

BULLETIN OF THE  
**Dipterists**  
Forum

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Affiliated to the British Entomological and Natural History Society



# Bulletin No. 93

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Please use the Booking Form downloadable from our website

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Now organised by several different contributors, contact the Secretary.

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Photographs: Front cover *Neoitamus* sp. (France), Darwyn Sumner, above *Anepsiomyia flaviventris*, Ian Andrews

Other photographs as supplied by the authors or the editorial panel who would be pleased to receive illustrations for general purposes - many thanks for those already sent. If you want to catch the next front cover, please think about the orientation, it must be upright (portrait) and have an aspect ratio of 6:7 (or be croppable to that ratio)



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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](http://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 (11<sup>th</sup> 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](mailto: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 crane flies 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 crane flies 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 Lonchaecidae (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 albosetosa* (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 20<sup>th</sup> 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](mailto: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 5<sup>th</sup>. 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 0.1m<sup>2</sup> 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?

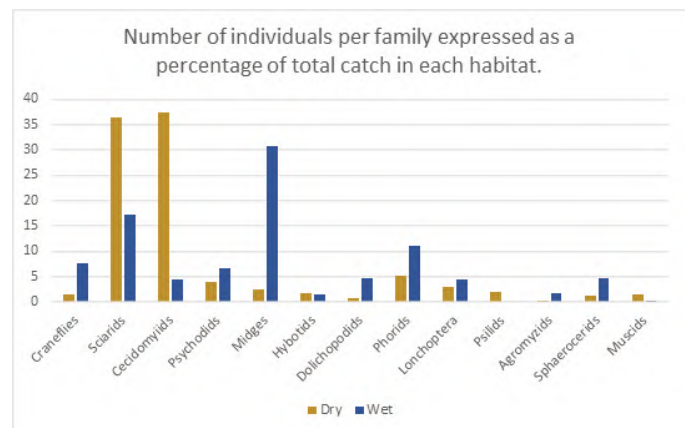
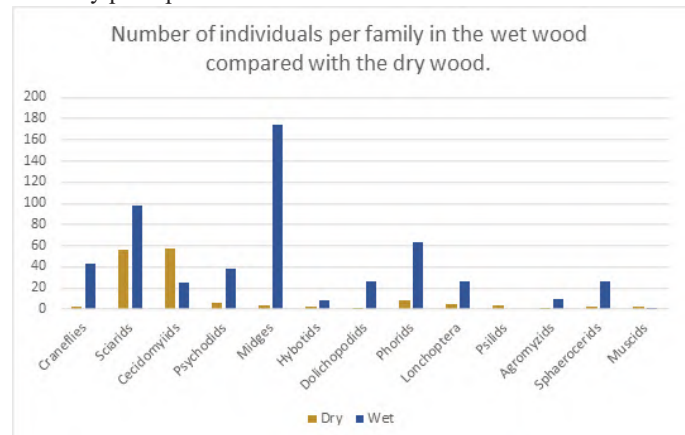
In 2021, in April, I set two traps in the same wet woodland (National Vegetation Classification W7b), to get some data for that month (in 2020 I ran the traps only in May, June, July and September). As a result, I am upping my estimated productivity to 38 million flies per ha.

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.

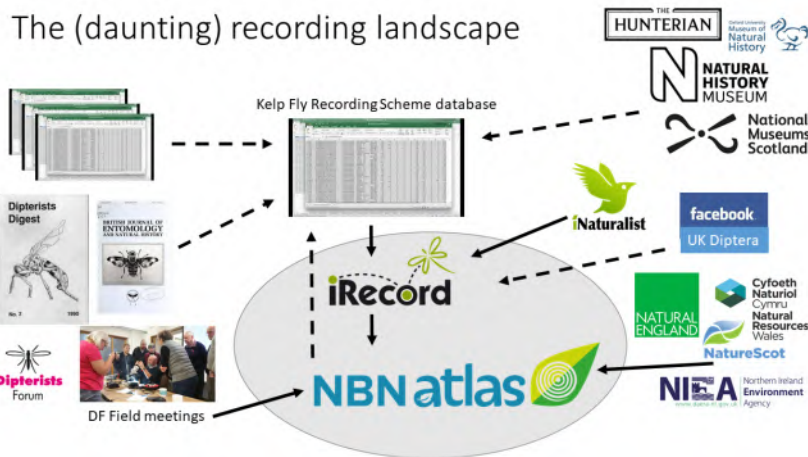
But it's not quite that simple. NBN also receives information directly from a variety of sources - Local Records Centres, survey work carried out on Nature Reserves or SSSIs, historic records and from Dipterists Forum Field meetings. Most of the records from these sources will be reliable even if they 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](https://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](https://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](https://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](https://irecord.org.uk/linking-inaturalist)) and via the NBN Trust website ([nbn.org.uk/inaturalistuk](https://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](https://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](mailto: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](mailto: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](mailto:davidiliff@talk21.com)

## Hippoboscidae and Nycteribiidae Recording Scheme

This Recording Scheme becomes Dipterist Forum's 7<sup>th</sup> 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](mailto:KelpFlyRS@gmail.com)

## Lesser Dung Fly Study Group



Newsletter #2 in this Bulletin

Mark Welch [m.welch@nhm.ac.uk](mailto: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](mailto: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 <sup>nd</sup> to 9 <sup>th</sup> July	0
2006	Lewes	24 <sup>th</sup> June to 1 <sup>st</sup> July	0
2007	Aberystwyth	14 <sup>th</sup> to 20 <sup>th</sup> 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

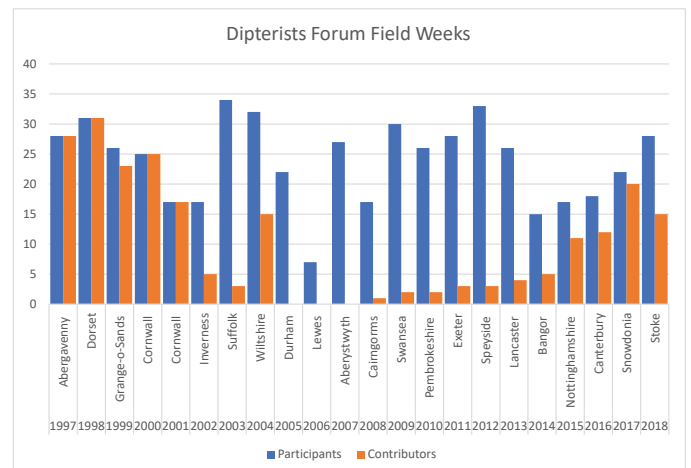
**Open Data:** <https://registry.nbnatlas.org/public/show/dp172>

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 12<sup>th</sup> to 19<sup>th</sup> 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.

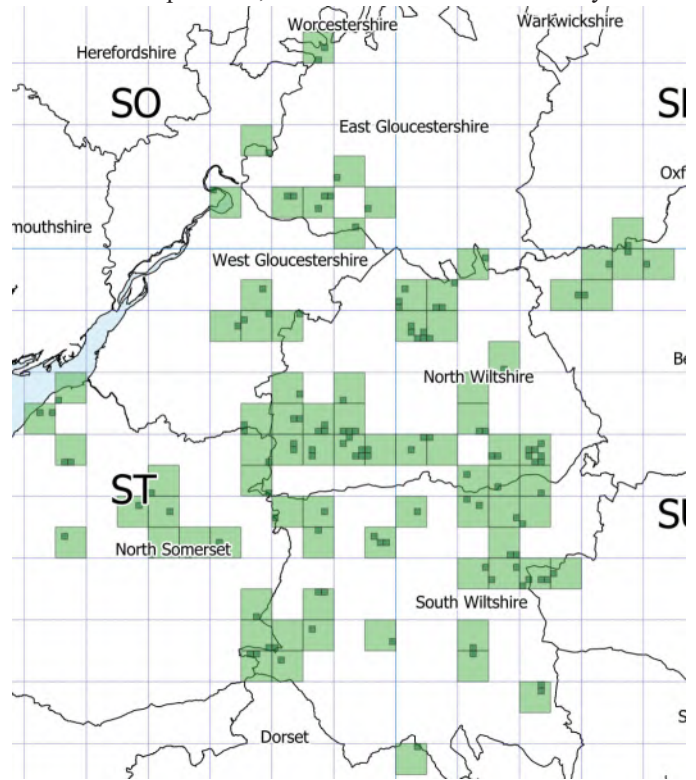
In November Roger informed us that he's got all the Spring and Autumn field meetings data up to 2016 digitised.

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 <sup>nd</sup> to 9 <sup>th</sup> July	
2023	Forest of Dean	50 <sup>th</sup> 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>)

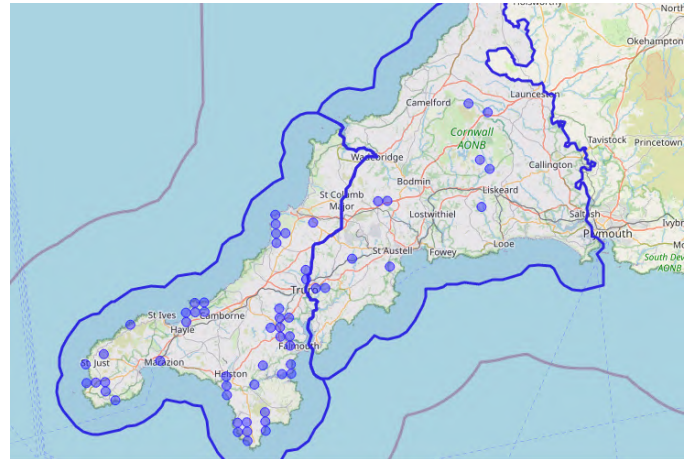
It seems reasonable to assume that by the time you're attending our 2022 Norfolk field meeting, you'll have sorted out all your records for the previous year. Accordingly we'll be uploading to NBN Atlas in Autumn 2022.

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

The screenshot shows the iNaturalist interface for a project titled "Cornwall Dipterists Forum Field Week" (JUN 25, 2021 - JUL 4, 2021). The project page includes a header with the iNaturalist logo, a search bar, and navigation links like "Explore", "Your Observations", "Community", "Identify", and "More". There are also buttons for "Upload", "0" notifications, and a user profile icon. The main content area features a large image of a river scene with a dark overlay containing the project title and dates. To the right, there's an "About" section with "Leave" (3 members), "Read More", and "Your Membership" options. Below this, there are buttons for "Edit Project" and "Project Journal". A statistics bar shows: Overview, 12 OBSERVATIONS, 11 SPECIES, 15 IDENTIFIERS, and 1 OBSERVER. A "Stats" button is also present. The "Recent Observations" section shows four entries with photos and species names: *Scathophaga stercoraria* (Yellow Dung Fly), *Cantharis flavilabris*, *Eristalis pertinax* (Tapered Drone Fly), and *Chloromyia formosa* (Broad Centurion Fly). Each entry includes a small profile picture and a date (6mo).



## 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 12<sup>th</sup> & 16<sup>th</sup> 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 4<sup>th</sup> & 11<sup>th</sup> 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

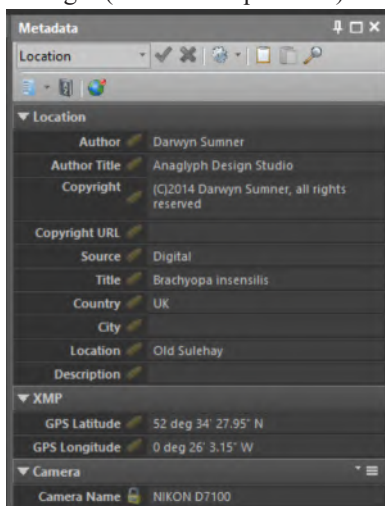
Leaf through a box of family photographs and on the back will be handwritten the place and year, maybe even more. All dads did that when those expensive prints came back from the chemists - they'd cost such a lot. Transparencies were a little harder to label but then along came digital and the task of 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 way<sup>1</sup>. 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)<sup>2</sup>:



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:

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

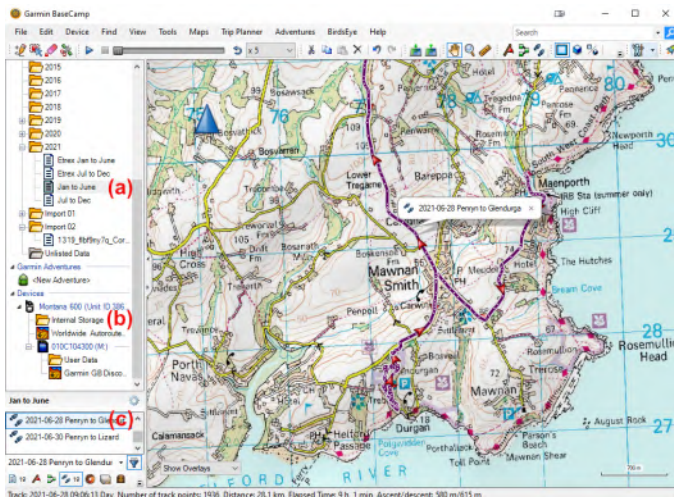
<sup>2</sup> Technically an EXIF metadata editor, several free ones listed at <https://tinyurl.com/y5enunza>



## 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.



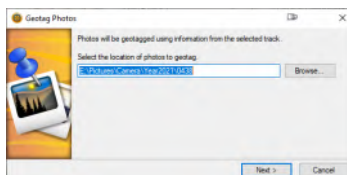
Basecamp set up ready to geotag images.

### Setting up:

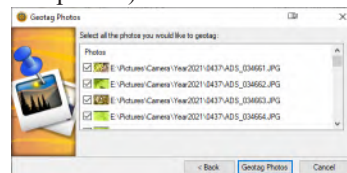
1. Connect your GPS unit to your PC. If you have OS maps on your device then enable them using Maps on the menu.
2. Look for your tracks on the connected GPS unit (b) and copy them into your local folders (a) using Basecamp.
3. Select one track (c) - which then shows up on the map.

### Geotagging:

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



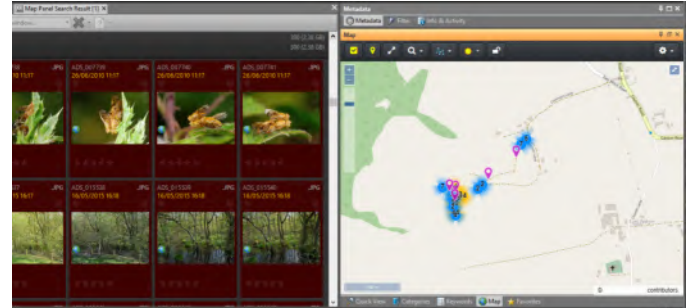
5. Next (don't tick the Import box or you'll fill your GPS with photos)



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

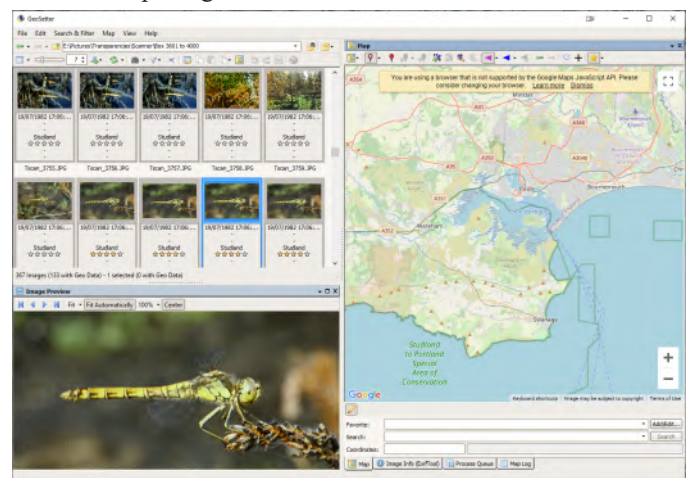
### 2. Lighthouse (£subscription)

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

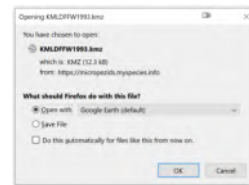
## Sharing with Google Earth

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.

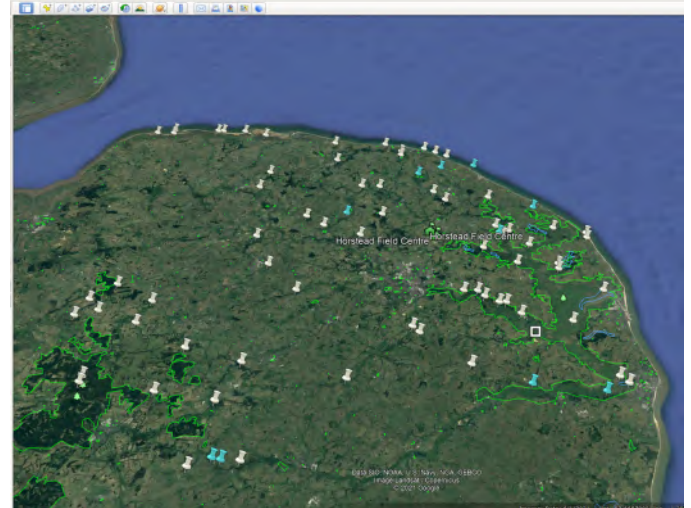
### Reading Google Earth files

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”<sup>\*</sup> 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.

<sup>\*</sup>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](mailto: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:

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

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

International payments should use:

IBAN: GB56NWBK60600848054615  
SWIFT: NWBKGB2L

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

#### OTHER PAYMENT METHODS

Cheques should be made payable to:

"Dipterists Forum" and sent to the address above.

PayPal payments can be made to:

[dipteristsforum@outlook.com](mailto:dipteristsforum@outlook.com)

or through our website:

[www.dipterists.org.uk](http://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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# MEMBERSHIP

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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/](http://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 *Dasydorylus 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 albipennis*,



*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 crane fly, 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 brevisrostris*. 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 brevisrostris* (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*, *Boreocylocerus 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](mailto: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](mailto:syrphidae11@sciencesconf.org)

David Iliff





## Expeditions - Summer Field Weeks 2006 to 2013





# 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	

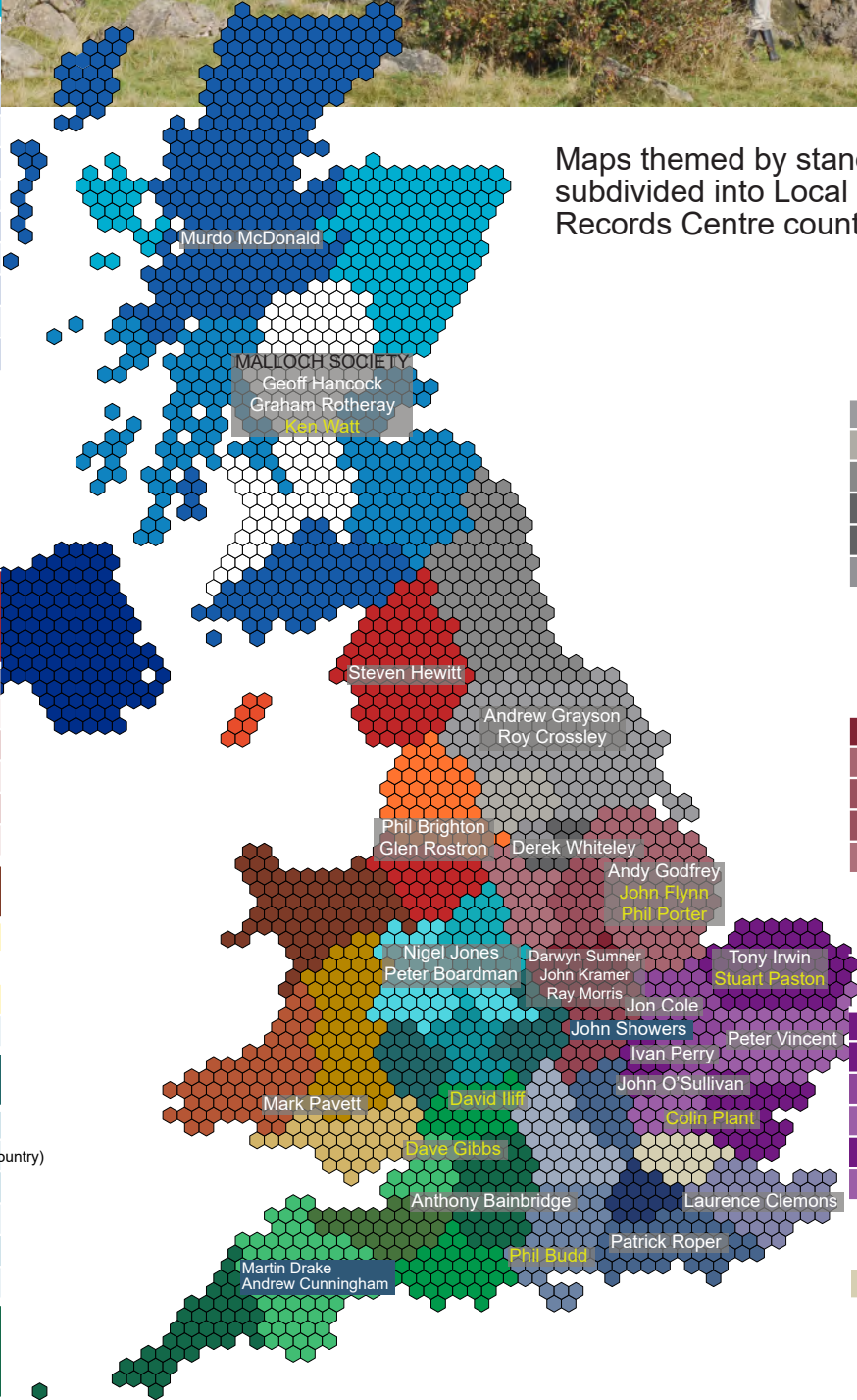
Ireland	
CEDAR (Ulster Museum)	

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.
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## 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