Scheme. It is also being used by our colleagues over at the Orthoptera Recording Scheme, the Ground Beetle Recording Scheme and the Soldierfly and Allies Recording Scheme. Here is how it works.

Step1 – visit the website at https://shiny-apps.ceh.ac.uk/targeting_revisits_craneflies/ or Google ‘targeting revisits craneflies’

Step2 – Decide where you want to survey and zoom in on an area on the UK Map.



Step3 – You will see a number of differently coloured 1km x 1km squares (monads). Any that are blank are classed as ‘unrecorded’ as far as the model goes and if you can add any records for here this would be great!

Bright pink squares = targets for revisits. They have records from only one year in the past so if any records can be made in these monads, they can be included in our trend analysis.

Pale pink squares = new this year. These squares have the most recent records and will become targets for revisits next year.

Dark green squares = considered well recorded. These are already being used in the trend analysis as they have records from multiple years so are less important for the model but welcome for the Recording Scheme.

Pale green squares = successful revisits. They used to only have records from a single year but have had records added due to the targeting revisit scheme.

Step4 – Go out and survey craneflies as you normally would considering access permissions.

Step5 – Add your records on to iRecord.

Step6 – Records get verified.

Step7 – Targeting revisit maps get updated automatically and you should see bright pink squares change colour to pale green, blank squares go pale pink, and more dark green squares.

Step8 – Sit back knowing you’ve done a great job and repeat next year!!!

It would be wonderful to get as many recorders adding cranefly records via iRecord to help with the trend analysis models and add new records for us here at the Recording Scheme.

Many thanks!

Pete Boardman

Can you help with the Cranefly Recording Scheme?

Now ‘British Craneflies’ has been published we anticipate the volume of records to increase that comes into the recording scheme. Our friends over in the Hoverfly Recording Scheme found this and have produced some interesting graphs that demonstrate how the availability of identification resources boost recording and we expect that to be the case with this scheme too.

In the last few years, we’ve had around 4000 records annually through this scheme. Most come through iRecord, the safest way to submit data, as if one of the current scheme members goes under a bus the data remains and can be picked up by someone else acting on behalf of the scheme. We still do get Excel spreadsheets though, which we have to process and add onto iRecord anyway so that all our cranefly data goes through iRecord one way or another eventually.

About two thirds of our data that comes through iRecord is submitted alongside a photo. Each of these has to be looked at individual to check ID and can be really time consuming, but ultimately really interesting as the quality of digital photography and camera technology has improved.

There are a number of ways people could help with the scheme in a technical or non-technical way – could you help?

1 – Social Media – could you advocate for us? Help spread the news that there is a Cranefly Recording Scheme and that we have a Twitter account (@CRStipula) currently with just over 2000 followers Could you help generate content? We have a Facebook page too with 714 members and always need people to help identify photos on there. Would anyone be prepared to set up and monitor an Instagram page? Maybe put content together for TikTok and get craneflies viral?

2 – Websites – do you have website building skills? We currently have a small presence on the Dipterists Forum website <https://dipterists.org.uk/crane-fly-scheme/home> but it would be great to get more information on here as place for inexperienced cranefly recorders to visit. Maybe species profiles,

3 – Data Handling – Could you commit to convert Excel spreadsheets into iRecord friendly Excel imports?

4 – Cranefly Identification - Are you able to identify craneflies? Could you help with verifying for iRecord – even just common species?

5 – Cranefly training events – are you able to help run events or run events yourself with support from us? Could you host an event? Do you have a venue that we could use? We anticipate the need for more training events over the next few years with the availability of British Craneflies.

If you are able to help with any of these areas (or have other suggestions as to how you could help – please contact Pete or John.

Pete Boardman

The verification of biological records. - JohnKramer

In response to an increase in recording we need to be careful in our enthusiasm, not to go for quantity over quality. It is much easier to make a record than it is to check and confirm it. The late Trevor James of the National Biodiversity Network, in his paper 'Improving wildlife data quality' (James, 2006) discussed the process and the purpose of records. He also discusses the need for data verification – 'ensuring the accuracy of the identification of the thing being recorded'. He wrote: *Recordingschemes or organisations setting up a survey have a responsibility to take the lead with setting standards for identification. They should define agreed levels of 'difficulty' over the identification of the species being recorded.*

Entomology is a science, and science is an evidence-based activity. We use visual evidence in identification. The level of evidence needed to verify a species record varies from species to species, from common to rare, and from simple characters to complex ones, but sometimes it is reasonable to say 'there is not sufficient evidence on which to base a conclusion.'

We usually accept records of common easily identified species in their usual habitat but if the recorder is a novice or the habitat abnormal we may ask them for the diagnostic character that they observed. However, any claim for a record of a 'difficult', rare or a new species needs the presentation of supporting evidence. This may be for a County (or Vice-County) Recorder, or for the National Recorder. The evidence may be the specimen itself, or it may be a drawing or photograph of the diagnostic features. Important reasons for this are that structures can be missed or misinterpreted by the original observer, or the taxonomy may change and if the evidence is there, the misidentification can be corrected. It goes without saying that any recorder should be able to describe the diagnostic character which led them to their identification, in a similar process to the way that the ornithologists' British Birds Rarities Committee operates. What should we, as a recording community, accept as sufficient evidence? This paper is offered as a contribution to that debate.

Guidance for Validation

The levels of difficulty shown below can be used to sort species into groups. The statements below refer chiefly to males. For many genera a satisfactory key to females has yet to be published and in those cases, where a voucher specimen is female, it should be noted and the site searched further for confirmatory males.

Level of identification difficulty - Criteria

Level 5. Microdissection of male genitalia necessary to display apodeme or other character. Eg. *Tasiocera*, *Paradelphomyia*, *Ula mixta*.

Level 4. Some genitalia dissection needed and/or genitalia complicated and/or difficult to see. Eg. *Gonomyia*, *Idiopyga*, *Rhabdomastix*.

Level 3. Binocular microscope needed to see small features such as male styles. Eg. *Erioptera*, *Ormosia*.

Level 2. Diagnostic characters distinct with hand-lens. Eg. *Male Lunatipula*, *Limonia*.

Level 1. Diagnostic characters distinct with naked eye. Eg. *Acutipula*, *Limonianubeculosa*.

Species in Group 5. Voucher specimens, drawings or photos of diagnostic characters necessary to confirm the record. Eg. *Tasiocera jenkinsoni*, *Paradelphomyia fuscata*, *P. dalei*, *Rhabdomastix laeta*

Species in Group 4. Voucher specimens, drawings or photos of diagnostic characters necessary to confirm the record. The genus *Gonomyia* have complex genitalia which can be difficult to make out. Parts change shape or are concealed according to the viewing angle. This means that evidence such as is demonstrated by photomicroscopy is hard-won, and difficult to present.

Species in Group 3. A description of the diagnostic features observed may be requested, especially if the species is rare or in an atypical habitat.

How common or rare a species is another criteria relevant to the evidence required for identification and this can be measured by the National Rarity Indices. If a species is common and widespread (NRI 1 or 2) the record is usually accepted without any anxiety. If however it has only previously been found in a few hectads then it would be necessary to present the full evidence with the record.

The National Rarity Indices

NRI 1	Species found in > 100 hectads
NRI 2	Species found in 30 – 100 hectads
NRI 3	Species found in 16 – 30 hectads
NRI 4	Species found in 6 -15 hectads
NRI 5	Species found in 2 – 5 hectads
NRI 6	Species found in 1 hectad only.

List available from the author.

Some examples of Verification Levels (VL) with the National Rarity Indices (NRI)

	VL	NRI	
<i>Gonomyia bifida</i>	4	4	Voucher
<i>Gonomyia conoviensis</i>	4	4	Voucher
<i>Gonomyia dentata</i>	4	2	
<i>Gonomyia hippocampi</i>	4	6	Voucher
<i>Gonomyia lucidula</i>	4	2	
<i>Gonomyia recta</i>	4	2	
<i>Gonomyia simplex</i>	4	2	
<i>Gonomyia tenella</i>	4	4	Voucher
<i>Gonomyia abbreviata</i>	4	5	Voucher
<i>Gonomyia edwardsi</i>	4	4	Voucher
<i>Hoplolabis areolata</i>	4	4	Voucher
<i>Hoplolabis vicina</i>	4	4	Voucher
<i>Hoplolabis yezoana</i>	4	6	Voucher

There are no hard and fast rules. A species like *Ctenophora ornata* is very distinctive and it appears to be spreading northwards. When it appeared in Sherwood Forest at light, fortunately the Pembertons were able to photograph it and remove any shadow of doubt as to the validity of their record. (CN 26. 2013). There is a specimen of this species in the Wingate collection in Newcastle, from a site in the north east. The specimen looks authentic and has a layer of soot characteristic of specimens from that time and place. It is simply labelled 'Bishop Auckland, --07, Wingate.' and there are no other details with the specimen. (CN 24 2012) Did it come from imported timber, or was it a gift from one dipterist in the south of England to one in the north ? So the locality is as important as the species name and despite the presence of a labelled specimen, the presence of *Ctenophora ornata* in Bishop Auckland has not been accepted.

References

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John Kramer

British Craneflies by Alan Stubbs

Buy yours now, while stocks last !!!

Any suggestions for amendments to the book can be made to the author, Alan Stubbs, Pete Boardman or to John Kramer.

The next copy deadline for Issue #39 is June 21st

2022. john.kramer@btinternet.com

If you are not on the list to receive an extended e-copy please send your email address to the editor.



Anthomyiidae Newsletter No 13

Spring 2022



David Michael Ackland (1927-2021)

You will have read the reminiscences and tributes in the last Bulletin (Issue 92) and they very much reflect my own few years of working with him on the Anthomyiid data. Michael is seen above collecting in some alpine location in France at a date unknown to me, but perhaps someone can supply the details. We had an extensive e-mail correspondence from which I learnt much not only about the entomology but also useful IT resources such as new file transfer sites. He also supplied me with a reference set of specimens in which every British genus was represented. In March 2019 I had the opportunity to visit him at his home in Bridport and see his well-equipped workroom with the shelves of boxes from around the world.

Sadly, the many species new to science in these boxes may have to remain unidentified for a while. Michael had also hoped to develop the keys to the British species into an RES handbook (though he also said that it would have been better to base it all on the genitalia). The DF Committee has agreed that it should be a priority to get these keys into a publishable form.

Anthomyiidae Recording

Although we have suspended verification on IRECORD and so been demoted from the status of a Recording Scheme, records are continuing to come in both from dedicated dipterists and from a wider range of digital photographers and leaf-mine enthusiasts. IRECORD has nice facilities for filtering and displaying records and also you can generate a species list for a family in a given period of time and geographical region. The last Newsletter (No 12 in Bulletin 89) summarised the Anthomyiidae data up to early December 2019 when over 17,000 records had accumulated.

Over the last two years just over 4,700 further records have been entered covering 156 species of which 32 are nationally scarce or rare. Just two of these are discussed below. Meanwhile, please continue to send in records. If you have extensive spreadsheets you may prefer to send them to me at helophilus@hotmail.co.uk and I will upload them to IRECORD on your behalf.

The Anthomyiidae Study Group continues in existence as a list of e-mail addresses for the exchange of interesting observations and queries, and pre-publication copies of these Newsletters. Just e-mail me at the above address if you would like to be added.

Hydrophoria diabata in Scotland

Until last year, there was one record of this species *Hydrophoria diabata* (Pandellé 1899) on IRECORD, from Michael Ackland's own 1965 record from Wytham Woods, the University's ecological laboratory just west of Oxford. Now it has turned up in Scotland twice. On 6 June 2020 Ali Shuttleworth found the species at NT17868348 in the Braefoot Plantation near Dalgety Bay on the north side of the Firth of Forth. The IRECORD comments state that the identification was confirmed by Michael Ackland by email. It was swept among low vegetation in mixed woodland around abandoned WWII buildings in a sunny patch comprising mostly

Dog's Mercury but also nettles and *Dryopteris*. Here is the crucial photograph showing the sharp upturn of the surstylus with a sharp point, differentiating the species from the familiar *H. lancifer*.



This summer on 22 June Sam Thomas found the species in woodland by a river in the hills near Pitlochry in Perthshire (NN881699), with an equally convincing photograph on IRECORD

Hydrophoria diabata was added to Peter Chandler's British checklist only as recently as 2017 (see *Dipterists Digest* **24**, 210) following the addition of Michael's record to the database. Peter gave a reference to Collin (1953) as the first British record of the species. The current checklist notes that it was synonymised with *lancifer* by a no less eminent a dipterist than Hennig in 1969. Michael's previously unpublished details of the differences between the two species are as follows:

Hydrophoria lancifer: Surstyli shorter, apical half in caudal view wider, lateral setae longer. In lateral view tip of surstylus bluntly upturned. Epandrium shorter in lateral view than *diabata*. Sternite 5 processes in basal half with shorter setulae, which are in more than one row.

Hydrophoria diabata: Surstyli longer, apical half narrower in caudal view, lateral setae shorter. In lateral view tip of surstylus sharply upturned into a sharp point. Epandrium longer in lateral view than *lancifer*. Sternite 5 processes in basal half with a single row of longer, inwardly inclined setulae.

"There may be differences in the chaetotaxy of the legs or thorax, and differences in colour, but I only have 2 males of *diabata* in my collection. This is not enough to be able to separate normal variation from any differences between the two species.

"*Hydrophoria diabata* appears to be present in very small numbers compared to the very common *lancifer*. I have seen specimens of *diabata* from Switzerland, and there are specimens in the Hope Dept. in Oxford (Verrall-Collin Coll.). No doubt more males remain to be discovered in other collections mixed up with *lancifer*. They can generally be recognised by the longer epandrium which is often visible even if the genitalia have not been pulled out when pinned."

Komzáková and Michelsen (2015) added the species to the fauna of the Czech Republic and stated that it was previously known from Austria, France, Germany, Great Britain, Greece, and Switzerland.

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Komzáková, O. and Michelsen, V. 2015. New records of Anthomyiidae (Diptera) from the Czech Republic and Slovakia. *Acta Mus. Siles. Sci. Natur.* **64**, 151-154.

Botanophila bicilaris locally abundant in Lancashire and Cheshire

Many of us no doubt embarked on special projects as COVID struck in March 2020. I was fortunate in being 20 minutes' walk from a site I've visited occasionally over the years. It is Houghton Green Pool (SJ6292) in VC59 (South Lancashire), which you may have unwittingly passed by as it is adjacent to the M6/M62 interchange. It is a saucer-shaped depression formed by the excavation of stone for the motorway construction and ten years ago it was a lake several hundred metres in extent. Progressive ground-water abstraction has reduced its level over the recent years, so that in dry summers it almost disappears. There are now successive rings of willow which have germinated on the contours that the water level reached in successive years: even in a wet winter the pool reaches only a small fraction of its former size – the photo overleaf shows it in February 2021.

My plan was to undertake weekly 15-minute sweep-net surveys at 6 locations spaced over the willow scrub area to see if one could obtain replicable and comprehensive data on the diptera fauna of a relatively simple habitat



in an early stage of succession. I did indeed manage to carry this through right to the end of September, amassing 3113 records (ie occurrence at a sample location in a particular week) of 381 diptera species. Details of the statistical analysis of this data will appear in a forthcoming paper in the *Dipterists Digest*.

The list of Anthomyiidae with numbers of records was as follows:

Adia cinerella(1), *Anthomyia liturata*(1), *Anthomyia procellaris*(3), **Botanophila biciliaris*(24), *Botanophila discreta*(14), *Botanophila fugax*(7), *Botanophila jacobaeae*(4), *Botanophila sericea*(23), *Botanophila sonchi*(1), *Botanophila striolata*(6), *Delia coarctata*(1), **Delia diluta*(1), *Delia florilega*(25), *Delia platura*(21), *Delia radicum*(1), *Egle ciliata*(3), *Egle lyneborgi*(6), *Egle minuta*(7), *Egle rhinotmeta*(18), **Egle subarctica*(4), *Hydrophoria lancifer*(5), *Hydrophoria ruralis*(1), *Hylemya urbica*(22), *Hylemyza partita*(1), *Lasiomma seminitidum*(3), *Paradelia intersecta*(4), *Paregle audacula*(6), *Pegomya caesia*(1), **Pegomya ?sociella*(1), *Pegomya winthemi*(2), *Pegoplata aestiva*(9), *Pegoplata annulata*(41), *Pegoplata infirma*(17), *Pegoplata nigroscutellata*(5), *Phorbia fumigata*(4), *Zaphne ambigua*(1), *Zaphne divisa*(6).

Although this list includes 17 of the top twenty species nationally (Ackland *et al*, 2017), there were also many surprises. The asterisks indicate four species included in the recent Natural England species status review (Falk and Pont 2017). One of these, *Botanophila biciliaris* was the third most frequently encountered, just behind *Pegoplata annulata* and *Delia florilega*. Falk and Pont (2017) classed this as “provisionally data deficient” based on four widely scattered locations, three in Scotland and one in Surrey between 1964 and 1994. The NBN Atlas has two more recent records, from Mike Pugh in the West Midlands in 2012 and from Nigel Jones in Shropshire in 2017. The habitat for the earliest record by Parmenter in Mitcham in 1964 is unknown, but all the others are from waterside locations.

The species has been recorded from several central European countries (KomzÁková and Rozkošný, 2009), Finland (Michelsen, 2014) and Denmark (Skipper *et al.*, 2020). In a survey of the Anthomyiidae of six peat bogs in the Czech Republic (KomzÁková *et al.*, 2011), it was one of the scarcer species, being found only at one site at just an altitude of just over 1000m. This distribution is reflected in this GBIF map with the intriguing addition of one record in Alaska.



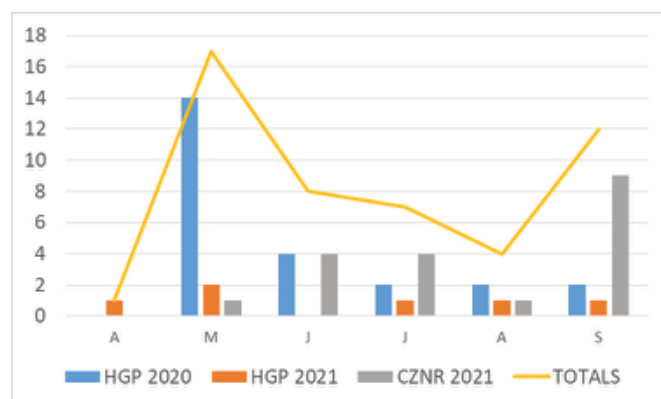
The larval life history of *B. biciliaris* is not known, but curiously the phylogenetic analysis by Leuchtman and Michelsen (2015) places it next to the globeflower (*Trollius*) parasite genus *Chiastocheta* Pokorny 1889. *Trollius* is a genus in the buttercup family Ranunculaceae, which was well-represented at the site by both *Ranunculus repens* and *R. sceleratus*. Incidentally, Leuchtman and Michelsen (2015) also list *B. discreta* and *B. striolata* as associated with *Ranunculus* species.

In 2021, I continued with the same survey pattern at Houghton Green Pool, but only once a fortnight to allow more time for recording elsewhere. I have not yet analysed the overall results, but *Botanophila biciliaris* was again present, albeit with only 6 records, a 50% decrease on the previous year after allowing for the halved sampling effort. I also made fortnightly visits to Chester Zoo Nature Reserve in VC58 (SJ4070) where I

took sweep-net samples at 12 locations. The centrepiece of this reserve is a meadow of about 4 hectares in extent, converted from a pasture about 5 years ago by scraping the topsoil and reseeding with native wild flowers. 4 of my sample locations were located in the meadow. Another 4 were in an adjoining marshy strip of land about 80m wide and extending alongside a canal. The other 4 locations were in varied habitats at the periphery of these two main zones, including an area planted with a wide range of native trees, hedgerows and ponds. Remarkably *Botanophila biciliaris* was abundant here as well, a total of 19 records with 10 in the meadow, 4 in the wetland area and 5 in the peripheral sampling locations.

The overall result is that I have obtained 49 records in 2020-1 for a species with only 6 previous records nationally. They are split between two locations 30 km apart. The habitats in the two locations have developed only in the last five years or so, and apart from being relatively open with still water features they are not particularly alike. Buttercups are certainly a common feature.

A chart of the monthly number of records shows a long season with peaks in May and September. Interestingly the May peak is dominated by the 2020 results at Houghton Green Pool while in 2021 there was a late surge of both males and females in September at Chester Zoo.



Amongst *Botanophila* species, *B. ciliaris* is one of the few with an anteroventral bristle on the middle tibia. It is a medium-sized species distinguished by the backward curve of the surstyli, reminiscent of *Hylemya variata* though without plumose antennae. The surstyli with their small projections near the tip in rear view are quite different from any other British *Botanophila*. The species is not covered by the female *Botanophila/Delia* key in Ackland *et al* (2017) but my samples included females keying out to couplet 16 for *D. linearis/nigrescens* though clearly not either of those.

So it is unlikely that this species would be overlooked by recorders of Anthomyiidae. It seems to be a species with a good dispersive capability which has increased over the last half-century and favours early-succession sites. But whether this has been a steady progression under the radar or a recent population explosion in North-west England remains to be seen. If you do record this species, please include a good description of the habitat in the comments section of IRECORD.

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Swarming in *Paradelia intersecta*

By Martin Drake, martindrake2@gmail.com

My observations that I report here surely cannot be original but a quick search through the Anthomyiidae Newsletters and elsewhere revealed few observations on swarming in this family. In the autumn of 2020 and 2021 I watched several species of flies swarming high up or close to trees in my rural Devon garden. These included the muscids *Hydrotaea armipes* (Fallén), *H. cyrtoneurina* (Zetterstedt), *Hebecnema umbratica* (Meigen) and *H. vespertina* (Fallén), but the fly most frequently seen swarming was *Paradelia intersecta*. This is moderately common species, particularly in the

Table 1. Dates, weather and position of swarms of *Paradelia intersecta*.

Date	Time	Temp. °C	Weather	Position of swarm
30 Oct 2020	10:00	14	overcast, windy	not noted
1 Nov 2020		14		by tall <i>Salix 'alba'</i> , at 4-6m
4 Nov 2020	14:30	11.1	bright, sunny	by small horse-chestnut <i>Aesculus hippocastanum</i> , to one side and slightly below branches, in sunlight, at 1.5m
8 Nov 2020	8:50 and 10:25	12.8	misty, still	by tall <i>Salix 'alba'</i> , usually just below now leafless branches, at 4-6m
8 Nov 2020	9:30	12.6	misty, still	by small willow <i>Salix cinerea</i> at 2-3m
11 Nov 2020	8:50	not recorded	warm, overcast, windy	by apple <i>Malus</i> , at 1-1.5m
14 Nov 2021	12:15	11.8	¾ cloud, slight wind	by tall birch <i>Betula</i> at 2-3m, about 8 flies
14 Nov 2021	13.35	12.0	¾ cloud, slight wind	by ornamental cherry <i>Prunus cerasifera</i> , at 1.5-2m, about 12 flies

south and west of Britain (Ackland *et al.*, 2017).

I checked the identity of a representative of each swarm caught using a sweep-net, and released those that were obviously one of previously collected species (examined under a microscope – not in the field). All these individuals were males. It was difficult to estimate the number of flies in any group, particularly against a dull grey autumn sky, so this useful information was not often collected. I have summarised the conditions when these swarms were seen (Table 1).

While there was some variation in the flies' behaviour, a generalised description of the swarming behaviour is given here, based on these separate swarms. Swarms varied in size from about five to perhaps 30 flies. They were found between 1-4m above ground, and only occasionally higher. The flies occupied a sausage-shaped volume about 30-80cm across and up to 4m long for large swarms, positioned just 20-50cm away from the outermost twigs of the tree, so that flies were close to twigs on which they landed but still had a large arena. The volume occupied seemed proportional to the number of flies. The whole swarm sometimes shifted position slightly but the flies showed a strong affinity for just a few twigs on which they landed, and this appeared to fix the position of the swarm.

The flight pattern of individual flies consisted of brief fairly steady motion but almost never true hovering, followed by more rapid darting away, before resuming the steady flight. These two phases lasted only fractions

of a second so that, without looking carefully, the flight appeared to be a chaotic zigzagging. The flight path was usually about 30-50cm long although sometimes up to about 100cm. When in flight, the flies rarely got closer than about 5cm to each other, although would often briefly fly on parallel paths before moving apart. When they converged closely, they started a very brief 'dogfight' before separating. The overall effect of the zigzag flight and rapid 'repulsions' was of a chaotic affair but which seemed to involve considerable interaction between flies.

Unlike some swarming flies which remain aloft for a very long time, *Paradelia* showed an alternating swarm-then-rest pattern. The flies took off more or less in synchrony, swarmed for perhaps 30-60 seconds then settled together, although in a rather undisciplined manner so that some flies remained 'swarming' by themselves while others settled well before the majority. After about another 30-60 seconds, they took off again. When the flies settled on the outermost twigs (leafless by mid-November), often two or three alighted within 1-2cm of each other, which suggested deliberate behaviour in view of the huge number of similar twigs available. So their behaviour in flight could be interpreted as more aggressive than when they settled. Their behaviour when they settled could be interpreted as either each fly independently selecting a preferred set of just a few leaves or twigs or, since they often sat close together, they contrived to remain in close visual contact with each other. More likely is a combination of

these, with the initial selection being based on features obscure to a human, then communal behaviour reinforcing their return to the preferred site.

The swarm 'marker' appeared to comprise a vertical surface - a moderately tall twiggy tree - next to open ground - lawn. No *Paradelia* swarms were found where branches formed a more enclosed air-space. Few swarms were found altogether so the population of the garden was highly aggregated despite numerous apparently suitable sites. This strongly suggests that the flies collectively sought their preferred location rather than merely responded to physical cues.

Once the pattern of flight of a species had been recognised, it was possible to distinguish *Paradelia* from the muscids *Hydrotaea* and *Hebecnema* whose flight was less chaotic and included very brief periods of hovering, the swarms lasted for longer between settling, and were positioned further from the tips of branches. In the case of *Hydrotaea cyrtoneurina*, swarming took place in a large but sparsely populated swarm over open lawn. A single male of the anthomyiid *Hydrophoria ruralis* (Meigen) was collected from the lowest part of a swarm but it was not clear whether the higher-flying individuals were this species too or whether this individual was a passer-by among other flies far too high for my net. I am inclined to think that this very common species does not swarm. A small swarm of *Delia platura* (Meigen) was seen on 31 October 2020 beside the roof gutter of the house where I caught a specimen from an upstairs window (8:15 a.m., 14.5°C).

Anthomyiids have been recorded swarming before. Michael Ackland (1997) wrote that *Egle* swarm at sallow blossom in spring on warm days, sometimes at a great height, and later (1998) he reported *Delia cardui* (Meigen) flying rather rapidly around fruit trees. On another occasion a single male of this species was flying rapidly and erratically around a hazel bush on which it landed, selecting the same branch on several evenings, and later several males competed for position of dominating this branch, which was preferred to any other possible perching sites on the bush. These observations are similar to mine and also for the muscid *Hebecnema nigricolor* (Fallén) (Drake 2022). Reid (1940) described flight behaviour of *Delia platura* (as *Hylemya cilicrura* (Rondani)) in North America and his observations suggest swarming similar to that described here.

These few observations suggest that swarming calyptrates have complex behaviour showing considerable interaction between individuals, including synchronised swarming and settling, homing on the

same tiny area of twigs, and apparently changing their behaviour from aggressive when in flight to communal when settling. Swarming behaviour is assumed to be linked to mate attraction but to prove this would require considerable effort and diligence.

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Wing-waving display in *Fucellia*

On 1 July, Pete Boardman sent me a video of some curious behaviour in *Fucellia* seaweed flies near Conwy in North Wales. I circulated this to the Anthomyiidae Study Group and lively speculation and debate ensued. It turned out that this phenomenon had been the subject of a study by Memmott and Briffa (2015) at Plymouth University. It still seems curious to find such behaviour in a species without wing markings and with relatively small eyes.

In August, we received another such video from Alan Watson Featherstone, this time at a Scottish beach. It can be viewed on YouTube at

<https://youtu.be/ISvJZLCm3Qw>

Reference

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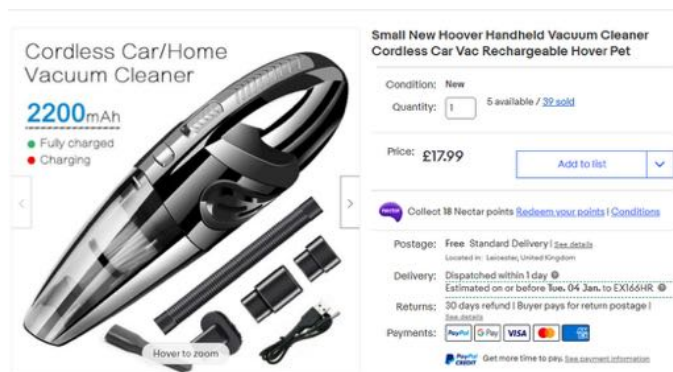
Phil Brighton
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Lesser Dung Fly Study Group - Newsletter 2

Suction sampling with a hand-vac

Andrew Cunningham

Suction sampling is an effective means of collecting sphaeroceridae from dung piles, tidewrack seaweed, compost bins, carrion, etc. but carrying a large petrol or battery-operated cordless leaf vacuum is not always ideal. For example, if you were out for a walk or using public transport. One solution is to modify a cordless hand vacuum that can be carried in a backpack. There are various models at a wide price range available on the internet. The market is evolving rapidly with some becoming very cheap as I made mine, but one must be wary of buying too cheaply. You get what you pay for. The majority follow the same basic design of a hand-held motor being attached to a dust housing with a filter in between. My modification involves removing the filter and sealing the motor to the housing with duct tape such as Gorilla Tape to maximise suction power. The shortest nozzle is then selected to wedge in a piece of fine net curtain mesh fabric into the suction hole to trap insects. The vacuum is then used to extract insects from their habitat before switching the motor off and tapping them out into a net, bowl or tray for selection. Hopefully, the three images attached explain this. There is also a video available on the DF YouTube channel at <https://www.youtube.com/watch?v=aHJySnGrIjw>



A high proportion of lesser dung flies are very small and useless at flying. Standard sweep netting will not find these – hence, the advantage of suction sampling. A few interesting examples caught with the modified hand vacuum are *Trachypella bovilla* and *Spelobia cambrica* (pNationally Scarce) from cattle dung and *Telomerina pseudoleucoptera* from a mature pile of grass cuttings.

Sphaeroceridae recorded in Devon during 2021 (Andrew Cunningham)

Various field methods were deployed in the pursuit of sphaeroceridae specimens including a modified hand vacuum cleaner, a malaise trap, a battery-operated cordless leaf vacuum, tussocking, potting individual specimens manually, sweep netting, rearing from fungi, water pan trapping and baited traps. Due to a higher

degree of caution as a result of Covid, my sampling was mainly close to home or on Devon Fly Group field meetings. I did not visit the coast as much as I would have liked. A large number of samples were placed in 2ml tubes of alcohol and have not yet been looked at, and so this is a provisional review and will reflect easily recognised species.

As things stand, 58 different species have been recorded of which the commonest five were *Spelobia clunipes* (74 records), *Chaetopodella scutellaris* (59), *Pseudocollinella humida* (55), *Lotophila atra* (47) and *Leptocera nigra* (32). The Devon Fly Group's own database does not hold a lot of Sphaeroceridae records, with this family having received little attention previously. Anyone taking a keen interest in this family will undoubtedly find species that are new for Devon and this proved the case in my second(ish) year of study. The following were recorded with no previous records according to our database; *Spelobia palmata*, *Trachypella lineafrons*, *Elachisoma pilosum*, *Opalimosina simplex*, *Coproica hirticula*, *Rachispoda cryptochaeta*, *Terrilimosina schmitzi* and *Trachypella bovilla*. The highlight, however, had previously been recorded in Devon twice prior, by myself at Watersmeet and this was *Spelobia cambrica* (photo), which is classed provisionally Nationally Scarce (pNS). Hopefully, what remains of the winter will be inclement enough to stay indoors and work on the remaining specimens. If anyone reading this has any records of sphaeroceridae from Devon, we would be grateful if we could add them to our database. (Email me at ajc321@hotmail.com).



The pNS species *Spelobia cambrica* (female)

PHOTO: Andrew Cunningham



Tales from the Dung Heap: Going Small Mark Welch

Horse-dung heaps provide an important food and heat resource for insectivorous birds such as pied wagtails and meadow pipits, particularly during the winter months. The heaps are noticeably warmer than the surrounding land due to decomposition of the dung and straw, and this heat promotes rapid development of fly immatures.

From January to July 2021, I made fortnightly visits to a local horse-dung heap near Ely in Cambridgeshire. The heap was completely removed in mid-July and the site refreshed in November, after which I started sampling again. This heap, about half the size of a tennis court, receives a mixture of horse dung and bedding straw from a stable 0.5 km away, with small increments made every month or so. On each visit 7-10 white water pan traps were laid and run for 8 to 30 hours. Total yields per visit were typically 300-500 sphaerocerid specimens. From Jan-July, 30 species were recorded – not bad for a single small heap.

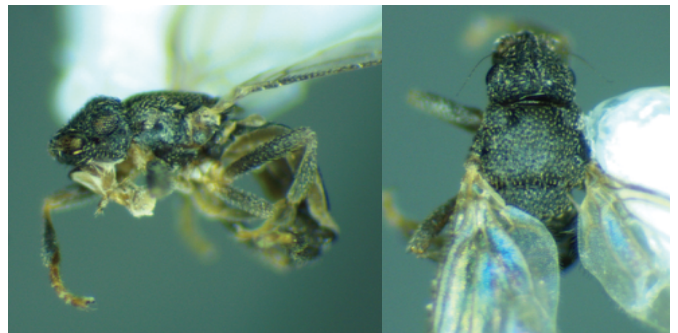
Two rarely recorded tiny lesser dung flies (~1mm), *Ischiolepta scabricula* and *Trachypella atomus*, were taken in small numbers (6 and 18 specimens, respectively) from the heap during May and June 2021. Although tiny, they are distinctive once your “eye is in” sifting the multitudes of more common larger species. *Trachypella* are very smart pied flies, typically 1-2 mm long. *T. atomus* and the more frequently recorded sibling species *T. lineafrons* are very small (1-1.5 mm) but share a distinctive wing venation that separates them from other *Trachypella* (vein R_{2+3} is very short). Females of these two species are easily separated by the presence (*T. atomus*) or absence (*T. lineafrons*) of an obvious median sternal keel (photo). Males are very similar, but their surstyli are distinctive.

Ischiolepta scabricula (sub-family Sphaerocerinae) is the smallest of the six British *Ischiolepta*. It has a typical *Ischiolepta* head profile with sloping frons (photo), a small eye and a distinctive uniform scutum ornamentation that lacks the bare longitudinal stripes of other *Ischiolepta* (photo).

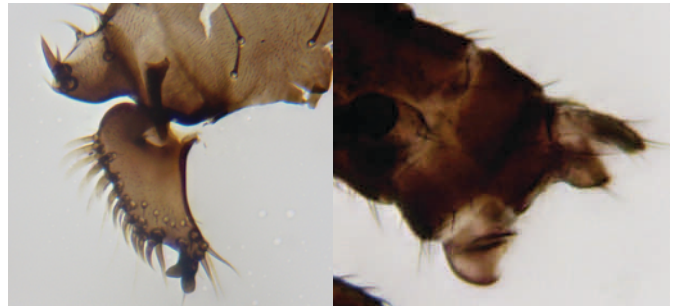
Other distinctive small (1-2 mm) sphaerocerids to look out for at horse-dung heaps are *Elachisoma aterrimum*, *E. pilosum* and *Telomerina pseudoleucoptera* (rarely recorded). Interestingly, *E. pilosum* (an infrequently

recorded species) was much more common at the heap than *E. aterrimum*, with over 70 specimens taken.

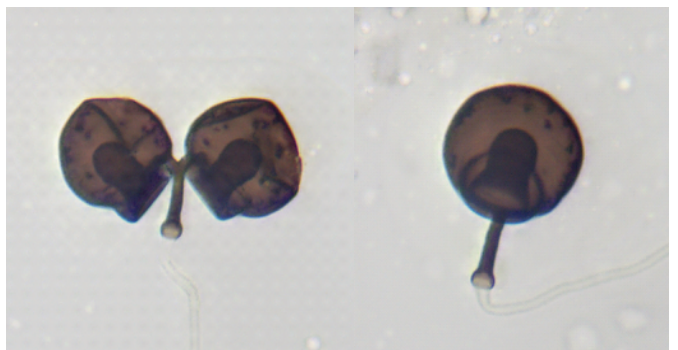
Dung and silage heaps are convenient small-scale targets for following the changes in the fly fauna over several months, really getting to know their phenologies and those of associated invertebrates, many of which will be predators or parasites of Diptera. So, if you are at a loose end, even in the bleak mid-winter, you could do worse than explore a local dung or silage heap. The Lesser Dung Fly Study Group would welcome your records! Please send any records or enquiries to both Andrew (ajc321@hotmail.com) and Mark (m.welch@nhm.ac.uk)



Ischiolepta scabricula male, Ely 12 May 2021



Left: *T. atomus* surstylus Right: *T. atomus* female S7 sternal keel



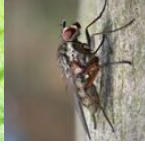
T. atomus paired and unpaired spermathecae

PHOTOS: Mark Welch



Soldierflies & Allies Recording Scheme

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Anthomyiids Anthomyiidae Study Group

Phil Brighton
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Tephritids Tephritid flies Recording Scheme

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Conopids Conopid Recording Scheme

with Lonchoceridae, Uliidae, Pliopteridae & Platystomatidae
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Agromyzidae Leaf-miner Recording Scheme

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Sciomyzids Snail-killing flies Recording Scheme

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Sepsids Sepsidae Recording Scheme

Steve Crellin steve_crellin1@hotmail.co.uk



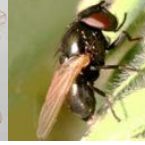
Micropezids & Tanypezids Silt & stalk-fly Recording Scheme

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Heleomyzids Heleomyzid Recording Scheme

Ian Andrews syrphus@hotmail.co.uk



Lance-flies Lonchaeidae Study Group

Nigel Jones nipajones@talktalk.net



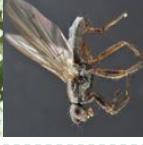
Hoverflies Hoverfly Recording Scheme

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David Liff davidliff@talk21.com



Rhinophorids Rhinophoridae Recording Scheme

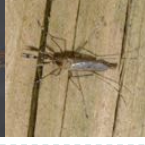
Ryan Mitchell ryanmitchell1994@live.com



Coeloptidae, Heterocheilidae, Helcomyzidae

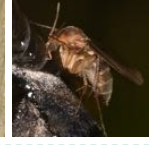
Kelp-fly Recording Scheme

Donald Smith KelptfyRS@gmail.com



Culicidae Mosquitoes Recording Scheme

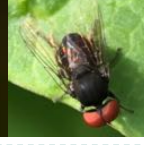
Jolyon Medlock jolyonmedlock@hpa.org.uk



Fungus Gnats Recording Scheme

Mycetophilidae & allies

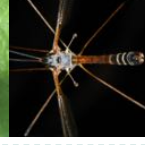
Peter Chandler chandgnats@aol.com



Flat-footed flies Recording Scheme

Platypezidae

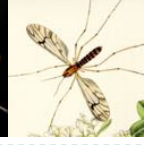
Peter Chandler chandgnats@aol.com



Craneflies Cranefly Recording Scheme

Pete Boardman pete.ento22@gmail.com

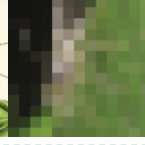
John Kramer john.kramer@btinternet.com



Dixidae & Thaumaleidae Recording Scheme

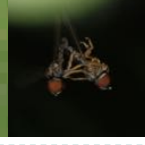
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Chironomids Chironomid Study Group

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Pipunculidae Study Group

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Dipterists Forum

Recording Schemes & Study Groups



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Scathophagids
Scathophagid Recording Scheme
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Calliphorids
Calliphoridae Recording Scheme
Olga Sivell aruma@wpp.pl



Hippoboscids & Nycteribiids
Ked, Louse & Bat-fly Recording Scheme
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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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Oestrids
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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).



Collecting



Disseminating

Own website

Scratchpad



iNaturalist project

Overseas interest

Look for Newsletters on these sites and in the Dipterists Forum Bulletin (<https://tinyurl.com/y3pqcajh>)

Dipterists Forum www.dipterists.org.uk

Publishing

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

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D. Sumner (ADS)