



BULLETIN OF THE  
**Dipterists**  
Forum

**Bulletin No. 85**

**Spring 2018**



# Bulletin No. 85

Spring 2018

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## Annual Subscription 2018

Obtainable via subscription to Dipterists Forum, contact John Showers  
Annual Membership (N.B. Overseas = £25 total)  
Forum - £8 (includes Dipterists Bulletin)  
Subscription to Dipterists Digest - £12

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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 Treasurer.

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Biological Records Centre also lists all schemes at [www.brc.ac.uk](http://www.brc.ac.uk)

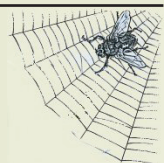
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**Dipterists Forum Website** [www.dipteristsforum.org.uk/](http://www.dipteristsforum.org.uk/)

**Dipterists Forum Forum** [www.dipteristsforum.org.uk/index.php](http://www.dipteristsforum.org.uk/index.php)



Photographs: Front cover *Dysmachus trigonus*, Darwyn Sumner, above *Hydromya dorsalis*, Malcolm Storey

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)





# BULLETIN OF THE **Dipterists** Forum

## Contents

<b>Editorial</b> .....	<b>4</b>
<b>Notice board</b> .....	<b>5</b>
NBN Atlas	5
Biological Recording in 2018	6
Recording Schemes	9
<b>Photography</b> .....	<b>13</b>
<b>Conservation</b> .....	<b>16</b>
Pesticides & pollution	20
<b>Regional groups</b> .....	<b>21</b>
Devon Fly Group	21
Northants Diptera Group	24
<b>Members</b> .....	<b>26</b>
Membership Matters	26
Dipterists Forum Data Protection Policy	27
<b>Review</b> .....	<b>28</b>
<b>Meetings</b> .....	<b>29</b>
Reports	29
Forthcoming	38
Contributing Bulletin items	40

**Contents**

**Events**

**Please consult the Dipterists Forum website for latest details of events.**

**Other items such as full details of training and workshops and our Membership form may be downloaded from Dipterists Forum website or by contacting the organiser.**

**A Booking form for meetings can be downloaded at <https://tinyurl.com/y9u3pc44>**

The following Newsletters and other special items are incorporated into the package for the printers after completion of the Bulletin. They have their own pagination. Please contact the Newsletter editors for full colour pdfs, back issues may also be found on the DF website.

- Agromyzidae Newsletter #6**
- Cranefly Newsletter #33**
- Fungus Gnat Newsletter #10**
- Flat-footed Fly Newsletter #2**

**Criteria for application to DF to produce identification keys**  
**Events list January 2018**

**Links: To access all links in this Bulletin use <https://tinyurl.com/y6wv6g57>**

**Fly Sheets**

## Editorial

### Award winning Dipterists

Congratulations to two of our members who won **UK Awards for Biological Recording and Information Sharing**.

**Jann Billker** whom many of us met at the Canterbury Field Week won the Gilbert White Youth Award for recording terrestrial and freshwater wildlife.

The Lynne Farrell Group Award for biological recording was won by South Yorkshire's Dearne Valley Landscape Partnership of which **Derek Whiteley** is a volunteer worker.

NBN's Chairman, Professor Michael Hassell said:

*"The painstaking work that individual and groups of biological recorders undertake over many years is all too often not publicly recognised. We wanted to correct that, and celebrate the outstanding contributions that British biological recorders have made to improving our understanding of wildlife in the UK."*

Congratulations to other prize winners too, I was particularly taken with the comment by another prize winner, Peter Hodge: *"I do it because I want to make use of the records and share them. Otherwise what else do you do with records? Leave them at home and die with them."*

**Alan Stubbs** also won an award this year. The Animal Hero awards are organised by a partnership of Mirror newspaper and RSPCA. There's a terrific account of him and his work at <https://tinyurl.com/y9zefe4t>

### Fly times

The October newsletter is now available to download at the NADS site. Fascinating accounts of some of their field trips there, I was particularly struck by the photograph of four Oestridae experts, presumably like our Andrew Grayson they have to get up close to animal hosts to catch their quarry (can we call them "moose whisperers"?). The **Diptera ARE Amazing!** regular feature includes strange beasts such as bat flies. [www.nadsdiptera.org/News/FlyTimes/Flyhome.htm](http://www.nadsdiptera.org/News/FlyTimes/Flyhome.htm)

### Redesigned Dipterists Forum website

At the time of writing a group of us have met via "Webinar" (a seminar conducted online and through telephones) to provide BRC developers with instructions as to how to proceed. Whilst we've had a quick demonstration as to how the Drupal tools will let us edit content, as I write this in early December we don't yet have access. The hope is that it can go live around March 2018.

### Colour issues

This issue of the Bulletin is a bit of an adventure being the first one to be printed in colour. We've considered it before but it was just too expensive until now. Dipterists Digest had investigated costs and came up with a new printing company so I suggested it again and now we've got colour too, many thanks to Rob Wolton who negotiated all that. I've worked with colour images in the Bulletin since issue #64 (available as colour pdfs) and so hopefully

have some grasp of the issues involved.

The "Contributing Bulletin Items" has been updated for those who are kind enough to send material for use in the Bulletin, here are a few tips that will help improve our image:

#### How to send images

1. **Incorporated into other files:** Image files are already very compressed so even ZIP systems (e.g. Winzip) don't help reduce the size. Place them in other files such as MS Word and others like Powerpoint and PDFs and the risk is high that quality will be downgraded.

2. **eMail:** Size is an issue as large files won't get through. Try single files or slightly reduced ones.

3. **File repositories:** Dropbox or similar can be used for files of any size. Easy to use, simply drop the file then send the shareable link. We use this to send the huge Bulletin pdf to our printers.

4. **Image sites:** Flickr (e.g. Steve Falk) & BioImages (e.g. Malcolm Storey), these have the added advantage of public access if desired.

#### Determining resolution and dimensions

Different graphics applications have different means of displaying this information but typically, even if you use the default system that came with your camera, you should be able to find out the following image information:

**Dimensions:** Bulletin columns are 9cm so the picture should be at least that, preferably double that or more.

**Resolution:** Commercial offset printing (this Bulletin and Dipterists Digest) requests 300 dpi, (cf business documents at 600 dpi & photographer's prints at 1200 dpi.) Images larger than the required dimensions we scale down, increasing their resolution. This makes no difference to the commercial print quality but the pdf version will have better resolution.

#### Image metadata

Setting your camera up so that your own name is automatically placed in the image metadata is a useful thing to do for all sorts of reasons, check your camera manual or software.

#### Technical obsolescence

Considered one of the major threats to the preservation of the wellbeing of digital archives, ageing hardware and software is a major cause of technical obsolescence. Despite proper planning we've fallen foul of both of these, Bulletin archives being one of them (see Archives article) and software redundancy another. Adobe's move to an expensive online annual subscription system of providing their software online compromises the investment in Desk Top Publishing both in terms of digital archives and decades of experience. Augmentation of Adobe's InDesign with

QuarkXPress 2017 to help produce the Bulletin is therefore currently under way. The editors would be grateful if any readers familiar with this latter software would make themselves known in to us, see <http://www.quark.co.uk/Products/QuarkXPress/> An older version of this was used by Malcolm Storey to compile one of the Soldierflies books and a new trial version used for the back page of this Bulletin.

Current Dipterists Forum initiatives will help address archive issues more thoroughly.



A spring favourite, *Brachyopa* sp. at Old Sulehay. Hand-held DSLR + macro flash [Darwyn Sumner]



# Notice board

## A wooden exhibit

The only exhibit at our Annual Meeting in Liverpool was a wooden fly carved by Richard Baker of Leicestershire Woodcarving Group. No actual flies. In the spirit in which Richard gave it to me when I expressed an interest at a County Show, I in turn gave it to Erica McAlister, perhaps it will turn up in one of her publicity antics at the Natural History Museum. In fact the annual prize was cancelled due to the absence of real flies but woodcarver Richard deserves credit as sole exhibitor.

Exhibiting insects at such events seems to be very much in decline, Peter Chandler informed us that this decline was marked at the BENHS exhibition earlier in the year. This was expanded upon in a cartoon in *Private Eye*. I have to confess that when I wish for satire from the newsagent I reach for the scatological rather than the political and so encountered an extensive feature on Flies in *VIZ* comic. Very appropriate that they should choose Harrison Ford as the spoof presenter in this article as it was in his movie *Enders Game* that the ant-like aliens were termed “buggers”.

I do hope that this does not mean that no-one is finding anything of interest to collect any more, the Annual Exhibits section in *Dipterists Digest* were always of great interest in the past. As I trundled the suitcase full of exhibition material back through Liverpool and Manchester Christmas Markets, it occurs to me that perhaps it's time to return to the idea of photographs as objects of our exhibition. Much easier to carry around than specimen boxes.

Darwyn Sumner

## Chairman's Round-up

Our Secretary Amanda Morgan gives a full account of the society's activities in her 2017 report for the AGM, including progress on our three development priorities, so I can keep this brief.

Our thanks are due to Victoria Burton for fulfilling the role of Treasurer for several years before stepping down at the AGM. She kept our accounts in good order and always made payments promptly. I am pleased that she is willing to remain on Committee. Many thanks to Phil Brighton for stepping forward to take on the role.

Martin Harvey and Tony Irwin were elected to Committee at the AGM and will I know play an active and helpful part in taking the society forward.

The role of Conservation Officer remains vacant – do please let me know if you are interested in taking this on. As I have said previously, it's a flexible position which may be developed as the post holder wishes. Meanwhile I will continue to cover it.

Dipterists Day in Liverpool was a great success – the venue was ideal and the talks excellent. Member attendance was strong, despite the difficulties some experienced with travel or finding affordable accommodation, and clearly everyone enjoyed themselves. Many thanks to Martin Drake for organising it – and these events do take a lot of organisation – and to our hosts at the World Museum Liverpool who looked after us extremely well.

May I add my congratulations to Jann Billker and Derek Whiteley for winning NBN awards for biological recording, and to Alan Stubbs who won an Animal Hero award for services to wildlife. Darwyn is going to say more about this elsewhere in the Bulletin.

Committee and society members have plenty of good ideas to improve delivery of the Forum's objectives, and our bank balance is healthy, so I am confident that in 2018 we will be able to make the society stronger and relevant and fit for modern times.

Robert Wolton December 2017

## NBN Atlas

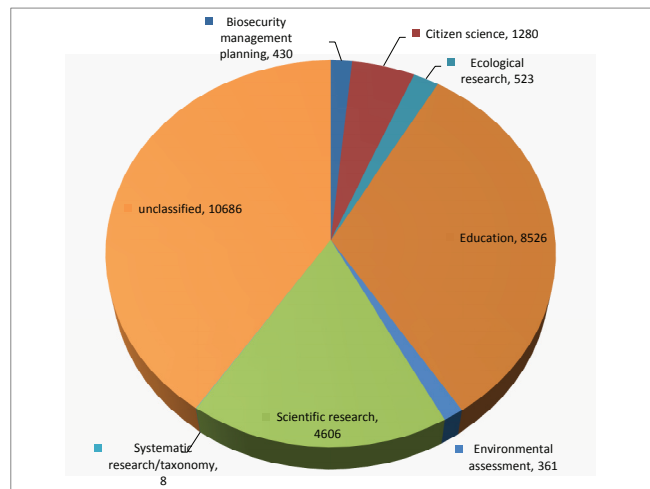
### Dipterists Forum on the Atlas

On the Dipterists Forum Atlas page under the heading of Data and Partners, the link at <https://registry.nbnatlas.org/public/show/dp172> lists all the datasets published under our banner. Select one of these “Resources” and you'll be taken to a page which summarises the dataset in some detail.

### Field Week usage figures

The NBN Atlas went live on 1st April this year, the response from users was initially a little slow and so the following figures and charts are based upon the eight months May to November 2017 and just include the datasets from our Field Weeks:

- Field Week 1999 (North West England) 4994 records
- Field Weeks 2000 & 2001 (Cornwall & Devon) 2808 records
- Field Week 2002 (Inverness) 1158 records
- Field Week 2015 (Nottinghamshire) 3711 records



Figures from our uploaded datasets have always been difficult to interpret, this was reported as being the case with NBN Gateway statistics way back in Bulletin #60 and it's even more vague now, twelve years later, with no indication of the groups or individuals who are doing the downloading. This is one of the issues that NBN secretariat who are managing the NBN Atlas hope to address.

Darwyn Sumner

## Biological Recording & Biodiversity Data Denial

One of the vulnerabilities of the US's Environmental Protection Agency was the broad absence of publicly available environmental data which allowed politicians to criticise their published papers and reject their findings. That watchdog was severely harmed as a result. There's a risk of it happening here too unless we are able to raise the profile of the large volumes of publicly available environmental data that we do have through the NBN Atlas.

ALERC observes that in England, the **25 Year Plan for the Environment** document <https://tinyurl.com/ybl5stva> included well over a hundred references to natural capital but not a single mention of the National Biodiversity Network (of which we are all part.) The environment can ill afford “biodiversity data denial”; respect for evidence is the mainstay of science, naturalists have been accumulating it and using it for conservation here for more than two centuries.

The profile of our biological recording and biodiversity data publishing needs to be raised in all sorts of areas.

Darwyn Sumner

## Biological Recording in 2018

A variety of biological recording tools and methods for dissemination of information play a part in the recording of Diptera and the meeting of our objectives.

Dipterists Forum's formal objectives are:

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

Dipterists Forum members have a diversity of interests, more or less focussing on some or all of these objectives. This Bulletin features them all, frequently every one in a single issue.

The desktop tools and online services we use in following our pursuits and objectives are subject to change. Regardless of individual choices and preferences, all of them play a key role in helping us fulfil objectives. The key biological recording application, Recorder 6, and its support services, are currently under threat.

### NBN Forum and support services

The forum "*dedicated to the various aspects of the NBN including the NBN Atlas, Recorder and Indicia.*" attracts a large number of naturalists in the biological recording sector and has been an excellent source of information and a general discussion forum for a number of years. Contributors include many names with which you may be familiar, count the number of posts and you'll find several Dipterists like myself are busy on there. Many issues raised in this Bulletin originated with topics raised there. Amongst regulars you'll also find Chris Raper answering enquiries about the NHM Checklist as part of his job. All of my posts these days relate to Dipterists Forum, the Recording Schemes and items in this Bulletin.

We owe much to many naturalists in different sectors who are keen to answer questions and enter into debates, many knotty problems have been solved by the likes of Charlie Barnes (Lincolnshire) Teresa Frost (BTO), Ben Deed (Lancashire), Christine Johnson (Scotland) and others.

Whilst the NBN Forum is maintained by NBN, it is also the means by which issues related to Recorder 6 are debated and solved by those involved with its upkeep (that includes Chris' work). Mike Weideli is employed as an R6 expert and member of the technical support team alongside Sally Rankin and John van Breda. All provide many support services on this forum. For naturalists using R6 it's Mike who helps maintain their systems.

### Recorder at risk

We've many users of Recorder in Dipterists Forum, it's one of just three systems used for data management work (includes Mapmate and home systems using Microsoft Access) each of which have different strengths and features. Dipterists Forum also has a good

deal of expertise in these systems, Laurence Clemons with MS Access, Martin Harvey in MapMate, Stuart Ball invented Recorder and several of us have used these systems professionally.

### A brief history of Recorder support

In 2003 I was invited onto the NBN's "Working with Volunteers Advisory Group", the outcome of which was that I finished up in their "Technical and resources" group (see Bulletin #57) and thus was fairly close to the developments that were proposed for our biological recording applications, specifically Recorder. At that time JNCC were actively funding the development of Recorder which, benefitting from the work of Charles Copp, culminated in the current version, Recorder 6. The direction in which JNCC allocated their funding gradually shifted over the years, online systems were seen as an important direction (e.g. resulting in iRecord.) Online systems perform only a fraction of the functions of full data management systems required by users needing to analyse records in depth (e.g. several Recording Scheme organisers and LERCs), they are not full replacements but have value for all schemes (see Bulletin #81.)

JNCC continued to maintain support for Recorder 6 in the form of technical bug fixes and technical support via the team of John van Breda, Mike Weideli and Sally Rankin.

**That funding stream has now ceased altogether.** JNCC's formal statement about this is to be found at <https://forums.nbn.org.uk/viewtopic.php?id=7028>

Shortly afterwards one generous anonymous Recorder 6 user stepped in and funded the employment of the technical support team for a further 12 months (or more) <https://forums.nbn.org.uk/viewtopic.php?id=7075>

Subsequently, as Recorder 6 is a fundamental component of the data management and service delivery systems of LERCs, a LERC consortium was set up to replace the lost funding and to take over JNCC's role in this regard. They were well prepared for this eventuality and so initiated this with considerable alacrity. For a ponderous NSS (well, we meet quarterly and they meet daily) keeping up with their speed of movement on this issue was tricky but we managed it, just.

### The Recorder 6 consortium

The LERC consortium's first action was to conduct a survey commissioned by Sussex Biodiversity Record Centre (SxBRC) and Greenspace Information for Greater London (GIGL) plus the ALERC Databases Group. This was conducted by Andy Foy in the form of an online questionnaire, his remit was "everyone involved in biological recording"

We first had our attention drawn to this survey by BRISC and eventually, by making enquiries on the NBN Forum, exploring a few links (<https://forums.nbn.org.uk/viewtopic.php?id=7047>), posting on to our own DF forum (<http://www.dipteristsforum.org.uk/t6131-JNCC-withdraws-support-Biological-Recording.html>) and emailing potential and actual Dipterists Forum Recorder users I was able to draw the survey to the attention of all those interested and completed it on behalf of Dipterists Forum and my Recording Scheme.

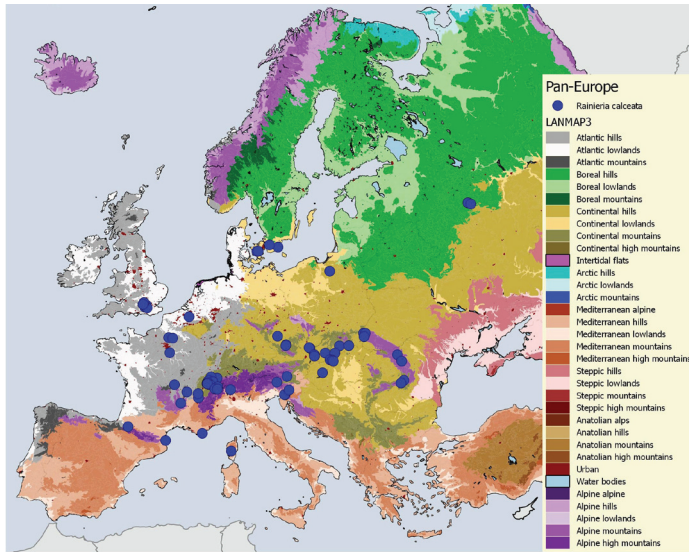
The survey, given the LERC originators, was rather focussed on LERC needs and resources. For example there was a question in there about how much of an annual fee one would be prepared to cough up to help support it. Well my Recording scheme is unfunded and I'm unpaid so a rethink is needed on that particular issue. I did my best to answer on behalf of Dipterists Forum as a whole but the short timescale meant that there were no opportunities to discuss the survey with other committee members.



Dipterists Forum members also responded, many thanks to them for letting me know. The survey analysis is being conducted by ALERC's Databases Group and because of the slower response from NSSs (not us!) they extended the deadline to 1st January. There will be a "phase 2" once the analysis has been completed and Dipterists Forum is prepared to participate.

### Engaging with the consortium

It is important that NSSs such as Dipterists Forum engage fully with this consortium. There are key differences between the data management and service delivery needs of an LERC versus those of an NSS. For example LERCs have few interests outside the UK whilst we do (see objective g); Recorder 6 was fundamental to the data management and analysis in my NFBR conference talk "*An endangered UK species in a European context*":



*Rainieria calceata* European distribution [Darwyn Sumner]  
Background map after Múcher CA, Klijn JA, Wascher DM, Schaminée JHJ. 2010. A new European Landscape Classification (LANMAP): A transparent, flexible and user-oriented methodology to distinguish landscapes. *Ecol. Indic.* 10(1):87–103  
Numerous data sources; data management using Recorder 6, maps via QGIS  
Part of a presentation at the NFBR 2017 conference *Think globally, record locally - effective biological recording at the scale needed* <http://www.nfbr.org.uk/>

There are many other examples of such advanced analyses in the pages of the Bulletin, Dipterists Digest and in Recording Schemes Newsletters and reports. These extend beyond the capacity of simple online utilities (e.g. phenology, elucidating life histories, population changes over time and habitat modelling), utilise collected datasets within *relational* databases which are much more flexible and powerful than those maintained in online *flat file* databases (Atlas, GBIF) and provide broader geospatial context than do "Local" ERCs.

For both LERCs and NSSs, Recorder 6 is the main tool used to upload data to the NBN Atlas (and subsequently GBIF).

A seat at the consortium table will not only aid in fulfilling Dipterists Forum objectives with this particular biological recording tool but also give us an opportunity to influence the direction in which future development might take place, perhaps across a wider board than this single fundamental tool.

Dipterists Forum committee has agreed in principle to support our Recording Schemes and members who use Recorder by participating in the Recorder 6 consortium.

The official website for Recorder 6 is currently at <http://jncc.defra.gov.uk/page-4592>

Darwyn Sumner

## Project news

It can be a complex task, finding out just what is going on in the world of biological recording. British Wildlife rarely reports on this topic which is surprising given the amount which is going on. One good source for keeping up to date is the NBN Newsletter, an electronic newsletter that's emailed each month if you get on their mailing list (contact [support@nbn.org.uk](mailto:support@nbn.org.uk)) The latest one can be found on their website (<https://tinyurl.com/y9dppog7>), this simply presents a number of topics which can be explored further on the NBN website. The NBN represents the sector as a whole and so you'll find items there from their partners such as BRC, NHM, FSC, NFBR and perhaps a few events that might be of interest such as workshops and conferences. For further exploration try NFBR at [www.nfbr.org.uk/](http://www.nfbr.org.uk/) to locate lively blogs.

Obtaining specific answers to questions can be a different matter, online forums do not have quite the same level of liveliness you'll find on social media sites but they do serve a valuable function in this regard. Our current website forum and that of Diptera.info for example are invaluable for diptera identification, ALERC found this system rather quiet and have transferred to a KnowledgeHub system (a sort of members-only half way house between the latter and social media sites) but the NBN Forum (<https://forums.nbn.org.uk/index.php>) seems well suited to this question/answer format which is delivering that kind of a service to us by both NBN staff and Recorder support.

### Four years after

In the NBN account of Helen Roy's (BRC) election as Honorary Member of NBN, we're told that one of her roles is to transfer invertebrate data to the NBN Atlas. Thus it was that Helen spear-headed the 2014 recorders conference (Bulletin #81) which for us left a number of unresolved issues. A major one is the absence of the facility, much discussed at that conference, for **Record Commenting** which has a bearing on quality of the Atlas data. This has been much debated by dipterists over the years and long seen as a barrier to datasets being uploaded. Its absence may also be a factor in most diptera records not having been transferred from Gateway to Atlas yet. Through discussions on NBN forum it seems that there may be some progress shortly, NBN's Sophia Ratcliffe tells me that "*The 'flag an issue' or 'comment on a record' is on our priority list of development. As soon as record-level verification is launched, which we hope to do in early February, work will start on it. As soon as I have more information on the exact timeframe I will let you know. I am sorry for the delay in implementing this functionality*". Sometimes a posting sparks a lively debate, sometimes you just get an answer (thanks to Christine Johnston, their Scottish Liaison Officer for support on this one) followed by a few hundred reads, a forum that does the job nicely.

Combine that particular issue with others such as poor documentation, incompatible and poorly designed databases (Darwin Core), high workloads, reduced funding, uncertainty over copyright and Data Protection Act issues (currently being fixed by another ALERC consortium) and we've many more barriers than we had a year ago. Several projects will be delayed whilst these are being fixed. We can only assist by participation.

On an unrelated project, the digitisation of Steve Falk's records which began in 2014, a pessimistic mathematician would calculate that if it takes 4 years to extract records from 4 of 12 folders as Martin Harvey reported in the last Bulletin then the total length of the project would be 12 years. By which time Steve might have amassed another 12 folders of records.

Darwyn Sumner

## Archiving digital assets

There is a worthwhile read on the principles of archiving at <https://tinyurl.com/798p3fn> and a very readable document by Gabriella Redwine at <https://tinyurl.com/y9zpgwob>

It has become possible to use DNA for long-term storage of data, (see <https://tinyurl.com/ybdl9nmk>) so perhaps one day you'll get a test-tube in the post instead of a printed Bulletin.

## Bulletin archives

Tracking down copies of old Bulletins has been one of the tasks I've been up to in order to ensure that we've a good resource of material available in electronic format once the new Dipterists Forum website goes live.

So far I've managed to convert all of the Bulletins into pdfs, from #41 to the most recent and have made these available on our current website at <https://tinyurl.com/yqjwuxtd> (minus the last 3). I'm unable to work further back than 1996, that's probably when I joined Dipterists Forum, but if anyone sends me paper copies from before that I'll be happy to scan them and add them to the resource as I've done with numbers 41 to 46.

In 1999 I took over from Martin Drake as editor and began straight away to use Desk Top Publishing. Adobe Pagemaker was great at the time because Printers were accustomed to using such files directly, nowadays professional Printers like to use pdfs (a far cry from arranging lead type in trays). Several years and one dead PC later and though the original Pagemaker files were archived safely, the Adobe Pagemaker software is long lost. Adobe updated its DTP to InDesign which, though capable of retrieving those old files, mangles some settings so the pdf versions of Bulletins 47 to 57 leave a little to be desired. Colour versions began in 2007 with #64 as I updated to InDesign and digital photography began to make digital images more readily available, any Bulletin pdf you download from then onwards will be in colour.

This Bulletin is the first to be fully printed in colour.

## Newsletter archives

At the same time as I chased up back copies of the Bulletin, I also looked into Scheme Newsletters and contacted all schemes with lists of what I have. Theoretically I should have a good set of everything since I began as Bulletin editor. Some of their responses are detailed in the Recording Scheme reports below.

## Dipterists Digest archives

Currently under discussion by Peter Chandler and Dipterists Forum committee. Peter of course has them all safe.

Darwyn Sumner

## Status of keys to the British Diptera

Up-to-date identification keys and species descriptions are essential tools for entomologists. While excellent published keys exist for many Diptera families, there are some groups for which there is no English language key covering the British fauna and others that are very outdated.

The DF committee would like to move forward on this front. We feel that helping useful keys to publication is a good use of our resources. There are two strands of enquiry that need to be covered before plunging in. First we need to make an assessment of the status of keys to all the British Diptera to establish a priority list. The obvious starting point is published keys listed in *A Dipterist's Handbook*.

The second strand involves you. We know that there are a number of unpublished keys in circulation, often cut-and-paste versions of published works, and maybe completely original keys are being developed. Work may well have stalled on these, or there may be other blocks to publication, for example, lack of access to important references, lack of ability to satisfactorily translate important foreign references, the need to obtain permission to include pictures/photos/diagrams copied from other publications, lack of access to microscope, photographic, dissection or other essential technical equipment or just personal confidence. Whatever the factors involved, it is hoped that it might be possible to use DF resources to expedite publication.

We are accordingly seeking your co-operation in establishing a list of unpublished keys or existing keys requiring updating which can be used to identify where DF resources or assistance might be directed. We also seek information on taxa where no up-to-date keys or English versions are available, and would also appreciate it if organisers of Diptera Recording Scheme and Study Groups would provide us with details of the latest keys being recommended to or used by their members for identification of British species, and whether there is a need for updating them.

If you have any useful information (or are secretly working on a key behind the scenes) please contact one of us ([malcolmjsmart@gmail.com](mailto:malcolmjsmart@gmail.com) or [martindrake2@gmail.com](mailto:martindrake2@gmail.com)) with details of the group and a summary of the issues involved.

Malcolm Smart & Martin Drake



## Recording Schemes

### Schemes on our new website

Design for the Recording Scheme section of the new website was discussed at a seminar in late 2017. A number of ideas were debated and the design which was considered to best suit the needs of all the Recording Schemes was something along the lines of an amalgam of two excellent websites already up and running, the Soldierflies at (<http://www.brc.ac.uk/soldierflies-and-allies/home>) and the Scathophagidae (<http://scathophagidae.myspecies.info/>).

The idea is that some form of navigation system will direct the enquirer on the new website to a **main page** for each scheme. The enquirer will find there, at a minimum, a description of the scheme, a picture, contact details and a link to an external website (if such a thing exists.) Other tabs are optional and different schemes will be able to populate these in more or less detail, Scheme organisers will be given the necessary permissions to enable them to add information to a range of other tabs:

**Species:** Similar to the Checklist tab on Stuart's Scathophagidae website. Lots of potential here for an organiser to add species detail, maps, phenology and the like. Our developers, BRC, will provide the taxonomic tree for you.

**Identification:** links to keys

**Recording:** methods employed to record

**Distribution:** Overall progress with scheme recording

**Literature:** detailing publications beyond the basic keys

**Newsletters:** any downloadable news items

**Projects:** Martin Harvey's Soldierflies website provides an example of the sort of thing that might be included.

Many of the above are optional, the range does provide a palette however to include as much or as little as may be of value. A study group for example may wish just to describe the group, provide contact details then add a few notes on projects they are currently working on.

For the scheme organiser, do put some thought into what you would like to appear on the pages of your scheme. Basic descriptive text and a picture would be very useful to have available in the early stages of the development of this section. I daresay we could dig back into old newsletters, the brief description on the current website and the listing from the back page of the Bulletin. Fresh content would be much appreciated by the team that hopes to make this section an important aspect of the new website.

Whilst there are a number of Dipterists Forum members currently working on the new website as a whole, the two who are focusing specifically on the Recording Scheme pages are myself and Steve Crellin, we're both very keen to get our own pages up and running smoothly so if you have any enquiries or want any help working on your own pages then do contact us.

**Darwyn Sumner\*** [darwyn.sumner@ntlworld.com](mailto:darwyn.sumner@ntlworld.com)  
**Steve Crellin** [steve\\_crellin@hotmail.co.uk](mailto:steve_crellin@hotmail.co.uk)

\*It's proving tricky to write this, in 2017 with no access to website controls yet and the prospect of the new DF website being up and running shortly after you receive this Bulletin. Bear with us.

### Agromyzidae Recording Scheme

Barry Warrington's scheme is buzzing along nicely. He tells me he's been using iRecord to collect records and has accumulated a lot of correspondents through this means, to the point where he's now sending out monthly newsletters to over 50 people. This is rapidly turning into one of the most popular Diptera recording groups. If you want to be on this mailing list then visit his website at <http://www.agromyzidae.co.uk/> or contact him at [agromyzidaers@gmail.com](mailto:agromyzidaers@gmail.com)

Newsletter #6 is included with this Bulletin. Barry tells me that this is an annual summary and he'd appreciate feedback on it. I've seen the October issue (#4) which is very different and well worth having, so for the time being if you want these newsletters you'll have to get in touch, his productivity exceeds the capacity of this Bulletin to print them all.

Monochrome images of leaf mines don't come across too well in print, I used this observation in my attempts to persuade the DF committee to think again about printing the Bulletin in colour. So thanks Barry, it worked.

(Ed)

### Oestridae Study Group

Steve Falk has put together a folder of images of Oestridae species together with some textual information on his Flickr pages at <https://tinyurl.com/y9ms5srg> he is asking for further photos of living flies, larvae or wounds that he could host there (with full credits.) Steve's quite right in saying that Flickr resources fill a specific niche. Flickr and BioImages collections of this nature are clearly valuable resources that we have somehow to incorporate as a feature into Recording Scheme pages on the new DF website.



*Cephenomyia auribarbis*, Cairngorms 3/7/2017 [Graham Mayar]  
 (an image on Steve Falk's Flickr site)

Is it looking at me? (Ed)

### Conopidae Recording Scheme

In the same vein, do check out Steve Falk's Conopidae collection at <https://tinyurl.com/y9xg3hsu>

(Ed)

## **Tephritid Flies Recording Scheme**

Laurence Clemons circulated an updated document of distribution maps to recorders in January. (Ed)



*Tephritis divisa* [Malcolm Storey] BioImages

laurenceclemons56@gmail.com

## **Anthomyiidae Study Group**

Phil is concentrating on the February workshop at the moment and so is not contemplating any newsletters until afterwards.

He is now accepting data via iRecord, is uploading and verifying some 2000 records on there and reports that it is working nicely for the scheme.

Phil Brighton (helophilus@hotmail.co.uk)

## **Soldierflies Recording Scheme**

### **Newsletter archives:**

Martin Drake replied to my appeal, hopefully we can build up a full collection of the old Larger Brachycera newsletters in time for the new DF website. (Ed.)

Martin Harvey

## **Cranefly Recording Scheme**

### **Newsletter archives:**

In principle I should have all the cranefly newsletters since the year dot (1973) and some other recording schemes since their origin in 1976 (Peter Chandler and a few other.) Thus it is a question of how far back you wish to go and knowing the threshold date for material earlier to your holding.

I shall be very happy to free up storage of archive papers.

Alan Stubbs

Newsletter #33 included in this Bulletin

John Kramer

## **Empid & Dolichopodid Recording Scheme**

### **Newsletter archives:**

Martin Drake is scanning the older newsletters and will have them ready for the new DF website

Martin Drake & Steven Hewitt

## **Hoverfly Recording Scheme**

Roger Morris continues to produce fascinating accounts on his Syrphing Time blog, I usually pick up the links from the NFBR page at [www.nfbr.org.uk/](http://www.nfbr.org.uk/) but Facebook folk will have better methods. His "Changing recording demographics" <https://tinyurl.com/ybehaa8y> is fascinating, especially Stuart's chart showing the changes in the record submission methods over time. A lot of spreadsheet submissions in there, I wonder what those recorders use to maintain their personal records. An account of Stuart and Roger's efforts to provide training course up and down the country is also detailed in another item "Diptera training courses" at <https://tinyurl.com/ybdqt2uo> Keep up the good work. (Ed)

David Iliff

## **Calliphoridae Recording Scheme**

Records submitted to this scheme via iRecord are being processed and now appear on the NBN Atlas at <https://registry.nbnatlas.org/public/show/dr1570> within BRC's collection which means the contact details there are of BRC rather than Olga, she's at [aruma@wp.pl](mailto:aruma@wp.pl)

Now's the time to send her records, don't forget that spreadsheets are a means of uploading records to iRecord, either bung them on to iRecord yourself or send them to Olga, she's got 649 records so far. (Ed)

## **Fungus Gnat Recording Scheme**

Newsletter #10 included in this Bulletin

Peter Chandler

## **Flat-footed Fly Recording Scheme**

Newsletter #2 included in this Bulletin

Peter Chandler

## **Recording Schemes listing**

Many thanks to all those who have shown patience whilst the redesign of the back page listing all the Recording Schemes was in flux. A complete redesign using an unfamiliar piece of software was a lengthy business. Hopefully it is clearer now, will be easier to update & amend and matches up with current Dipterists Forum initiatives. In order to fit on one page some information has been omitted, postal addresses should now be placed on the website pages of individual schemes and study groups. Especial thanks if you spotted the glaring typo and kept quiet about it, that saved me an hour.

The pdf version is downloadable from our website.



## Sepsidae Recording Scheme

### News from the Sepsidae Recording Scheme Update - Spring 2018

It must be a couple of years since I last updated the Bulletin on the latest news from the Sepsidae Recording Scheme. During this period, I've received records from Rob Wolton, Lee Johnson, Peter Vincent, Derek Whiteley, Laurence Clemons, Andrew Graham, Martin Drake, Howard Bentley, Abigail Rhodes, Ian Andrews and Richard Dickson. In addition, I've kept an eye on iRecord and verified a number of records. Bill Ely, Rob Zloch and Phil Brighton have been the largest contributors via iRecord. The verified iRecord records are now uploaded to the NBN Atlas on an annual basis so all of the records verified during 2017 should appear on the Atlas in the first few months of 2018. The UK Diptera Facebook group continues to be a source of occasional identifiable records with *Nemopoda nitidula* being the species identified most often.

I was fortunate to attend the Forum's 2016 field meeting based in Canterbury and had a thoroughly enjoyable time. The last information I have about the sepsid records for the meeting is that 270 specimens were checked producing 17 different species which is a similar number of species to the 2015 Nottingham meeting. While there were no surprises among the 17 species, finding my first *Sepsis thoracica* was useful as it filled in a gap in my reference collection and the dominance of *Themira lucida* records over the rest of the *Themira* spp. was interesting. Sadly, I couldn't get to the 2017 Snowdonia meeting and, although I've received records from a couple of the attendees, I don't know the overall score yet.

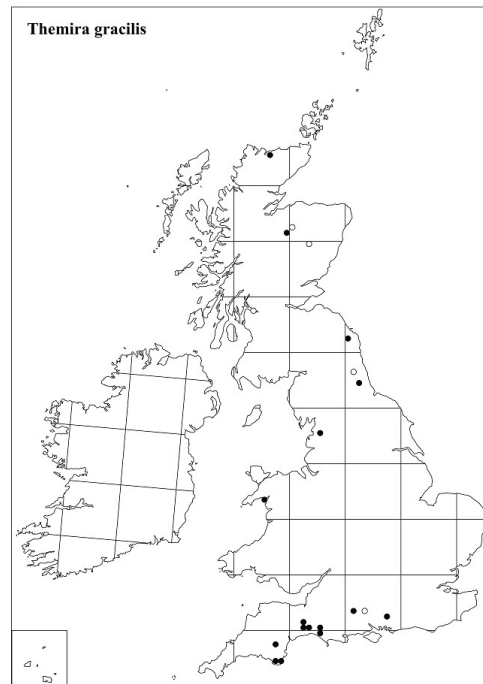
Amongst the highlights of the records submitted to me were the first for *Meroplius minutus* in over ten years. Ian Andrews recorded it on a deer corpse found in S.E. Yorks (v.c. 61) during September 2016 and Julian Small swept one in N.E. Yorks (v.c. 62) during September 2017. This had me wondering which other species seem to have gone "missing" and below are the species are that haven't been reported to me for some years: -

<i>Nemopoda pectinulata</i>	last reported in 2000
<i>Sepsis biflexuosa</i>	last reported in 1995
<i>Sepsis nigripes</i>	last reported in 2006

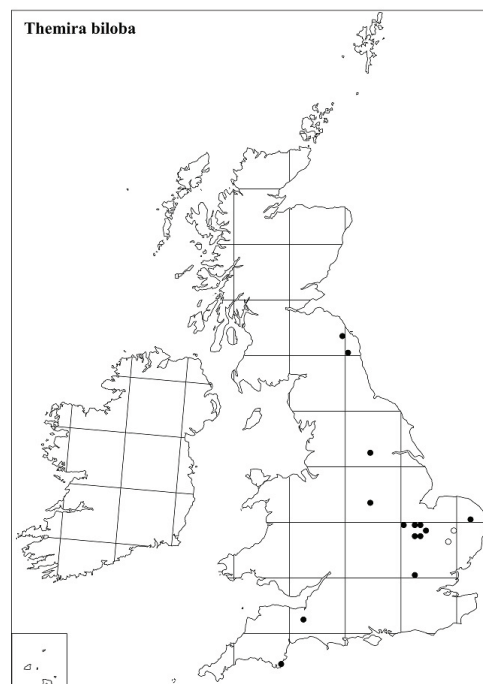
If anyone knows of more recent records of these three species I'd be grateful for an update or a nudge that I've overlooked something already passed to me.

Further highlights have been further records of *Sepsis luteipes* for which I have almost completed a note for publication. Two of the scarcer *Themira*, *T. biloba* and *T. gracilis*, are proving to be more widespread than originally indicated by the Provisional Atlas.

*T. gracilis* was reported from the very north of Scotland (v.c. 108) by Abigail Rhodes where she caught two males on a flowering mint in her garden on separate dates, Rob Zloch caught two in W. Lancashire (v.c. 60), Howard Bentley caught three females during the Snowdonia meeting (v.c. 48) and Martin Drake caught several males (v.c. 3). The map below shows the current spread of records (open dots are the records in the Provisional Atlas; closed dots are the records received since the Atlas).



At the time of the Provisional Atlas, *T. biloba* had only just been recognised as a British species so the map only had two East Anglian records. During 2017, Martin Drake recorded it from S. Somerset (v.c. 5) while Rob Wolton & Andrew Cunningham from S. Devon (v.c. 3). The records were associated with swan and goose dung respectively. Again, here is the up to date map with the same symbols.



After the recent AGM, I volunteered to do a sepsid workshop for Project Tanyptera. At this stage it is being planned for October 2018 at the World Museum, Liverpool. So if you are based in the north-west and fancy a session looking at this family please keep your eyes peeled for further news.

Steve Crellin [steve\\_crellin1@hotmail.co.uk](mailto:steve_crellin1@hotmail.co.uk)

## GB Non-native Species

### Great Britain Non-Native Species

Non-native species are any species (terrestrial, freshwater and/or marine) that did not naturally occur within the United Kingdom before people first arrived. An **invasive** non-native species has been defined as any non-native species that causes, or is thought may cause, serious negative impact on our native species, our health or our economy. The distinction between non-native and invasive is important as there are many non-native species that are not invasive and do not pose a threat. (thanks to GIGL for that text Ed)

These species are treated extremely seriously by many sectors, not only those who are under direct threat but by others who have taken an interest and taken on a coordinating role. Key amongst these latter are BRC's Great Britain Non-Native Species project (<https://tinyurl.com/h98uc2d>) which represents the official government strategy and GIGL, the London LERC who have a particular interest since many such species are present in that region. GIGL can speak at length about these species, indeed I've heard them do so at ALERC conferences. They have a specific project on this topic (LISI) on their website at <http://www.londonisi.org.uk/tackling-inns/lisp/#intro>

Until recent years few of the species involved were of immediate interest to Dipterists but the arrival of the Spotted Wing *Drosophila* changed that.

The Asian Hornet affects us too, principally since active Dipterists are well equipped and placed to detect them <https://tinyurl.com/yadaurps>

### Spotted Wing *Drosophila* slips through our nets

Of all the species that we record, surely one of the most important to keep a watchful eye upon is an invasive species which is an horticultural pest. Despite a whole batch of articles in Dipterists Digest (10 articles in Vol 21 No 2), posts on Dipterists Forum and occasional reports in the Bulletin, there's no sign of any active recording of *Drosophila suzukii* by Dipterists anywhere (3 records on NBN Atlas).

Although there are ideas being discussed to address the recording of species not covered by Recording Schemes, we don't have a scheme for Drosophilidae and this one has slipped through our nets.

The following images are from posts in the identification section of Dipterists Forum's forum:



Alan Outen <http://www.dipteristsforum.org.uk/t5570-Small-with-aristate-antennae.html>



Martin Cooper <http://www.dipteristsforum.org.uk/t4150-Drosophila-suzukii-Suffolk.html>  
Paul Beuk writes: *The species was first spotted in the UK in 2012. In the Netherlands ... the species was 'mass imported' by cherry growers who wanted to sell cherries ahead of the local harvest and that brought (infected) ripe cherries from southern Europe. Emerging flies found a true El Dorado in the cherry trees near by. A survey last year collecting elder berries in the middle of the country revealed that in more than 25% of the field samples suzukii was already present. It will be just a matter of time till it is all over the UK, I think...*

Ken Merrifield, who has close ties with the Queckett Microscopical Club (and a published author in their journals) spotted the fact that they have begun a survey experiment: <http://www.queckett.org/about/citizen/swd-survey> Queckett members attending the NBN Conference "Connecting the Crowd" at the Natural History Museum (<https://nbn.org.uk/event/conference-connecting-crowd/>) were advised that the best platform for recording this species was the American iNaturalist recording website which, whilst it will connect to US projects, has no clear path to any of the UK or European public-access databases and certainly none to the NBN Atlas. UK systems would have worked better for recording in this country, but any iRecord setup currently lacks a verifier. The Queckett took advice from an Astrophysicist and beat us to it - well done them!

For UK recorders of this species (spotted spotters) I would advise you put your records onto iRecord, they'll be picked up in due course when we organise non-recording-scheme iRecord projects with BRC and persuade an expert to verify them.

### The microscopical societies

Involvement with the various microscopical societies is strongly advised, they know their stuff, barter & trade useful gear and always welcome Dipterists.

Queckett Microscopical Club <http://www.queckett.org/>

Manchester Microscopical & Natural History Society

<http://www.manchestermicroscopical.org.uk/>

Northamptonshire Natural History Society <http://www.nnhs.info/>

Oldham Microscopical & Natural History Society

Journal at <https://tinyurl.com/yd7rpb8s> main site <http://www.oldham-wildlife-link.org.uk/micro/>

**Darwyn Sumner**

(Oldham Microscopical & Natural History Society: Secretary ret.)



# Photography

Trawling newsagents for popular photography periodicals in the hopes of finding useful information about macro photography can be an expensive and disappointing business. They tend towards art, vanity publishing, sport and commerce whilst we do scientific, microscopic, collecting, technical illustration and identification and occasionally achieve “art”. Consequently their reviews of equipment can be inadequate for our specialist purposes, they miss gear that we find and value efforts differently (as evidenced by macro competition winners.)

Current themes that are of interest to us are those of focus stacking and illumination (plus we’ve a piece on illustration in this issue), no doubt we’ll return to microscopy again in the future. If you’ve made any equipment finds, have any tips to pass along or have taken a photograph of something of interest we’ll be happy to consider them for the Bulletin, we value your contributions.

## Anaesthetising specimens for Focus Stacking

A recent article in The Bulletin described Focus Stacking of live insects and included a few paragraphs on the attempted use of CO<sub>2</sub> as anaesthetic (Sumner & Merrifield Bulletin 84). For the last few years I’ve been making extensive use of Ethyl Acetate for this purpose and have been pleased with the results.

The flies are held in individual tubes, and kept in the fridge until required. Take out the tube a few minutes before it is needed to warm up. Have ready some small spills cut from blotting paper. Dip a spill in Ethyl Acetate, touch on a scrap of paper to soak up the excess, then introduce into the tube. Trap the spill with the fins of the closure. It’s important not to let any liquid run down the inside and touch the fly.

Watch the fly until it stops moving. The trick is to catch it when it is comatose but before it stretches into the final wings-up/legs-down position. Usually this is just as it starts to flex its legs inwards.

Tip the insect out of the tube onto your chosen background. (I use glass which is suspended a centimetre above the photographic background to reduce shadows). Leave the tube open for the fumes to disperse so that you can return the fly to it should you need to, and it won’t get knocked out again until you’re ready.

Turn the fly onto its back and gently prise the legs open with fine needles (I use acupuncture needles), then carefully turn it the right way up.

The fly can now be easily manipulated into a life-like pose. Finally check for dust (place over a dark background if it’s on glass). Acupuncture needles seem to pick up enough static to attract dust if you run them through your fingers. This way you can take dorsal “whole insect” shots and close-ups of particular features. After a few minutes in this position while you take the stack they often stay relatively extended if you turn them back over to photograph the underside, although the legs usually move together a bit. This can generally be cleaned up in retouching (supported by both Zerene Stacker and Helicon Focus)

Generally the fly will stay comatose for long enough to take several stacks, but if it starts to revive, the procedure can be repeated – several times if need be. Finally the fly can be killed with Ethyl Acetate when the wings will go up and the legs down; then the lateral views can be photographed, and the specimen pinned and retained for future reference.

Not all flies are cooperative – the more muscular groups like Calliphoridae and the blue-bottle-like Tachinids often lock up almost before the legs stop moving, but those flies which habitually die with the wings up are generally well-behaved as are hoverflies. Lauxaniids are easy so practice on these.

### Box 1: size of blotting paper spills

The size of spill depends on the size of tube. It isn’t critical but as a guide:

3”x 1” tubes: 25mm x 7.5mm

2” x ½” tubes: 25mm x 2.5mm

I’ve used this method a lot over the past 5 years – including over 400 species of Diptera (with 8 or more photos of each), all online on the BioImages website. I’ve particularly concentrated on picture wings (<https://tinyurl.com/y7sxkth2>) especially Tephritids (<https://tinyurl.com/vctorxzp>) and Sciomyzids (<https://tinyurl.com/yc4pw8d9>)



*Phasia obesa* (Tachinidae) head [Malcolm Storey] 600dpi

**Malcolm Storey** ([malcolm.storey@dsl.pipex.com](mailto:malcolm.storey@dsl.pipex.com))

BioImages contains over 100,000 images by Malcolm Storey on a well-structured site. Well worth searching here if you want a good image of a fly to examine.

### Spills without spills

On the subject of spills soaked in Ethyl Acetate, polyporous pith from the Birch polypore (*Piptoporus betulinus*) is an excellent substance. It soaks up large quantities of the solvent without any sign of it dripping, its absorbent properties are far superior to any paper. Small presoaked spills can be carried in the field in a sealed glass tube, last for several months and require only forceps (or fingers) to pop into pooters etc.. Harvest the mature fungus in late winter before the fungus gnats get at it, allow it to air dry then cut spills using very sharp thin blades (e.g. new scalpel blades or stiff-backed razor blades) using a pushing rather than a sawing motion.

**Darwyn Sumner**



## In-camera focus stacking

Mention was made in the last Bulletin about the increasing tendency of some form of focus stacking mechanism to be incorporated into modern cameras. Popular periodicals are the place for camera reviews but we can give you an idea of the kind of images that are possible using that function:

Nigel Jones drew Ian Andrews' work using the Olympus TG-5 to my attention with:



*Eristalinus aeneus* (head, female) Olympus TG-5 1/60 f6.3 [Ian Andrews] 758dpi

Nigel comments that whilst these images are not up to the very best quality images obtained with an SLR and lots of stacking specialist gear, they are very very acceptable. Find this image at <https://tinyurl.com/y76mdbko> where Ian converses with Nigel and shows his setup for illumination. Ian's main Flickr page is at <https://tinyurl.com/yckkija7> where there are many more examples using this camera. There may be some field shots in there, a particularly impressive image of *Boreus hyemalis* (Snow Flea) has a slight shadow on the antenna which suggests that that is the case.



*Eristalinus aeneus* (head) Canon EOS600D dSLR and MP-E 65mm x1 to x5 macro lens [Malcolm Storey]

A like-for-like comparison with Malcolm's more elaborate setup (see his BioImages site for details) is shown above. Malcolm observes "it's the arista that gives us both problems. A thin structure in front of a densely patterned background. It's much worse when they're plumose - even if you retouch it, it never looks right." Please note that the differences will not show up well, or even at all, in print versions; zoom to about 200% in the pdf version. Full image at <https://tinyurl.com/yct7mhjt>



Possibly an Anthomyiid (? *Hylemya vagans*) Olympus TG-5 [Ian Andrews] 1100dpi



*Lianculus virens* (Dolichopodidae) Olympus TG-5 [Ian Andrews] 1000dpi  
Ian tells me he's had little chance to use this camera in the field so far.

More results from the field would be appreciated, I wish Ken, Andrew and Ian good luck with that as the season picks up. From the demonstration an Olympus representative made to me, I'd guess it rattles through the 8 shots needed for a stack in less than a second but bear in mind that's using available light, not flash. He then threw the camera over his shoulder, not something you'd do with the cameras from other manufacturers.

Examples of fly photographs from other brands with in-camera stacking would be appreciated. There's little chance of seeing examples in the popular periodicals, fast cars seem to be their focus.



## Equipment Illumination

There has been an enormous proliferation of lighting solutions for insect macro photography and microscope illumination over the past few years. This was pretty much predictable when white LEDs were invented and we started to report on them in 2007. Nowadays laboratories packed with Dipterists poring over microscopes are much cooler places to be since most have ditched their hot lights in favour of LED solutions.

When it comes to macro photography in order to obtain a series of images for stacking, the observation by Julian Cremona is particularly important. That flash is preferable to continuous lighting in many circumstances because there is less potential for subject movement and thus slight blurring due to the instability of your “optical bench”. Keeping your equipment vibration free can be quite an issue (wobbly tables at our Field Week labs.)

That said, Ken Merrifield and I keep finding cool gadgets for continuous lighting:

### Gooseneck

At a recent meeting of the Quekett Microscopical Club a member showed a LED Gooseneck Illuminator from Hong Kong that he found was surprisingly good for the price, including a ring light and a UV light. <https://tinyurl.com/y8m2pra9>

### Microscope mini-light

Ken tells of another that he spotted at a Queckett meeting, he’s bought one and tried it out:



*Tachina fera* Olympus TG-5 f6.3, 1/30s ISO320 [Ken Merrifield] 1000dpi



He considers that two (or four) in a reflective enclosure might provide a compact diffuse illumination system.

This “USB Microscope Lamp Universal Biological Microscope Light Source LED Illuminant” feeds off USB cables and is obtainable at <https://tinyurl.com/y9yvtjsz>

### Small portable illuminator

In my investigations to find a reliable continuous LED light suitable for macro photography I invested in an Aputure AL-M9, a credit card sized LED light. Extremely compact, it has a range of light outputs up to that powerful enough for portrait photography. It charges from a USB cable so that in the field if you exceed its 2 hours charge you could recharge from a portable power pack (try PNY products for that.) It affixes via hot shoe or tripod thread, for field work you might need a small ball and socket joint to angle it at your subject, or just hand-hold it; there are no trailing wires like the ring light LED units. Good review at <https://tinyurl.com/yd9lejo3>

### Studio lighting box/tent

Mike Taylor of Liverpool World Museum sent me an account detailing his macro photography setup. In it he mentions PULUZ equipment, they make accessories for GoPro cameras, amongst which are what they term “Photo Studios”. Mike had invested in their large tabletop version but I discovered a small portable version, the “Portable Mini Photo Studio” which sells for around £10. At that price it was too tempting so I’m now the proud owner of a white plastic box that clips together with press studs and has only 5 faces, one of which has a huge circular hole. It weighs nothing and packs flat and could have a lot of potential. Where Julian Cremona advocates lugging a large polystyrene box around in order to act as a reflector/diffuser and wind break in the field, this would slip easily into a backpack. Bryologists, mycologists and botanists, who wish to isolate their subject, would probably find more use for this in the field than entomologists.



A few toys to play with in 2018. Aputure AL-M9 mounted on a cheap tripod, pouch with colour temperature filters in foreground. Puluz portable mini photo studio, black background affixed, white one in foreground, other garish colours (no gray) in the compact pouch. A Novoflex grey card may prove useful too. Garden table from Wilko.

The PULUZ studio also has a line of LEDs just under the top edge, powerable via a USB cable so it can run off a portable power pack.

**Darwyn Sumner**

with thanks to Ken Merrifield, Malcolm Storey, Mike Taylor, Nigel Jones and Ian Andrews

# Conservation

## News from the Conservation officer

### Status reviews

The status reviews or assessments commissioned by nature conservation agencies are extremely useful documents, so it's excellent that two further ones have recently been published:

Drake, C.M. 2017. *A review of the status of Larger Brachycera flies of Great Britain - Species Status No.29*. Natural England Commissioned Reports, Number192.

Falk, S.J. & Pont, A.C. 2017. *A Provisional Assessment of the Status of Calypterate flies in the UK*. Natural England Commissioned Reports, Number234.

Congratulations to the authors Martin Drake, Steven Falk and Adrian Pont, to the Natural England project manager David Heaver, and to the many others who have helped.

The second report does not include the Tachinidae which will be the subject to a further separate review. However, information on this family can be found in the draft calypterate review produced back in 2005. David tells me that the next review we can expect to see published is the Platypezidae one and I understand that Dolichopodidae is close to completion.

### Optimising the benefits of new woodlands for Diptera

An interesting study has just been published which examines the use of new broadleaved woodlands planted on agricultural land by craneflies and hoverflies. The study looked at Malaise trap catches from 78 new woods in England and Scotland ranging in size between 0.5 and 32ha, although 85% of them were less than 5ha. The woods varied in age between 10 and 160 years. The 33 English sites were in the Midlands west of Peterborough, and the 45 Scottish sites in the central belt west of Edinburgh.

27% of British woodland hoverfly species were caught and 43% of British woodland cranefly species. The results revealed that the main factors determining species-richness were structural heterogeneity in the woodlands, such as variation in tree trunk diameter and the amount of understory present. Unexpectedly, neither woodland size nor the proximity to other woodlands had any significant effect on species-richness. So, it's not where you plant your new woodland that matters so much as how you manage that woodland. The paper concludes that land managers should be encouraged to plant and actively manage their woodlands to increase structural heterogeneity and resources for woodland insects.

Lauren Fuller, Elisa Fuentes-Montemayor, Kevin Watt, Nicholas A. Macgregor, Katja Bitenc, Kirsty J. Park. December 2017. Local-scale attributes determine the suitability of woodland creation sites for Diptera. *Journal of Applied Ecology* – currently available online.

### Back from the Brink

This is an exciting major conservation project, part funded by the Heritage Lottery Fund (HLF), which aims to save 20 species from extinction, improve the conservation prospects of another 92 threatened species, and benefit a further 112. All in all, that's 224 species. As I write (December 2017) a full list of all these species is not publicly available. We do know though that there are 12 single species projects which include a number of invertebrates (narrow-headed ant, shrill carder bee, field cricket, barberry moth and ladybird spider) but no flies. The other species will benefit

through seven integrated projects which focus on specific habitats or landscapes. These are Ancients of the Future (see below), Roots of Rockingham (Rockingham Forest), Colour in the Margins (arable species), Shifting Sands (Brecklands), Gems in the Dunes (Sefton coast), Limestone's Living Legacies (Cotswold grasslands) and Dorset's Heathland Heart (recreating microhabitats for rare and threatened species within the Dorset heaths).

Andrew Whitehouse tells me that the **Ancients of the Future** project, led by Buglife in partnership with Plantlife and the Bat Conservation Trust, focuses on the wildlife associated with ancient and veteran trees in woodland, historic wood pasture and parkland. This project will work with landowners and managers in key places across England, seeking to secure the vital continuity of veteran trees and wood decay habitats in some of our most iconic landscapes. It will focus on 28 highly threatened species. These include the royal splinter cranefly *Gnophomyia elsneri* and the western wood-vase hoverfly *Myolepta potens*. In 2018 Buglife is planning surveys for these two flies and trialling the use of artificial habitats both to aid monitoring and to provide breeding sites. For more information about the project please visit the project webpage: <https://www.buglife.org.uk/ancients-of-the-future-project>

If you would like to help with fly surveys and monitoring, or find out about other volunteering opportunities please contact Sarah Henshall [sarah.henshall@buglife.org.uk](mailto:sarah.henshall@buglife.org.uk)

*Gnophomyia elsneri* is only known from three sites in the world – Windsor Forest (Berkshire) and single sites in Slovakia and Turkey. We can expect quite a few other rare or threatened flies to benefit from **Back from the Brink**.

### Dynamic Dunescapes

This is another exciting project that will hopefully come to fruition. As I write the HLF has indicated its willingness to provide £4.1 million pounds towards it. Hopefully the necessary match funding will be found, including from the EU LIFE programme. The idea is to increase the amount of sand movement within dune systems, since most are lacking sufficient open sand and early successional plant and invertebrate communities. The project will focus on nine dune systems or clusters of such sites: Lincolnshire Sand Hills; Studland Dunes, Dorset; North Cornwall Coast; Braunton Burrows, north Devon Coast; Swansea/Neath Port Talbot, Carmarthen; Anglesey/Gwynedd; Sefton Coast, and Cumbrian Coast/Solway. The lead bodies are Natural England, National Trust, Plantlife, The Wildlife Trusts and Natural Resources Wales. Personally I am very much looking forward to engaging with Plantlife, the lead body on my local dune system, Braunton Burrows, to ensure that the needs of flies and other invertebrates are recognised alongside the flora, and have already agreed to meet on site. This project could bring major benefits to the many threatened and scarce flies which inhabit dune systems.

### Trees Outside Woodlands

A year or two further down the line, this is a third major project that HLF has indicated its willingness to support with up to £14 million pounds. It recognises that the trees of our parklands, wood pastures, hedgerows and so forth are of great importance in the landscape and for biodiversity, yet are often overlooked because tree funding programmes usually focus on woodlands and forests. The particular driver is the stresses and strains that our trees are under from climate change and new pests and diseases, most imminently ash dieback. The Woodland Trust, which has been asked to lead the development of the project, has sought project proposals from across England and Wales. I am sure many of these bids will



include management and safeguard of ancient and veteran trees which are so important for Diptera and other invertebrates, as well as encouraging new generations of trees. A Devon and Somerset idea is to create Future Deer Parks.

But there's a big caveat attached to all this. Not enough people are now playing the National Lottery! Income is falling, and HLF is being forced radically to restructure and reduce its funding programmes.

### Devon's priority flies

The Devon Local Nature Partnership, or Natural Devon for short, a wide ranging network of organisations involved with the environment, has decided to list all the nationally threatened, rare or scarce species known to occur in the county. The initiative, led by Devon County Council, recognises that most conservation resources are focussed on a handful of priority species, leaving the majority unknown and in the cold. The list currently stands at over 1,600 species of threatened, rare or scarce plants, animals or fungi, both terrestrial and marine. It will be published on line, and developers, planners, etc, encouraged to use it. No less than 464 of the species are Diptera!

The next step has been to identify those species for which Devon is of special importance – if we do not look after them, they are at risk of extinction across the British Isles. To be on this short list, species must have been recorded since the year 2000 and must require some level of conservation action (beyond monitoring and research). Recent colonists don't count. After a lot of soul searching we have identified 96 such species, from across all plants, animals and fungi. These include nine flies: three crane flies *Dicranomyia goritiensis*, *Geranomyia bezzii* and *Helius hispanicus*; three hoverflies *Chrysotoxum elegans*, *Eristalis cryptarum* and *Sphaerophoria potentillae*; a chloropid *Lipara similis*; a muscid *Coenosia pudorosa*, and a tachinid *Dionaea aurifrons*. By comparison there are nine Hymenoptera (all aculeates), seven beetles and 14 butterflies and moths.

The key habitats for the 96 species are coastal cliff and slope (29 species), woodland (17), hedges (10), flower-rich grasslands (10), sand dunes (8) and non-woodland trees (9). The nine flies roughly follow this pattern, although a couple are associated with estuarine habitats, and one, the bog hoverfly *Eristalis cryptarum*, with upland bogs. 41 of the species are not Section 41 species – a high proportion.

From now on, the 96 species, including the nine flies, should receive a lot more attention than most have to date, making it more likely that they will survive long into the future. Perhaps you know of similar exercises taking place in your part of the UK, or would be keen to help set one underway? If so, please do get in touch.

Surely, we must do all that we can to identify those species most at risk in our local areas, and to let local site owners and managers know if they are responsible for any of them. Local records centres also need to know where such flies occur.

### When things go wrong...

The species listed above as ones for which Devon has special responsibility include the lagoonal sea-snout crane fly *Geranomyia bezzii*. This fly, provisionally classed as Vulnerable (with extinction) in the IUCN classification, is known from only six sites along the south and East Anglian coast. It has not been seen at most of these for many years. It is unusual in that its larvae feed on green algae on tidal flats, the adults finding shelter in low fringing vegetation on the upper foreshore. One of the six known sites is Dawlish Warren National Nature Reserve, where, thanks to Chris Spilling beating some sea purslane bushes on the foreshore, we re-found it at a Devon Fly Group meeting in August last year.

Just 100 metres away though, huge sea defence works were being undertaken by the Environment Agency, involving major re-structuring of the dune spit. I contacted Natural England to check that they and the EA were aware of the presence of the fly. They were not! It transpires that the Devon Biological Records Centre had no records of the fly, and no one had thought to look at the NBN.

In my further correspondence with NE I stressed the importance of the tidal flats to the fly, and was reassured that none of the works would impact on them. You can therefore imagine my dismay when in October I heard that the EA, when completing their work, had decided to disperse surplus sand over the flats. Apparently, the NE has not thought to tell the EA about the fly.

For me, there are some lessons to be learnt from this – firstly ensure records reach your local record centre as well as the NBN, and secondly don't assume that statutory agencies speak to one another, even over highly threatened species occurring on sites of international importance for nature conservation.

Let us hope the fly survives!



Sea purslane bush where adult *Geranomyia bezzii* were found at Dawlish Warren National Nature Reserve in August 2017 by Chris Spilling, with major dune re-structuring work in the background. Rob Wolton.





*Geranomyia bezzii*, Dawlish Warren, August 2017. Rob Wolton.

**Robert Wolton**

Acting Conservation Officer

## UK BAP & **Adopt a species** Species news from fly guardians (adopters) and BAP species contacts

### **Pine hoverfly *Blera fallax* update, from Iain MacGowan**

During the autumn we gathered together a team of some eight volunteers under the auspices of the Rare Invertebrates in the Cairngorms project to look for *Blera* larvae. They were all supplied with an identification sheet with the excellent photographs of *Blera fallax* larvae featured in the last edition of the Bulletin. With this large team we were able to examine all the artificial rot holes, old and new at the key site. The result was that we were able to find 15 large larvae – it does not seem a lot but that is a significant improvement on the figures we have had over the last five years. There were also small larvae in some of the holes which we could not confidently determine so hopefully some of these will turn out to be *Blera* in due course. The volunteers and the good ID material make a huge difference to our monitoring efforts – thanks to Gabby Flinn and Asheligh Whiffin.

Another piece of good news was that *Blera* larvae have been found again in artificial tree holes in Abernethy Forest – a site to which they were re-introduced in 2011 but have not been recorded since. In response, the RSPB who own the site are to cut new tree holes for summer 2018 which will hopefully result in *Blera* maintaining its foothold at this site.

The steering group which oversees the *Blera* conservation work had one of its biannual meetings in September and agreed that a new conservation management plan for the species be produced. The plan will reflect the input of new partners in the project such as the Royal Zoological Society of Scotland, the increasing potential for the use of volunteers and the possible impact of new survey techniques such as eDNA. The plan will also include a species re-introduction assessment which would be required in the event of the Scottish population levels falling to a point where it is considered that an introduction of Swedish stock is required.



Rare Insects in the Cairngorms volunteer group learning about *Blera* habitat. Iain MacGowan.



Athayde Tonhasca (SNH) beside a newly cut stump. Iain MacGowan.

### ***Phortica variegata* Spotty sap-fly or Variegated fruit-fly**

John Graham-Brown from the Institute of Infection and Global Health, University of Liverpool, gave us an excellent presentation about their work on this fly at the Dipterists Day event at Liverpool. This is being written up elsewhere in this Bulletin. John and Jennifer Palfreyman re-found the fly in the New Forest and at High Standing Hill, Windsor. They will publish these records alongside modelling work on the distribution of the fly across Europe including the UK.

### ***Stratiomys chamaeleon*, Clubbed General Soldierfly, and *Odontomyia angulata*, Orange-horned Green Colonel Soldierfly, from Judy Webb**

Once again in the autumn and winter time my focus has been on thinking about the best habitat management work in Cothill Fen SAC, Oxfordshire, for the breeding success of these flies, in particular the larval habitat. The larvae filter feed on bacteria or unicellular algae and protozoa in mud or waterlogged moss mat in calcareous (marly) sunny, shallow pools or runnels. They are amphibious and crawl about on wet mud and vegetation, especially at night. Short, warm, wet vegetation is essential for speeding larval growth which takes at least a couple of years.

From the flies point of view, the many rare plant species on site are not essential, the need is for calcium-rich shallow warm water with or without *Chara* stonewort algae and 'brown mosses' between tussocks of Black Bog-rush or Purple Moor Grass. Reduction of rank reed, rush and sedge has continued on the site by cutting



and raking activities of volunteers and the grazing by five Welsh mountain ponies belonging to the local wildlife trust (BBOWT). A concern for the whole site has been that in general it is becoming drier and also there is nitrate enrichment of some pool/runnel areas within the SAC resulting from fertilizer run-off from adjacent arable fields (barley and maize cultivation). Blocking up some drainage ditches would achieve useful re-wetting, but the problem has been how to reduce the nitrate levels in the drainage water. This rare alkaline calcareous fen ecosystem is dependent on very high calcium and high pH and very low phosphate and nitrate in the groundwater emerging from springs to produce the marl pools and tufa formation on the mosses which benefits the rare wetland plants and the rare wetland invertebrates. Nitrate in particular should be at a level of less than 1ppm, and ideally less than 0.5ppm in the emerging spring water.

Just recently I have seen the results of a detailed water chemistry study of the whole site, funded by the Freshwater Habitats Trust under their Flagship Ponds scheme. The data is mainly for nitrate and phosphate, with analysis of a great many site tests carried out by volunteers last January using the FHT simple citizen science test kits.

A nitrate reduction mitigation scheme is now suggested. This involves directing nitrate-polluted water through an area of anaerobic waterlogged rotting vegetation to encourage de-nitrification, thus cleaning up the water (anaerobic bacterial activity on nitrate means N is returned to the air as gasses). Cut reed and rush piles on the sites are available for use to form the rotting vegetation and there is a plan for suitable positions to set up this clean-up in existing pools and ditches. Hopefully these can be placed in position in early spring, in order to generate de-nitrifying anaerobic conditions before the next onslaught of fertilizer gets dished out on the fields behind the fen between March and May. Apparently another mitigation to lower the nitrate levels emerging in the fen springs would be to remove some of the trees in the catchment upslope in a wood behind part of the fen, on higher ground next to the arable field (not sure I can explain exactly how this works). Some tree work is therefore being negotiated.

The arable field behind part of the fen SAC is scheduled for sand extraction (carefully, down to 1 metre above the water table) within the next 5 years, so there will be an end to the fertilizer input in this area at least in the near future.

At the DF Annual Meeting in Liverpool last November Mike Howe gave a very interesting presentation on Invertebrate Conservation in Natural Resources Wales. Afterwards I had the opportunity to chat with Mike as to how *Stratiomys chamaeleon* is doing in its stronghold of the Anglesey SAC fens that have a similar habitat to the Cothill fen SAC.

Mike kindly produced this comment for inclusion here:

*'Anglesey remains the key area in the UK for Stratiomys chamaeleon, with important populations on Cors Bodeilio, Cors Erddreiniog, Cors Goch, Rhos y Gad and Waun Eurad. Adult numbers on Cors Erddreiniog reached a peak of 173 in 1994 but problems with grazing management over the last 20 years have resulted in a dramatic decline as the core breeding area has changed from open, tufa-forming seepages to rank Black Bog-rush and Blunt-flowered Rush. More sympathetic management has just been secured and it is hoped the remnant population can respond. By contrast, recent over-grazing at Waun Eurad has also led to a fall in population size from a peak of 102 adults in 1999. Fortunately, more appropriate grazing levels have been restored.'*

Mike also told me the interesting fact that there are no records of *Chalcis sispes* on Anglesey. This is the specific *Stratiomys* hymenopteran chalcid parasite known as Red-legged Big-thigh. In the Cothill fen I have swept this species more frequently than any *Stratiomys* adult fly. Apparently *C. sispes* is known from Gower and the Gwent Levels where it must be parasitizing other *Stratiomys* species than *S. chamaeleon*. The only other large *Stratiomys* recorded on the Anglesey sites are occasional specimens of *S. potamida*, although Mike has never seen one on these sites. Cothill has *S. potamida* and *S. singularior* as well as *S. chamaeleon*.

I was also interested that *Odontomyia angulata* apparently does not occur in Anglesey fens although they look to me to have suitable habitat, which seems to be waterlogged moss mat in shallow sunny pools and runnels.

I continue to maintain *Stratiomys* and *Odontomyia* soldierfly larvae of various ages in aquaria with marly pool mud and stonewort algae on my cool windowsills for study of larval feeding and other behaviour. My observations will be written up this winter.



Male *Odontomyia angulata*, Parsonage Moor. Judy Webb.



*Stratiomys* larva in pool, Parsonage Moor. Judy Webb.





*Stratiomys* larva in hand, Parsonage Moor. Judy Webb.

## Fonseca's seedfly, *Botanophila fonsecai*

As I write, a decision is awaited from The Highland Council on the planning application to create a new golf course at Coul Links, a sand dune system near Dornoch in north-east Scotland. The anthomyiid *Botanophila fonsecai* is known globally only from sand dunes in the immediate vicinity, including at Coul Links. Several other rare or threatened flies also occur on the site, together with plants and other invertebrates of conservation significance. I have written on behalf of the DF objecting to the application, as has David Horsfield for the Malloch Society. Buglife, Plantlife, RSPB and Scottish Wildlife Trust are among the other bodies which have objected. Scottish Natural Heritage (SNH) has also objected on the grounds that it will cause significant damage to Loch Fleet SSSI. SNH notes that the development has "potentially large economic benefits" and advises that a golf course could be progressed in the general location by using a much higher proportion of agricultural land.

Surely Highland Council will recognise the international importance of the site for nature conservation and that this should override local economic considerations? But if it does decide a golf course is needed, let us hope it will heed the advice of SNH and move it away from the sand dunes.

**Rob Wolton.**

## Pesticides & pollution

### Seeking the inconvenient truth

Al Gore, the American politician, spoke of the inconvenient truth as regards global warming. Whatever the alternative truth, his graph showing the increase in the greenhouse gas carbon dioxide in the atmosphere was particularly compelling.

Some years ago I was an objector to the construction of an energy producing waste disposal plant. Leaving aside the untried combination of technologies, the claim was that any nasty chemicals in the waste, such as dioxins and cadmium compounds would be changed to a harmless state by the very high temperature involved. That dioxins would reform in the cooler temperatures of the chimney stack was an inconvenient truth, as also that during a temperature inversion, chimney emission would come down to be breathed by the immediately adjacent population of Peterborough (as per experience of brickwork chimney stink). When pressed, the local health authorities said there was no known health hazard – weasel words indeed. So any expressed concern over the chemical cocktail of air and deposition on wildlife, or crops, was irrelevant. Incidentally, a similar scheme was nodded through after giving a 3 week consultation period during the summer holidays, a common sneaky tactic to avoid watchful eyes.

An inconvenient truth can be kept as quite as possible. Neonicotinoids are on the **Water Frameworks Directive** watch list and an assessment has been made of the levels of contamination in 23 rivers in Britain: 88% were found to have contamination. This class of systemic insecticide (for use on crops) disrupts the metabolism and behaviour of invertebrates, including death. Much of the chemical seeps down into water tables or is washed off agricultural land into rivers, not good news for invertebrates and fishermen. All the tested sites in the East of England, up into Yorkshire, at time have exceed the acute level for invertebrates, and two rivers at times have exceeded the chronic level (River Waveney in East Anglia and River Tame in the Midlands). These results have been off the radar but Buglife is taking issue. As yet the UK Government has not responded to calls to introduce systematic monitoring.

Most chemical testing is done minimally in a laboratory (perhaps one neonicotinoid, which may not speak for all) and a few representative invertebrates (the easily obtained common ones, common because they are the most environmentally resilient). Disrupted metabolism can lead to increased vulnerability to predation, tested in this case. However, it is impossible to do all the tests on all the species, and their interactions, before defining safe levels. Nor is it ever likely that testing could keep pace with the development of new chemicals. The biggest limitation is the implication of complex cocktail combination of chemicals in the environment. Monitoring invertebrates provides some measure of warning, though even a brief period of adverse conditions can have long lasting repercussions. The Biodiversity Action Plan advocates the precautionary principle and sustainability (in this case crop production should not, as collateral damage, result in loss of biodiversity). The late Eric Gardiner reared all British Dragonflies from the egg and found great differences between species of their resilience to pollution: the rarest species, *Oxygastra curtisii*, was the most sensitive if water was not kept absolutely pure, extinct in Britain after the construction of a water treatment works just upstream of its favour stretch of river. That has always remained vivid in my mind, especially having seen the seemingly perfectly good piece of river.

**Alan Stubbs**

## Neonics in British Freshwaters

After reading the above I contacted Buglife's Matt Shardlow who has recently written a paper on this topic which you can read at <https://tinyurl.com/y7hl9wqn>

He tells me that "Neonics are still on sale in garden centres, although I think at the moment none of the big three are available to gardeners, but Acetamiprid and Thiacloprid are still available." I did a little research of my own to find out how I might dispose of mine safely:

### Disposing of domestic neonics

If you happen to have a stock of insecticide bought for domestic use and wish to dispose of it safely without adding to the burden of our poisoned rivers then you've got a problem. The Royal Horticultural Society provide a guide at <https://www.rhs.org.uk/advice/profile?pid=820> in Leicestershire, to get ours treated safely we've got to travel to a private company in a remote town after applying for a waste permit from the County Council, they can't do it themselves.

The application for a permit is tortuous, first you have to register with the County Council on their website who send you an email with a password, then you've to login and complete the form which involves (for this non-driver) detailing the vehicle which is to be used and after 4 pages of questions the confirmation tells me "Permit has been referred to the back office for approval." which a day later was explained by the arrival of a permit in the post giving me a fortnight until it expired. An anxious wait here, can I persuade my driver to drive the 16.5 miles down the motorway just to drop off a couple of garden insecticides?

In the meantime I contacted the company who provide the hazardous substance disposal services for the Council to ask what means of disposal they use to ensure that our rivers aren't further poisoned. I waited but the company didn't reply and so my permit expired, perhaps as well since my driver said "no". The site is 3 bus rides and over 2 hours away, will they then let you in without a car? I gave up.

Check your garden pesticides (and veterinary treatments) for the neonics named in Matt's paper, keep them safe, don't use them and don't tip them down the drain. If you happen to attend a County Show this year, keep an eye out for the team from the local authority who are usually present demonstrating composting etc.; enquire about this topic with them, they're invariably concerned listeners. Legislation must surely come along which will oblige local authorities to devise better and less discriminatory disposal solutions.

For your region see <http://www.gardenchemicaldisposal.co.uk/> and good luck.

Darwyn Sumner

## Neonic notes

Two recent articles should you wish to read further:

**Guardian: Who is winning the PR battle over neonicotinoids?**

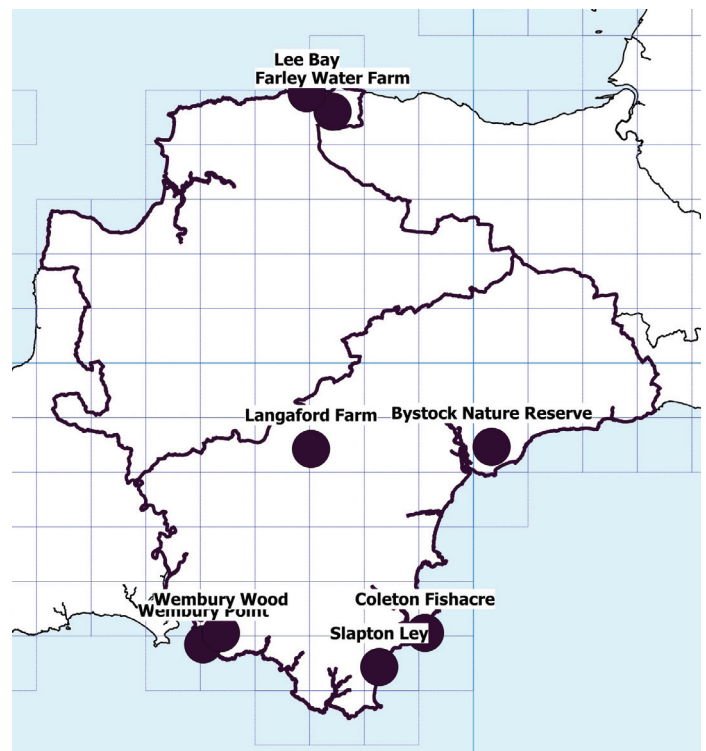
<https://www.theguardian.com/sustainable-business/2015/mar/19/pr-battle-neonicotinoids-declining-bee-colonies-food-security>

**Nature: The bitter battle over the world's most popular insecticides**

<https://www.nature.com/news/the-bitter-battle-over-the-world-s-most-popular-insecticides-1.22972>

## Regional groups Devon Fly Group

Another year has flown by in the blink of an eye and again, it has been a successful year of field meetings for the Devon Fly Group in 2017. February saw us meet up for the regular indoor meeting at Woodah Farm thanks to the generosity of the Devon Wildlife Trust. Martin Drake gave a presentation on Dixiidae accompanied by some pinned specimens with a microscope and a modified key. Martin also gave a short talk on a Sepsidae swarm in his garden. Rob Wolton discussed the special flies of Devon which include quite a number of attractive species. Geoff Foale brought a home made nature film. There was also the inaugural Fly Bingo incorporating images of interesting flies found in Devon with a delicious prize of Swiss chocolate up for grabs. Members also brought their latest home made gadgets which was intriguing as well as inspirational. The format of this first meeting of the year serves well to kickstart us for the year, discuss venues and get back in touch with each other after a winter of microscope work.



Sites visited by Devon Fly Group in 2017 [Darwyn Sumner]

The field season kicked off at **Froward Point to Coleton Fishacre** (SX911505) on the south Devon coast. Catherine Mitson was a new member welcomed to the group on the day. Catherine is a Masters student at Exeter University looking at the possible use molecular techniques to map the distribution of *Eristalis cryptarum* on **Dartmoor**. Two hundred and eighty records of a hundred and thirty nine species of diptera have been logged with some yet to be identified at the time of writing. Some of the highlights were *Dicranota subtilis*, *Kowzarzia madicola*, *Chelifera subangusta*, *Hydrophorus praecox*, *Dolichopus signifer*, *Geranomyia unicolor*, *Eristalinus aeneus* and *Portevinia maculata*. *Leucophora personata*, an anthomyiid parasite of solitary bees was a nice find, since there are few county records for this species. Two other species are awaiting confirmation, *Helina deleta* and *Chlorops*



*strigulus*. An oil beetle was spotted with some tiny *Atrichopogon* (Ceratopogonidae) harmlessly feeding on the oil produced by the host. Our visit covered two ten kilometre squares with a combined total of twenty five species recorded prior to our visit so it had been worthwhile.



Rob & Martin (Coleton Fishacre), 22nd April 2017. [Andrew Cunningham]

A couple of years ago, *Mallota cimbiciformis* and *Empis scotica* were discovered as new species for Devon in **Langford Farm** (SX701845) on the edge of Dartmoor. This was enough to make this an attractive venue for the meeting in May. Our host for the day, John Mills kindly welcomed us with hot tea and biscuits. Langford Farm is set up for conservation and community groups. It contains a rich mixture of Rhos pastures with accompanying wet woodlands containing plenty of important dead and rotting timber as well as a few ponds with lush margin vegetation. The uncommon hoverfly, *Brachypalpoides lentus* was found feeding on rowan flowers thereby signifying high quality woods or mature trees with plentiful dead and decaying wood. The nationally scarce scathophagid species, *Parrallelomma vittatum* was also recorded. The larvae of these mine the leaves of heath spotted orchids and has not been recorded before on Dartmoor with just one or two previous occurrences in Devon. Other species rarely recorded in Devon were *Eloeophila trimacula*, *Phasia pusilla*, *Tephrochlaena halterata*, *Dolichopus planitarsis* and *Coenosia pudorosa*. Some puparia of the hoverfly, *Microdon myrmicae* were collected and reared successfully. John Day had turned up earliest and whilst

waiting for others to arrive he was lucky enough to watch a Polecat drag a rabbit into a hedge.



Richard, Rob & Martin (Froward Point), 22nd April 2017 [Andrew Cunningham]

June saw us meet up on the south Devon coast again to visit the wildlife rich **Slapton Ley** (SX828443) and it did not disappoint on a wonderfully warm and sunny day. A variety of habitats were covered including shingle beach, reedbeds, coastal lake margins, mixed coastal woodland and marsh. As things stand, this field meeting generated four hundred and forty five records of two hundred and twenty three species. As far as we know, *Pegomya cunicularia* (Anthomyiidae) has not been recorded from Devon until that day along with a few 'Nationally Scarce' species, *Bombylius canescens*, *Homoneura notata*, *Dicranomyia lucida*, *Sarcophila latifrons*, *Dioxyna bidentis*, *Acanthiophilus helianthi*, *Colobaea bifasciella*, *Psacadina verbekei*, *Rhamphomyia lamellata* and *Themira gracilis*. One new species for Devon was the sepsid, *Themira biloba*, which is not known to occur outside East Anglia. This was found in good numbers feeding on the goose and duck droppings on a small shore of the Higher Ley along with four other *Themira* species. Plenty of interesting specimens of other orders were also noted adding to the scope of the our recording capacity.





Devon Fly Group (Slapton Sands), 24th June 2017. [Andrew Cunningham]

Two sites on the Devon parts of Exmoor were our destinations for the July field meeting starting at **Farley Water Farm** (SS742460) thanks to the kindness of Mr & Mrs South. Farley Water Farm is a steep sided valley with a narrow stony river running through the wooded floor producing a mix of shady and marshy conditions with lots of rotting wood.



Richard Lane (Farley Water Farm), 15th July 2017. [Andrew Cunningham]

The upper valley opened out into a few rushy meadows. The weather was far from ideal but thankfully, the trees protected us from the worst of the rain. Naturally, craneflies dominated our nets and pooters on the day. After we felt we had exhausted Farley Water Farm, we relocated nearby to **Lee Bay** (SS693492) on the north Devon coast. Here was a rocky seaweed strewn beach flanked by sheer cliffs with seepages. Two hundred and eleven records of a hundred and thirty two species were garnered from both sites. There wasn't anything particularly rare or scarce but it was good to find *Hilara lurida*, *Microchrysa cyaneiventris*, *Paracraspedothrix montivaga*, *Platycheirus occultus*, *Sphegina verecunda* and the psychodid, *Trichomyia urbica*. Also, several larvae of the hoverfly, *Cheilosia albipila* were found in stems of thistles. The weather didn't improve much when we got to Lee Bay which made it hard work getting many specimens but we were pleased to see *Aphrosylus ferox*, *Fucellia tergina*, *Geomyza majuscula*, *Orygma luctuosum*, *Oxycera pardalina*, *Rhagoletis alternata* and the sphaerocerid, *Thoracochoeta zosteriae*.



Rob Wolton (Lee Bay), 15th July 2017. [Andrew Cunningham]

Once again, on the south Devon coast, **Dawlish Warren** (SX987796) was the alluring destination for the August field meeting which was well attended and produced four hundred and forty four records of two hundred and thirteen species of diptera which was supplemented by a wide range of other orders. The star turn of the day was undoubtedly the distinctive RDB crane fly species, *Geranomyia bezzii*. We struggled to locate any specimens but it was Chris Spilling who found the first by shaking clumps of Sea Purslane over a net. This proved to be an easy way to find a few more thereby positively confirming it's continued presence. Other notable records made on the day were *Helina deleta* (again), *Musca osiris*, *Coenosia karli*, *Villeneuvevia aestuum* (all Muscidae), *Platymyia fimbriata* (Tachinidae), *Tomosvaryella littoralis* (Pipunculidae) and *Muscidideicus praetextatus* (Dolichopididae).

The south Devon coast dominated the field meetings this year and September saw us all down there once again to visit **Wembury Point** (SX504484) and **Wembury Wood** (SX537506) on the Yealm estuary which were probably visited by the famous Colonel Yerbury over a hundred years ago. The weather was not ideal but there was enough sunshine to enable us to do Wembury Point justice, the rain set in when we ended the day at Wembury Woods which limited our catches. As things stand, there were two hundred and sixty five records made of a hundred and forty two species. The species that merit a mention were *Philosepedon humeralis* (a psychodid that breeds in dead snails), *Azelia trigonica*, *Chrysotoxum elegans*, *Cerotelion striatum* (a fungus gnat),



*Lucilia richardsi*, *Chersodromia hirta*, *Tricogena rubricosa*, both *Aphrosylus mitis* & *A. ferox* on the rocky shore, *Kowarzia madi-cola*, *Melinda viridicyanea* and *Pollenia grisetomentosa*. Several Sphaerocerids were found of which two are not recorded often in Devon, *Opacifrons septentrionalis* and *Alloborborus pallifrons*.



Devon Fly Group (Dawlish Warren), 12th August 2017, 01 [Andrew Cunningham]

**Bystock Nature Reserve** (SY033844) managed by the Devon Wildlife Trust near Exmouth was the venue for the final meeting of the year in October and a hundred and thirty three records were gathered of eighty one species which is pretty good for so late in the season. Bystock is a small site but packs in a lot of habitats. *Forcipomyia aristolochiae* is a ceratopogonidae that seems to be hardly ever recorded in the UK but one was found today by Richard Lane. He also clocked the most species of psychodid (six) he has collected in one place on our field meetings. Craneflies featured strongly with the pick of the bunch being *Eriocnopa diuturna*, *Tipula luteipennis*, *Pedicia occulta* and *Crypteria limnophiloides*. Other notables found at Bystock included *Tephritis matricariae*, *Alloborborus pallifrons*, *Drosophila suzukii* and *Campsicnemus pusillus*.



Devon Fly Group (Dawlish Warren), 12th August 2017, 02 [Andrew Cunningham]

Membership of the Devon Fly Group is open to anyone who wishes to join simply by registering online with the Yahoo Newsgroup (email Andrew Cunningham via [ajc321@hotmail.com](mailto:ajc321@hotmail.com)). All communications of noteworthy items, field meetings, etc. are posted to all members' email accounts via this platform. Devon is a popular holiday destination so even if you are only here for a week or so, you will always be very welcome to join us for the day. We would also be keen to know what flies you saw and recorded in Devon.

**Andrew Cunningham**

Andrew seems to be using an Olympus TG-4 for the above images. presumably so that he can throw it down the cliffs (Ed)

## Northants Diptera Group

Following on from the Autumn Bulletin, several more records have been received from the DF Spring Field Meeting. These added a number of interesting records to the county list, in particular several Chloropids, including *Epichlorops puncticollis* and *Lipara rufitarsis* in the Yardley Chase Deer Park (DB).

Elsewhere in the vice-county, three new sites for *Gnophomyia viridipennis* were discovered by visiting known mature poplar plantations (JS & RC). Several sites visited did not yield any records but looked promising for future visits. In all cases the craneflies were found on vegetation close to fallen mature trunks that had been on the ground for 2 or more years but which still had firmly attached bark.

A second record of *Solva marginata* was made when I found a dead specimen on the floor of my conservatory. The day had been warm and the doors to the patio were open for a few hours, effectively making the conservatory a giant Malaise trap. The nearest likely breeding site is a row of mature poplars about 300 meters from my house on a local nature reserve. I have examined these trees and fallen or cut trunks and branches over several years but have failed to find either the wood soldierfly or the cranefly on them. They have yielded Hornet Clearwing Moth *Sesia apiformis* on one occasion, however.

Amongst the soldierflies, *Beris fuscipes* was recorded at High Wood and Meadow Nature Reserve near Daventry (KR), a site with steep grassy banks with several wet seepages. Two *Odontomyia tigrina* were noted at Pitsford Nature Reserve during a mini bioblitz of a poorly recorded part of the site (JS).

A new site for *Norellia spinipes* was discovered near Blatherwycke when several adults were found on a clump of daffodils growing on the road verge (JS). Several more sites with well established daffodils were checked but this was the only successful hunt this year.



Ganoderma galls [John Showers]

The Northants Biodiversity Records Centre launched its WILDside project in the Spring. This project is aimed at encouraging new recorders in all taxa, something that is desperately needed as the existing recorders are not in their first flush of youth! Members of the Diptera Group have been active in encouraging volunteers to get to grips with flies. A weekend workshop on fly families was held including classroom workshops and a field meeting. This was followed up by a second day of practical classroom identification



and some field work. One of the attendees (JH) sent me photos of the Artist's Bracket Fungus *Ganoderma applanatum* with nipple galls on the underside. In 2018 we shall try to find the adult *Agathomyia wankowiczii* at the site in ancient oak woodland in Corby. More events are planned for 2018. Stuart Ball and I are running a weekend workshop on soldierflies and allies at the beginning of February.

DB – David Brice

KR – Kev Rowley

JH – John Haughton

JS – John Showers

RC – Ryan Clark

John Showers

## In praise of Local Diptera Groups

Ten years ago, the Northants Diptera Group was set up; five years ago the Devon Fly Group started. Both are still going strong. John Showers wrote a good summary of how the Northants group was set up ('Starting a local Diptera group', *Bulletin* No 74, p8-9, 2012), and Rob Wolton added more background based on the Devon group ('Establishing local Diptera groups', *Bulletin* No 76, p7, 2013), with frequent round-ups in the *Bulletin*. As these initiatives were clearly not five minute wonders, we thought we need to encourage more such groups.

Perhaps I should start with what we get out of it, since no-one will turn up if they don't enjoy a productive day out in the countryside. You might think that 'recording' ought to be the first thing to mention but really the social aspect is foremost. We may have tolerant spouses and partners who murmur polite nothings when we report what we've just found (fascinating but incomprehensible) but there's nothing like being able to talk about flies to people who don't think you're nuts. Technically, recording is the prime reason for local groups. Only a few parts of Britain have been thoroughly worked for Diptera, and even in well worked counties there will be gaps in taxonomic coverage. A group of people will inevitably

cover a wider taxonomic range of flies than most of us can manage, helping to smooth out biases in recording. If just collecting records seems passé, the focus can switch to understanding the fauna of key sites or habitats, especially if there are good examples of a particular habitat in your area. For instance, the Devon Fly Group uses a list of species for which our county is particularly important and, together with nationally important species (BAP, rare) we target meetings to locate these beasts. As for habitats, we cover the range available in the county and make an effort to get to less well represented examples as well as the hot-spots; in our case, saltmarsh is hardly an important habitat but every scrap we visit turns up trumps. The field is wide open local groups for making a genuine contribution to recording.

Organisation needs a bit of attention although less than you might think. Getting the group going is the one big step that does need more effort. A well advertised inaugural indoor meeting is important, since this is the moment when the level of interest can be gauged and from which the frequency and format of meetings can be decided. It may be best to avoid the baggage of a formal organisation as the group will end up as a bunch of friends having a good day out; you don't want your day spoilt by rigmarole and looming deadlines. Some element of leadership is needed to goad the group into action but the Devon and Northants groups have loose joint leadership and spread the chores among members to avoid anyone feeling put-upon. The few chores are getting access permissions, thanking owners and giving feedback so return visits then become far easier to arrange, making sure records get to the local record centre and other important places, and, if an indoor meeting becomes an annual event, then booking a venue. Some regularity of meetings will help make them part of core members' routine – in Devon we have monthly visits from April to October; the Northants group has weekly visits over the same period. Organising access for just a few sites each year is not onerous, particularly as some of the best sites are likely to be under the aegis of the same few key conservation organisations. In both the Devon and Northants groups, attendance followed the usual trajectory of any new organisation, starting high and levelling off to a core of enthusiasts, with the welcome appearance of new



*Chamaepsila rosae* !

faces every so often. Occasional meetings are run jointly with other local entomological organisations, which encourages more new people and reduces the organisational effort. Dipterists Forum has insurance to cover accidents at field meetings, and it covers local groups although they are asked to collect the small annual sub that is additional to DF's main insurance.

A quick word about the DFG's indoor meeting: this is a self-help affair where about ten people turn up in a warm room in late winter, and everyone has something to show or talk about. Someone will do a short ID session, we have fly-bingo, there are always excellent photos, and more detailed presentations on whatever has captured someone's fancy during the year. Nothing is organised except booking the hall and asking for contributions but it works very well.

Do think of having a go. You are certain to make an impact.

**Martin Drake**

## Training Trainers for Diptera Workshops

Have you thought about running a Diptera training session but are not sure how to start or how to assemble the resources necessary? Well, the Dipterists Forum Committee are keen to help. We wish to find more people willing to run fly training courses at all levels. The excellent work of a number of our members has shown that training courses are a very good way of enthusing people in Diptera and in recruiting new members to Dipterists Forum. We are now looking to running a training course to help potential trainers develop their skills and find the necessary resources. We are particularly interested in recruiting trainers from various parts of the country so that we have as wide a coverage as possible.

Some potential training course subjects are:

- Identification of a particular group of flies
- The biology and ecology of flies, either in general or of particular families
- The diversity of flies, and their impact on the environment and on us
- Field techniques for recording and collecting flies
- How to rear flies
- Laboratory skills for preparation and curation of specimens
- Macrophotography of flies, possibly including stacking
- Key writing
- Illustration

Dipterists Forum have a set of microscopes, nets, pooters and some handouts that can be used for courses. Also some members have offered their training course notes for others to use. A training course does not have to be a long, elaborate affair. A single day in a village hall or similar will work very well.

The Natural History Museum have trainers and resources they use in training their trainers and may be willing to run a course or seminar for those interested.

If you think you might be interested do get in touch with any committee member. Let us know how we can help you. It would be helpful to know what course subjects you would like to cover, and what areas of the country you could cover. Expenses may be available.

**John Showers**

# Members

## Membership Matters

By Mid December 2017 we had 357 paid-up members and 310 subscribing to the Dipterists Digest. This is a little down on last year. In 2017 28 new members joined and 2 more have joined to start in 2018. Although we have had one or two resignations, and, sadly, members passing away, the main loss seems to be down to people who have not renewed their subscriptions. These people are being contacted to find out why they have not continued with their subscription.

I do urge all members to keep up to date with subscriptions, which fall due on 1st January each year. 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 & Subscription Rates for 2018

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 and Dipterist Digest: £25 pa.

There is only this one class of membership. Payment must be made in Pounds Sterling.

## 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)

Please e-mail me to let me know when you pay by PayPal..

**John Showers**



# Dipterists Forum Data Protection Policy

## 1. Introduction

This policy describes how members' data is held and used by Dipterists Forum. The policy has been agreed by the Dipterists Forum Committee and forms part of the society's compliance with the General Data Protection Regulation.

## 2. Personal Data Held

In order to provide membership services, Dipterists Forum hold all or part of the following personal information on a computer:

- Member's name
- Member's address
- Member's email address
- Member's home and/or mobile phone number. (Optional but kept if provided)
- Member's membership type (eg Bulletin only, Dipterists Digest only or both)
- Date of subscription payment
- Amount of subscription received
- Free-form comments about the subscription (eg if several years have been paid in advance or subscriber's reference where paid by a separate agent)
- Whether the subscription was paid for the previous year. (Needed to distribute the Bulletin as it is published before all subscribers have paid and is also needed to identify defaulters)

## 3. Uses of Personal Data

The primary purpose of holding this data is for Dipterists Forum to fulfil its obligation to send members their subscribed journals to the address they supplied.

Occasionally, other communications regarding Dipterists Forum business may be sent either electronically or by post. In these cases the communication will only concern the proper functioning of Dipterists Forum. Examples might be: subscription change or reminder notices or notices of special Dipterists Forum events.

Dipterists Forum will not use its membership list to supply third parties with address lists or other information unless required to do so under UK law. Nor will Dipterists Forum use the data for fund-raising or direct marketing.

## 4. Storage of Membership Data

The membership data is held in a spreadsheet on a personal computer. The computer is password protected and the data only accessible to the logged on user. The computer is also kept up to date with anti-virus protection.

A backup copy is made periodically by sending the spreadsheet to a nominated Committee member via encrypted email or password-protected file on other media. Access to that data is only available to the backup copy holder. The backup data will only be used to restore corrupted or lost primary data.

In order to enable query handling, the year end membership details are held in a separate spreadsheet for two years. Thereafter all data is deleted and a note made of that fact.

## 5. Access to the Data

Only the nominated manager of the data "Data Manager" (normally the Membership Secretary) may directly access the data and only for official Dipterists Forum business. If the Data Manager is indisposed the Chairman of Dipterists Forum may appoint another Committee Member to take on that role. If this happens it will be documented (see Procedures).

The Data Manager may pass membership details to other DF committee members for the purpose of fulfilling DF business, for example in posting journals to late subscribers.

Members may request in writing access to their own details for their own purposes. Proof of identity will be required before passing this information on. (For example if a request is received the email address or postal address must match those we hold).

## 6. Changes to the Data

Members can request changes such as address changes in writing and must include proof of identity such as providing the old address or by sending from the email address we hold.

## 7. Deletion of Data

When membership has lapsed the details of the member will be deleted after two years. This is to allow subscribers who have forgotten to renew to catch up.

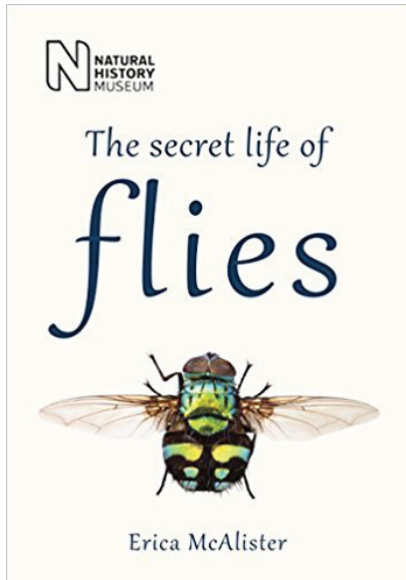
If a member resigns then their details will be removed within one month of receipt of resignation.

# Review

## Books

### Diptera

**Erica McAlister. 2017.**  
**The secret life of flies**  
**Natural History Museum**  
 ~£14.99 (paperback)



If you have not yet bought a copy of this book, you should! Erica’s knowledge of, and above all, enthusiasm for flies is reflected amply throughout the hardback. You may not love flies by the end of it, but you will be left in no doubt that they are truly fascinating. Despite her hatred of chocolate (the cocoa tree is fertilized by a non-biting midge) and often painful research on mosquitoes, Erica’s wonder of flies is infectious. Who else would describe adult bot flies as adorable? And the grey beefly as possibly the cutest animal on the planet?

Apart from the first, which is on life cycles, the chapters take the reader through the main functional types of fly – pollinators, detritivores, coprophages, necrophages, vegetarians, fungivores, predators, parasites and sanguivores. Scattered throughout are photos, most of weird or spectacular flies referred to in the text.

I particularly enjoyed the global perspective – this is not a book just about British or even European flies but covers every continent (even Antarctica). I now so want to revisit the Cape Region of South Africa, this time to look for *Moegistrorhynchus longirostris* which, at 8cm long, has an inflexible proboscis eight times its body length. And then there’s bizarre antler flies, exotic stalk-eyed flies... I might give eating the Sardinian cheese casu marzu, full of jumping piophilid maggots, a miss though.

The pages are full of the anecdotes which Erica is so good at telling. These focus on the less savoury and ‘bad-ass’ habits of flies, but this is where the best stories are often to be found. There’s even a paragraph on defecation rates of various mammals, including humans. Ever wondered why Aussies in particular hang corks from the rims of their hats? This book will tell you.

My one gripe with the book is that it has a boring title. Any tome with an account of the rediscovery of the extraordinary terrible hairy fly, known only from a few remote caves in Kenya, deserves

better. The book does contain a number of errors (like saying Sarcophaga are in the family Scathophagidae) and these may be a little irksome to experts, but I am sure they will be ironed out in future editions and detract very little from the value of the book.

Congratulations to Erica for writing in a way that appeals to such a wide audience, whether layman or entomologist, beginner or expert. Her book will do much to make flies more widely appreciated for their astounding variety and huge ecological importance. Perhaps flies will never be as charismatic as butterflies, but this book sets them well and truly on that path. I am not surprised it is selling well.

**Rob Wolton**

### Diptera: Conopidae

**Jens-Hermann Stuke, Feb 2017**  
**World Catalogue of Insects, Vol 15: Conopidae**  
**(Diptera)**  
**Brill, Leiden. 392pp.**  
**138 Euros (hardback)**

Although likely to appeal primarily to serious taxonomists of the family, this huge piece of work contains the fruits of more than 10 years’ work by the author and is the first World Catalogue of Conopidae to be published in nearly 100 years. Based on a comprehensive database meticulously built up by Dr Stuke, this volume lists every known taxon in their current synonymies, together with all of the known published country distribution records and host-associations, details about the type material (where known), relevant taxonomic history and current status. Some 808 valid species are recognised, reflecting the most recent and comprehensive review of the family currently available. There is also a brief summary of the family systematics and history of study, and a list of recorded hosts. Over 1400 published references are cited out of the nearly 2000 which were known of at the time of writing, the great majority of which have been individually reviewed.

The Conopidae are a ‘difficult’ family taxonomically, despite their often large size and bright colours, and have been plagued historically with numerous described taxa of dubious validity based on gross bodily characters which have subsequently been found to grade into each other. This catalogue therefore represents a conservative arrangement of species based on the latest research, coupled with systematic examination of large collections of material from all over the world. With the passing of Sidney Camras in 2014, Dr Stuke is now the leading world specialist on this family and can probably claim to have seen more material of more species from more countries than just about anyone else on the planet.

It is freely acknowledged that the family taxonomy remains fluid, particularly in genera which show high levels of polymorphism (e.g. *Physocephala*, *Thecophora*), and that further changes are likely with the advent of additional data such as, for example, from molecular evidence. Even where the published data is now assigned to a synonymised taxon, however, the name under which it was originally published is also given so that the information can continue to be associated with the correct taxon in the event that the present arrangement is revised in the future.

Whilst probably of limited interest to the casual conopid-fancier, containing as it does no illustrations, keys or any other identification, behavioural or ecological information, this monumental work nevertheless represents an important a necessary foundation stone for the future study and understanding of this intriguing family.

**David Clements,**  
**Organiser of the Conopid Recording Scheme of the British Isles**



# Meetings

## Reports

### 2017

## Amateur Entomological Society Exhibition

30 September 2017

Kempton Park Racecourse

<https://www.amentsoc.org/events/exhibitions.html>

Dipterists Forum has had a regular stall at this exhibition for a number of years.



Celebrity Erica McAlister enthusing about flies at our stand. This is a fun day out, do consider volunteering to help out (contact Judy Webb)

Photographs by Judy Webb

## Annual Meeting

25th & 26th November 2017

Liverpool World Museum

Liverpool World Museum's setup seemed tailor-made for us – the well equipped theatre was the right size, our informal meeting space was just next to it, and best of all was the warm welcome from the museum's staff, particularly the director, Steve Judd and his most helpful staff fronted by Tony Hunter. Just over 40 people attended, so down a bit on previous years, but expensive accommodation seemed to be a reason for some absences. The weekend's format was similar to that of recent years, with Saturday devoted to talks, chat and rummaging through Pemberley Books stand, and Sunday given over to a workshop and perusing the museum's extensive Diptera collection. Here is a resume of the talks.

### Gary Hedges – Introduction to the Tanyptera insect conservation charity

Gary is based at the museum, and summarised the five-year Tanyptera Trust project that he leads. This is an ambitious project to promote the study and conservation of invertebrates in Merseyside, Cheshire and Lancashire (vice-counties 58-60) with a large element of public engagement. Already Gary has run many workshops at several locations and has a busy schedule ahead. Among the activities that dipterists would find useful are making historical information freely available, particularly by scanning the *Journal of the Lancashire and Cheshire Entomological Society*, getting records onto the NBN Atlas, preparing checklists and atlases for the three vice-counties, commissioning surveys and stimulating more recording. Small grants are available to promote recording and recorder development. Look out for their new website. Gary is keen to work with the Dipterists Forum, and indeed there appears to be much potential for joint workshops, especially given the excellent facilities at Liverpool Museum.

### Nigel Jones – Discovering flies at Haughmond Hill in Shropshire

Nigel told us that for years he had overlooked Haughmond Hill just 3km or so east of Shrewsbury town. It rises only to about 85m above the surrounding plain and part of it has been quarried out. For the most part, though, the thin soils are wooded and managed by the Forestry Commission. It is mainly devoid of typical Diptera attractors such as hogweed, but the fascination of what can be found there has, in recent years, drawn Nigel back again and again – particularly to the abundance of dead wood.

Illustrating his talk with a fine collection of photos, variously from the field and under the microscope, Nigel led us through some of his methods and observations. Noteworthy Syrphidae included three species of *Brachyopa*, *Mallota cimbiciformis*, *Ferdinandea ruficornis* and *Cheilosia semifasciata*. Numbers of the last fly have declined recently, possibly because of the effect of reduced shade on navelwort, the larval foodplant which grows on rocks beneath the trees. *Tanyptera atrata*, *Ctenophora pectinicornis* and *Dioctria oelandica* are other prominent members of the woodland community.





*Ferdinandea ruficornis* [Nigel Jones]



*Rhamphomyia hirsutipes* [Nigel Jones]

Sap runs have been difficult to find, possibly because they remain concealed by the bark, so the acalyptrate *Aulacigaster leucopeza* (Aulacigastridae) was a pleasing find. Other flies are elusive because of the sheer brevity of their flight period, as with *Systemus pallipes* (Dolichopodidae), or because of their habit of flying well

beyond the reach of normal sweeping. However with a long-handled net Nigel had recorded *Periscelis annulata* (Periscelididae), *Fannia gotlandica* (Fanniidae), *Ectinocera borealis* (Sciomyzidae) and *Oedalea apicalis* (Hybotidae). Ground sweeping has also been productive, as a result of careful attention to the smaller specimens: examples were *Acartophthalmus bicolor* (Acartophthalmidae) and *Pseudopomyza atrimana* (Pseudopomyzidae), the latter resembling a sphaerocerid apart from a longer rear metatarsus. *Rhamphomyia hirsutipes* (Empididae) with its profusely long-haired front tibiae and tarsi (see photo) was a spectacular find alongside the closely related and common *R. erythrophthalma*.



*Tanyptera atrata* [Nigel Jones]



*Ectinocera borealis* (Sciomyzidae) [Nigel Jones]

The abundance of dead wood also leads to an abundance of fungi-vores. The drosophilid *Hirtodrosophila trivittata*, first recorded in Britain in 2008, was found on Haughmond Hill in 2017. Numerous Platyezid species have been recorded, as well as the minute *Meoneura neottiophila* (Carnidae) and *Eccoptomera obscura* (Heleomyzidae).





*Periscelis annulata* [Nigel Jones]



Phoresy: *Lonchaea tarsata* with *Lamprochernes nodosus* [Nigel Jones]



*Paraclusia tigrina* [Rob Wolton]

Finally Nigel reminded us of two previously reported star discoveries: *Callicera rufa* (Syrphidae) and *Neomochtherus pallipes* (Asilidae), both seemingly well established in their specific habitats on Haughmond Hill.

## Mike Howe – Invertebrate conservation in Natural Resources Wales (NRW), with a particular focus on Diptera

NRW was formed in 2013 by merging the Countryside Council for Wales, Forestry Commission Wales and the Environment Agency Wales. Its remit includes forestry, flood defence, pollution, fisheries and public access as well as nature conservation. The body now has 1,800 staff, of which just one is employed as an entomologist – Mike!

Altogether there are 1,069 SSSIs in Wales, covering 262,000ha or 12 % of the country. There are also 116 Natura 2000 sites (95 SACs, 21 SPAs) covering 2 million ha, and 76 National Nature Reserves occupying 26,000 ha. Current NRW annual expenditure on SSSIs is £1.7M. 188 species of invertebrate are listed under Section 7 of The Environment Act (Wales) 2016 as being of principle importance for biodiversity conservation. 115 of these are moths and butterflies, with just 9 flies. There are 8 SAC invertebrates in Wales. 118 invertebrate species, including nine flies, and 18 assemblage types are considered to be of national importance on Welsh SSSIs, with a total of 375 SSSI Qualifying features (293 species features, 82 assemblage features). The nine flies are:

- *Asilus crabroniformis* (the hornet robber fly). Whether resources should be put into the conservation of this spectacular fly is now a conundrum. The recent Larger Brachycera status review classi-



*Oedalia apicalis* [Nigel Jones]

An old beech log provided a profusion of Clusiidae such as *Clusiodes gentilis* and *ruficollis*, *Clusia flava* and the large picture-winged *Paraclusia tigrina*, which seems to be spreading northwards. A well-trodden path in dappled light attracted a swarm of small Hybotidae, including *Euthyneura myrtilli*. The paths also run past stumps of trees felled for safety: though these have yielded a few of the 14 or 15 species of Lonchaeidae recorded at the site, most have been swept from leaves at height.

A specimen of *Lonchaea tarsata* off a felled tree was carrying four sizeable pseudoscorpions (*Lamprochernes nodosus*) on its legs – surprisingly it managed to fly off as Nigel was trying to photograph it back home, but was recaptured for the photo shown here.

flies it as being of Least Concern, and since it has been recorded in more than 100 hectads since 1990, not even Nationally Scarce. Nevertheless we know it has undergone considerable historical declines and is probably still on a downward path.

- *Brevicornu kingi*. This fungus gnat was last recorded in Wales on blanket bog on Migneint SSSI in 1988 – is it still there? Elsewhere this species is known from just a scattering of sites in Scotland.
- *Idiocera sexguttata* (a crane-fly). Mike discovered the strongest known UK population of this great rarity at Cors Geirch on the Llŷn peninsula in 2015, where some DF members on our last summer's field meeting based in Snowdonia saw it. Elsewhere in Wales it occurs on a series of small seepages on Cefn Bryn Common on Gower, but is very difficult to find here and only ever in small numbers and there are concerns over habitat succession.
- *Idioptera linnei*. Another attractive crane-fly, but not as rare as the species above. In Wales, it is associated with boggy pools on Fenns & Whixall Mosses and on Migneint. Further survey may find it to be more widespread than currently thought.
- *Microdon devius*. There are three current localities for this hoverfly in north west Wales, including two in Coed y Brenin in southern Snowdonia, well away from its main centre of distribution in SE England. The Welsh sites are in danger of scrubbing over and it is hoped that NRW will be able to carry out the necessary annual clearance.
- *Odontomyia hydroleon*. Sadly this soldierfly has now probably been lost from its site in Wales, having not been seen there since 2006. So, it survives in Britain at just a single site, on the North York Moors. The Welsh site became very overgrown by the horsetail *Equisetum telmateia* but has now, ironically, been restored to good condition for the fly. Perhaps it can be reintroduced?
- *Odontomyia ornata*. Another attractive soldierfly, this species probably retains strong populations on the Gwent Levels although there are not many recent records.
- *Simulium morsitans*. This rare blackfly is known in Wales only from the Afon Teifi as it runs through Cors Caron NNR in the centre of the country where it was last seen in 2008. It may perversely be under threat from conservation measures to restore the river to its former channels and natural state.
- *Stratiomys chamaeleon*. A third soldierfly, and the largest and most attractive, this species has its strongest British populations on the base-rich fens of Anglesey. Here abandonment of grazing is a constant threat and numbers have crashed on Cors Erddreiniog over the last two decades although it is still present. Recent management to open up seepages may help to alleviate the situation.

Mike highlighted some of the best habitats for invertebrates in the country. Sand dunes support no less than 458 specialists, 75% of which are associated with pioneer habitats. Here the big problem is the loss of bare sand – an 87% loss overall since the mid 20<sup>th</sup> century. To counter this, NRW has been using excavators at Newborough Warren, Kenfig Burrows and Merthyr Mawr Warren to remove vegetation and re-profile the dunes – and some pioneer species have responded rapidly. Exposed Riverine Sediment (ERS) is another key habitat, but dramatic reductions in its extent have been observed over recent decades on 42 out of 48 Welsh rivers. There has been a 50% reduction in ERS area and 30% of bars have been lost! This is mainly due to plant succession, reflecting a lack of flooding – there's an urgent need to restore natural river function. The third major habitat highlighted was soft cliffs – these are important for 107 specialist invertebrates, 29 of them obligates.

The scale of the task necessary to conserve and protect all the threatened invertebrates in Wales vastly exceeds available resources. NRW lacks the resources even to monitor its SAC and SSSI Qualifying features, let alone get a handle on Section 7 species. Recently published species status reviews have identified 264 invertebrates in Wales which are under threat of extinction in Britain, according to IUCN criteria, and 1,106 that are Nationally Rare or Scarce, increasing the scale of the task.

Mike concluded by giving the names of a few species whose Welsh

populations are likely to be of importance in a UK context, including *Anopheles algeriensis*, *Dicranomyia aperta*, *Acrometopia wahlbergi* and *Ectinocera borealis* (Mike has found this on upland limestone scree yet Nigel Jones found a singleton in woodland at Haughmond Hill in Shropshire – what is its true habitat?).

Many thanks to Mike for providing us with an excellent overview of rare and threatened flies and other invertebrates in Wales, and of the considerable challenges faced by NRW and others in seeking to conserve them. We must hope that further resources can be found.

## Erica McAlister – Life of fly – the good, the bad and the ugly

Erica McAlister is well known to DF members as our publicity officer, to entomologists everywhere as Senior Curator, Diptera, at the Natural History Museum, and increasingly to the world at large as an author, broadcaster and all-round enthusiast for flies. Her talk provided a suitably rousing finale to the first day of the DF weekend.

Taking some of the stories from her book *The secret life of flies* as a starting point, Erica's tales of the fly life covered some amazing life-histories, and brought home the many ways in which flies and humans interact. The feeding strategies of flies are an endless source of fascination: the crane-fly larvae that once put a stop to cricket matches at Lord's (by devouring so much of the grass that the pitch became too uneven), the phorid fly larvae that cause the heads to fall of the ants inside which they develop, the robberflies that prey on hummingbirds. Erica also described some the roles that fly larvae play in forensic science and in human health – their roles in the latter definitely fall into both the “good” and the “bad” categories, but on the good side the use of blowfly larvae to treat human flesh wounds is well established and increasingly beneficial.

I was pleased to see bee-flies being featured as the cute “powder-puffs of the insects world”, with the females twerking their back ends in the sand to pick up the particles with which they coat their eggs. Many more flies got a mention, and you can catch up with all of them by reading Erica's book.

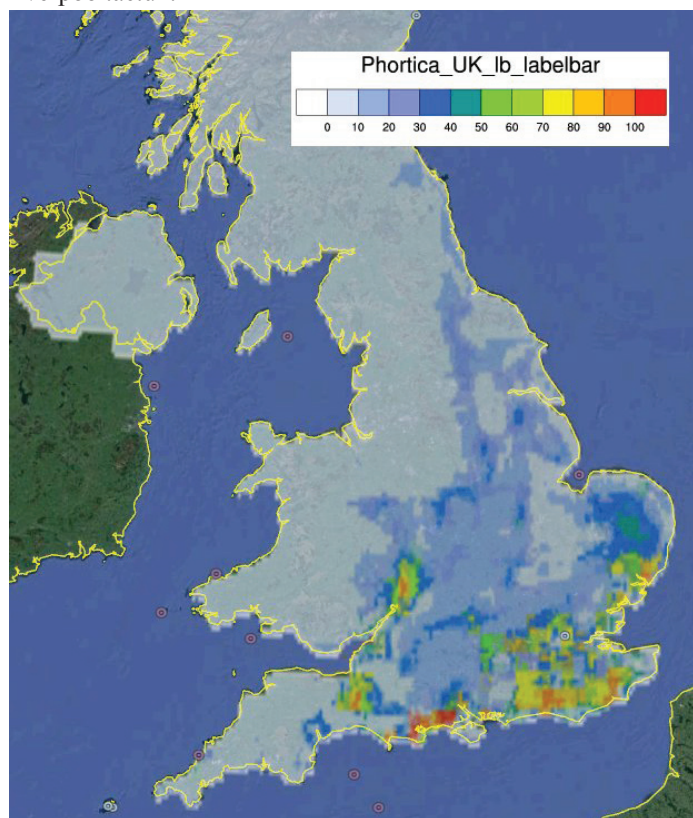
Erica's knowledge of and enthusiasm for flies was clear throughout this talk, and the way in which she has taken these messages and stories out to the wider world is especially impressive. Bringing entomology to the general public requires hard work and a high level of communication skills, and is harder than it looks! But it is such an important thing to do if we are to win broad support for Diptera in museums and research as well as attracting more people to study flies themselves.



**John Graham-Brown – Dogs, fruit flies and oriental eye worm**

John is a veterinary parasitologist at the Institute of Infection and Global Health at the University of Liverpool, and has an interest in Diptera in their role as parasites and vectors in diseases. The villain of this piece is the nematode *Thelazia callipaeda* that infects the eyes of large carnivores such as foxes and lynxes but most relevantly pet dogs and cats. The oriental eye worm originated in south-east Asia, hence its name, but has been reported in many European countries in the last ten years. Introductions of the parasite to Britain could escape detection because the current the pet travel scheme does not require screening for this parasite. Already the nematode has been found in Britain in three pets brought in from areas of Romania, Italy and France where outbreaks have been reported. All the European examples are just one of eight genetic haplotypes, so they are all from a single infection source.

Other species of eye-worm that infect cattle and horses in Britain are thought to be transmitted by muscids but, after some detective work, it was established that the unwitting vector of *T. callipaeda* is the drosophilid fruit-fly *Phortica variegata*. The males feed on eye secretions where they pick up the nematode's larvae and move them to the next animal – for once it is not the females to blame for being the nuisance. Using current British distribution data, John has modelled where *Phortica* may occur (see map). He tested the result by surveying using fruit-baited bottle traps but found only a few examples, mainly close to known sites. This is perhaps expected as *Phortica* is rarely recorded in Britain. John would welcome any records of *Phortica* to improve his distribution model that could help predict where any introduced nematodes may become established; he can be contacted on J.Graham-Brown@liverpool.ac.uk.



Modelled distribution of *Phortica variegata* (likelihood of *P. variegata* presence) CANTACESSI, C., LIA, R. P. & MACA, J. (2006a). The zoophilic fruitfly *Phortica variegata*: morphology, ecology and biological niche. *Med Vet Entomol* 20, 358-364

**Thom Dallimore – Is it, or isn't it? Unravelling the complexities of mosquito hybridisation**

One of the more amusing talks was the one that, on paper, that seemed the most sensible. Dr Thom Dallimore from Edge Hill University presented a talk on the complexities of mosquito hybridisation. Thom firstly introduced the current concepts of species and hybridisation, and the impact of mosquitoes on human health, and then as to why there are concerns about hybrid species, including resistance to control measures. But from then on it got technical. However, thanks to the easy style of Thom's presentation, and the clear and amusing analogies, he discussed the use of genetic sequencing and the value of barcoding/gene skimming in monitoring populations of vectors across regions (Fig.1).

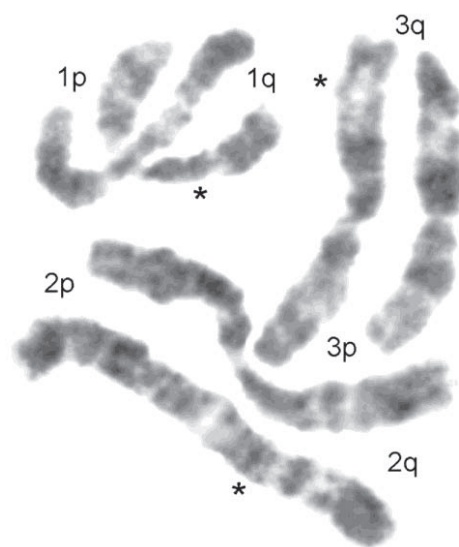
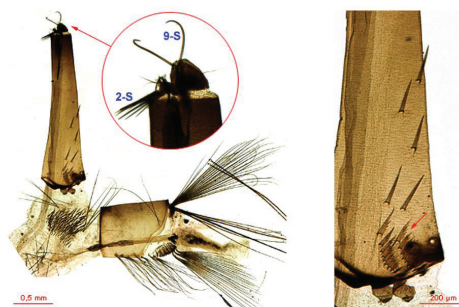
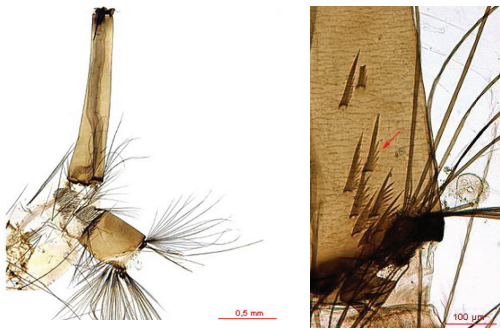


Figure 1. The genetic makeup of a mosquito

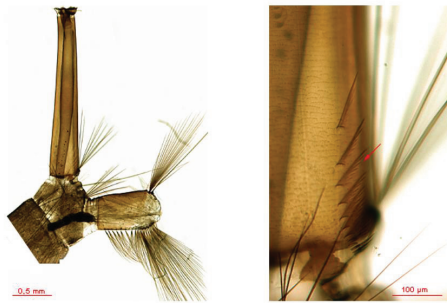
Thom has been working on a field-studies key to British mosquitoes and is very familiar with the British species. For this talk he concentrated on his work with populations of *Culiseta mortisans* and *Cs. litorea*, which are sibling species and whose morphology as adults is incredibly similar, with the main differences occurring in the larval stage and habitat preferences (Fig.2). Thom is not only looking at the morphology of these species (all life cycle stages) but is also studying the genetics, which in itself can be problematic.



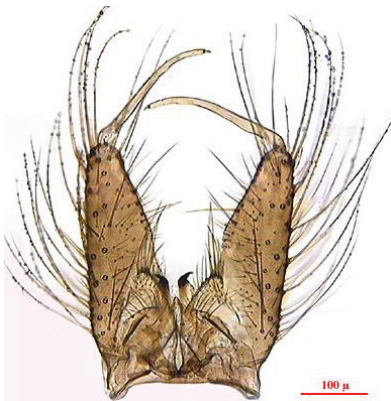
*Culiseta fumipennis*



*Culiseta litorea*



*Culiseta morsitans*



*Culiseta fumipennis*



*Culiseta litorea*

*Culiseta morsitans*

Figure 2. The different morphology of *Culiseta* larvae

Traditionally, many researchers use the ITS2 gene as a marker. But as Thom amusingly points out this is ‘a pain in the Backside for identifying mosquitoes’ so he is looking at the nuclear genome, another spacer gene which has a high mutation rate and lots of genome so is easy to amplify, and provides more reliable answers.

The samples were collected from 75 locations across the UK and from here he was studying the genetic makeup of the samples. Although, as he pointed out, these were just the initial findings from this study, but he did hint at some interesting results – and ones that he is keen to pursue. For example, when looking at the genetic reconstruction of different individuals there were definitely some of the *Cs. morsitans* gene ‘kicking around’ in the *Cs. litorea* gene (Fig. 3).

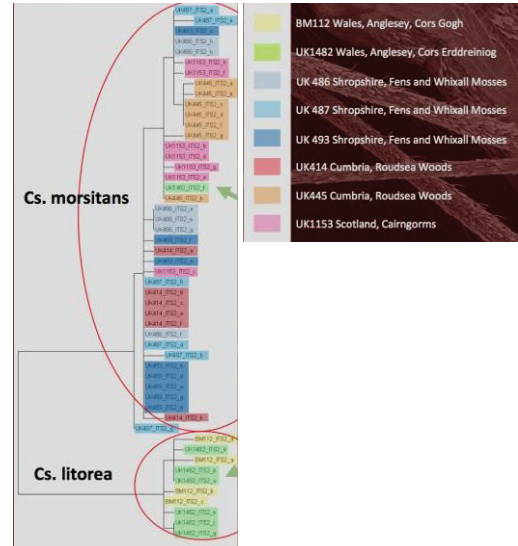


Figure 3.

What this means Thom could but guess but he has now set his sights on North Wales where the mosquito populations could provide answers, due to their existing overlapping populations of these ‘species’. Are these species of *Culiseta* more fluid than we previously thought? Should they really be distinguished as separate species? When it comes to understanding and distinguishing vector species, it is these questions that are the most pertinent.

So, although he gave us no clear answers, he was able to explain the value of this type of research and why we need to be conducting more comprehensive studies and including both the morphological and molecular analyses.

## Martin Harvey – Update on the pollinator monitoring scheme

PoMS – the Pollinator Monitoring Scheme – started in 2017 with the aim of measuring how well pollinating insects are doing, particularly hoverflies and bees. There are three strands. Existing data from recording schemes will be analysed to gain a better understanding of population trends. Secondly, flower-insect timed counts (FIT counts) which can be undertaken by anyone, following some simple guidelines to count insects visiting just a few flowery plants. Finally, CEH are undertaking more rigorous counts of insects using water traps set in hectads randomly selected from those used in the national Plant Monitoring Scheme, so results for plants and insects can be related. See Martin’s 2017 article in *Bulletin* No. 84, p6.



## Sunday 26th

**Martin Ebejer – Illustration for publications**

The Sunday workshop was aimed at persuading contributors to *Dipterists Digest* to put pen-to-paper – literally – when they report species that have to be differentiated from those we already know. Martin went through the reasons why good drawing are superior to photographs, notably when illustrating small features and overlapping structures that cameras are incapable of resolving satisfactorily. He mildly castigated poor illustrators, with examples of how drawings can be of little help when executed poorly or from insufficient points of view. There was a wealth of sound advice. So, before drawing anything, take a good look at the feature (usually hypopygia) from many angles so its 3D structure becomes clear. Include enough of the surrounding features to put the important feature in context; then more detailed drawing of individual components can be shown knowing where they sit on the fly. Features often need to be drawn from more than one angle since complicated structures, when turned only slightly, can appear very different. Labelling is important so we know what has been illustrated, but Martin was less bothered about the accuracy of a scale-line since size can vary between specimens by 20%. The amount of detail in drawings will vary depending on their purpose; thus for describing new species they have to be accurate and detailed, whereas for keys they can be more diagrammatic just to differentiate A from B. Martin covered the practical issues of paper, pencils, pens and so on, a good light source, and use of gel to hold the specimen still (see Michael Ackland's 2015 article Bulletin No. 80, p15-16). There are various ways of getting from a pencil drawing to an inked one, and Martin uses a simple light table – a sheet of tough glass propped up a few inches at the far side so a little table lamp can be shone under it. The inked version is done using good felt pens (although I spoke to another good illustrator who still prefers Rotring pens, and another good illustrator who inks directly over the pencil drawing and rubs out the pencil). The drawing has to be at least twice the final published size but 3-5 times is preferable as small imperfections then get lost in reduction. Scanning at black-and-white (not greyscale) at 600dpi is required by many journals (though *Dipterists Digest* asks for 300 dpi), and an advantage of the higher resolution is that it can be rotated in the final layout with less loss of definition. Any imperfections can be cleaned up in software such as Paint or Photoshop, so there is no need for messy Tipp-Ex any more. The process of drawing was covered in more depth during the following practical session where we were invited to have go – not that easy!

**reports by Erica McAlister, Martin Drake, Martin Harvey, Phil Brighton and Rob Wolton**

## Annual General Meeting

**MINUTES of the ANNUAL GENERAL MEETING of the DIPTERISTS FORUM**

**Saturday 25 November 2017**

**Liverpool World Museum**

The Chairman, Rob Wolton, opened the AGM at 14:35

**Apologies** received from John Kramer, Peter Herkenrath, Roger Morris, Peter Chandler, Tony Irwin, Chris Raper, Richard Lane, Roy Crossley, Duncan Sivell, John Ismay, Barbara Ismay and Stuart Ball.

**Approval of the Minutes of the last AGM and matters arising** (See Spring 2017 Bulletin 83, pp 23-25, for the Minutes of the 2016 AGM). The minutes were accepted unanimously (proposer Richard Underwood, seconder Martin Drake), and there were no matters arising.

### Treasurer's Report

Victoria Burton, outgoing treasurer, presented the annual audited accounts (See Autumn 2017 Bulletin 84, p21). The accounts were accepted unanimously (proposer Phil Brighton, seconder Martin Harvey).

### Secretary's Report

A shortened version of this report was read out at the AGM as an overview of the year's work.

### Membership

John Showers, membership secretary reports that we currently have 355 members and 307 subscribers to the *Digest*. Membership is fairly constant with gains and losses of about 30 members per year. John is looking into the new General Data Protection regulations which come into force next year, and has drafted a Data Protection Policy which will describe how members' data will be held and used by the Dipterists Forum. This will soon be uploaded to the website and will also appear in the next Bulletin.

### Running and developing the society

The committee of the DF supports the work of the organisation as a whole, planning field trips, arranging bursaries, publicity, training and other events, as well as producing two publications.

We held 3 meetings in 2017 in Oxford, Snowdonia and at Dinton Pastures, near Reading. At the start of the year the committee discussed the importance of developing the society; the top three priorities were implementation of an improved website, publication of new keys and updating existing keys, and thirdly to increase membership.

Good progress has been made with the development of the new website. This initiative has been led mainly by Martin Harvey, Rob Wolton and Chris Raper, with tremendous help from other members notably Ken Merrifield, Darwyn Sumner, Nigel Jones and John Showers, and the work is being carried out by Biren Rathod from the Biological Records Centre. The framework is in place, and we hope the site will go live early in the New Year; a much welcomed feature will be that members will be able to join on-line. Much of the excellent content in our existing site, developed and maintained so well by Stuart Ball over the years, will be carried forward to the new one.

John Showers led a discussion amongst the committee on ways in which we can raise our profile and increase membership. Areas that we are working on include improving our social media presence, developing a photo archive and presentation material to enable

existing members to give talks to local interest groups such as natural history societies, encouraging more local groups to form and finally a way of providing support to members who may wish to become involved in running training classes.

Promotion of key development and publication is in progress, this discussion being led by Martin Drake. We are now offering grants to help with this. A list of priority families for keys to be written or updated and published is being put together, and a workshop on how to write keys will be held next Spring – venue and date yet to be decided.

## Field meetings

The committee arranged 2 field meetings this year:

Spring meeting in Northamptonshire (25-28 May)

Summer meeting in Snowdonia (10-16 June)

The spring meeting was organised by John Showers and about 15 people attended. Three private sites were visited, including one owned by the MOD, as well as several nature reserves. A number of interesting finds were made with some new county records.

The summer meeting in Snowdonia was organised jointly by Rob Wolton and Amanda Morgan, with help from Mike Howe and Victoria Burton, and was attended by about 25 people. The venue, the National Park Study Centre, has been used by us before and is an excellent base, but increasing prices will probably mean that we are unlikely to go there again. Despite the cool and wet weather leading to poor catches for some groups, nevertheless many superb wildlife sites were visited and a rich variety of flies found.

Roger Morris ran two small autumn meetings which were not heavily advertised; one had limited accommodation and the other was arranged at short notice. 6 members attended each, and early indications are that good numbers of fungus gnats and a reasonable spectrum of craneflies was collected.

If anyone who attended any of the field trips has not yet sent in their records, the organisers would appreciate them as soon as possible so that the findings can be sent on to land owners and record centres.

## Affiliated fly groups and societies

Two local fly groups continue to be active, Northamptonshire run by John Showers and Devon by Rob Wolton, Martin Drake and Andrew Cunningham. They provide excellent opportunities for new and experienced dipterists, and provide many records for the various schemes.

Members of the Northants Group met every Sunday morning from the end of April until early September. This year they targeted a number of county wildlife sites that had no or few diptera records. Access arrangements were made through the Northants Biodiversity Records Centre. In addition to this the group helped in a local bioblitz and ran an introductory weekend to Diptera on behalf of the NBRC's WILDside project, a project designed to encourage more local people to send in records. Members outside of Northants are welcome to join any sessions in the future.

The Devon Fly Group held its indoor winter meeting in February with presentations by many members, and 7 monthly field meetings. Average attendance at field meetings was about 7 people with over a dozen coming during the year. Records are submitted to land managers and Devon BRC.

A new informal diptera recording group has been set up by Phil Brighton and Glenn Rostron to cover Lancashire and Cheshire, and an inaugural meeting was held at Lancashire Wildlife Trust's Brockholes Centre in July. A major project is to update and extend the county lists published by Kidd and Brindle (1959). So far up-

dated checklists have been prepared for Soldierflies and Allies and for Sepsidae, while Hoverflies and Craneflies are in progress.

From Scotland, the Malloch Society reports on their year. The two main outings were field trips to the Solway Firth coast where a number of interesting sites were visited in this rather unfrequented area of Scotland. Members have been involved in trapping surveys at the ancient woodlands of Hamilton High Parks SSSI and Chatelherault Country Park. Studies have been made of hoverflies around Aberdeenshire and the Buchan area, and an assessment of larval feeding and locomotion based on films and observations, autecological studies of phytophagous species and recording syrphids and acalypterates from Dumfriesshire is being put towards a text for Springer Publishing on the Ecomorphology of Cyclorrhaphan larvae.

The Malloch Society continues to be heavily involved in the conservation management work for *Hammerschmidtia ferruginea* and *Blera fallax*. Further afield they have been involved in describing new species of Lonchaeidae from South Korea and China as well as erecting a new Afrotropical genus within the family. The society AGM is being held in Edinburgh in early December.

## Identification and training workshops

The Dipterists Forum annual advanced workshop at Preston Montford was held in February, organised by Duncan Sivell despite him having stepped down from the committee in 2016. Stuart Ball tutored on sciomyzids and Peter Chandler on drosophilids. The course was well attended with excellent presentations, hand-outs and tuition. Many thanks to those involved, and also to the Natural History Museum and to Richard Underwood and Liverpool Museum for loaning specimens.

John and Barbara Ismay ran a beginners course at Dinton Pastures in February, jointly with Jann Billker who was invaluable. As he was 12 years old at the time we all congratulate him on being our youngest ever trainer. The team will be running another beginners course in January 2018 in Oxford. They are also planning an Acalyprate Clinic in Oxford to help people with keying out the more difficult species.

Roger Morris and Stuart Ball ran Introduction to Diptera and Introduction to Hoverfly courses for Bedfordshire Cambridgeshire and Northamptonshire Wildlife Trust, Sussex Wildlife Trust, and the Field Studies Council. A further course is scheduled for this winter.

The Committee are extremely grateful to the individual members of the Dipterists Forum who give their time and skills towards the various training courses. As I mentioned earlier, we are very keen to provide support to any members who may be interested in becoming a trainer and are working on a 'training the trainers' session for next year. Keep an eye on the website for any announcements.

The Committee granted bursary funding for one place at the February workshop and a further three for the Snowdonia meeting. All recipients have been asked to supply brief reports for publication in the Bulletin.

## Recording schemes

The various Recording Schemes and Study Groups continue to be active and their reports regularly appear in the Bulletin. The committee is exploring ways of supporting group organisers to make their information available through the NBN Atlas, in order to increase its value for conservation purposes.

Further to Michael Ackland's sustained taxonomic work over many years, the Anthomyiidae Study Group has now graduated to become a Recording Scheme under the BRC umbrella. Phil Brighton



helped to establish this by adding nearly 3000 records received since the original NBN upload of about 4000 records by Michael in 2010. The data cover 243 of the 245 species on the current British list and are being uploaded by BRC via IRECORD.

Barry Warrington was formally welcomed and endorsed as the organiser for the new Agromyzid Recording Scheme.

During the past year, the committee identified a problem with records that lie outside of Recording Schemes that do not get uploaded to the NBN Atlas because there is currently no system for verification. A procedure for allowing approved recorders to verify records and thus have them accepted by the NBN is being agreed with the BRC and should be implemented next year.

## Conservation

A car park development at a quarry in the Cairngorms highlights the need for us to ensure our records are readily available to those who advise, influence, or make decisions on future land use or management. In this instance neither the landowner nor the National Park Authority had any inkling that the site was important for Diptera since records had not made their way either to the NBN or local records centre.

In this context, it is encouraging that the great majority of the 20 Diptera recording schemes already submit their data to the NBN or intend to do so in the near future. It is to be hoped that before long all schemes and study groups will be able to place their data on the NBN Atlas or make them otherwise readily accessible.

The huge decline in abundance of insects, including flies, drawn into sharp focus by the recent publication of long-term monitoring results from nature reserves in Germany, must be of deep alarm to us all. One obvious manifestation is how few insects are squashed against windscreens following summer drives through the countryside. Recording numbers rather than just simply presence or absence is far from easy, but it something we should do where possible.

As yet these declines have resulted in few country-wide extinctions because species are able to hang on in one or two places. Nevertheless in England, 41 species of fly are considered to be at risk of extinction, as listed in the Spring Bulletin 83. Hopefully these will become the focus of recovery projects.

The seed fly *Botanophila fonsecai* is known only from Scotland, and one of its key sites, a sand dune system called Coul Links, is under severe threat from golf course development. The Dipterists Forum has submitted a formal objection to the planning application. Very many thanks to Rob Wolton, who continues to act as our Conservation Officer on the committee.

The publication since the last AGM of three major status reviews, covering alypterates, calypterates and larger Brachycera is very welcome. These documents contain a wealth of useful information and will without doubt help with the conservation of the many species. Congratulations to all involved.

Thanks to our fly guardians (adopters) for their good work monitoring and in some cases instigating habitat management for some of our most threatened species. The threats from water abstraction and pollution to the fens near Oxford where the clubbed general soldierfly resides remain deeply troubling despite the hard work being done by Judy Webb. It has, however, been really good to hear from Ian Andrews that following habitat improvement the barred green colonel *Odontomyia hydroleon* continues to survive at what is probably now its only British site. Reports from Iain MacGowan about the pine hoverfly and the aspen hoverfly in Scotland are also encouraging.

## Publicity and events

This year the Dipterists Forum was present with promotional material and exhibits at the Staffordshire Invertebrate Fair, the AES (Amateur Entomologists Society) exhibition at Kempton Park and BENHS (British Entomological and Natural History Society) exhibition in London. Many thanks to the various members who attend these events, set up the stands and engage with the public.

The Dipterists Forum publicity officer Erica McAlister published a book about the Secret Lives of Flies this year which has gained much publicity. On Twitter she reports that we have 1480 followers (for comparison BWARS has 1316, BENHS has 1879 and the British Dragonfly Society which has 8578). We are gaining about 40 followers a month but should be tweeting more regularly to engage more people. A profile of our users shows that in the age bracket 17-24 we have 33% fewer followers than average and in the age bracket 25-34 we have 28% more followers than average.

On Facebook we have about 630 followers, whereas UK Diptera has 1372, UK Hoverflies 3300, and Buglife 10,054. Mostly our followers appear to be asking for identifications of foreign Diptera. Social media responds better with good visual media, so if posting please include photos.

## Bulletin and Digest

As in previous years, we extend a big thank you to Darwyn Sumner and Judy Webb for their efforts as Bulletin editors, compilers and contributors, and to John and Barbara Ismay who help in getting it sent out.

Finally, the committee would sincerely like to thank Peter Chandler for editing and producing the Dipterists Digest, and to Richard Underwood who assists in sending out that publication. (Please see separate report from Peter.)

**Amanda Morgan, Secretary**

## Dipterists Digest Editors report

Two issues have appeared this year. I reported last year that the second part of volume 23 could not appear in that year because of insufficient material being received in time, but that its publication early in 2017 was expected. It was published on 30 January and had, like part 1 of that volume, the maximum possible 118 pages of text.

The first part of volume 24 was published on 14 August and comprised 28 items occupying 114 pages. This included everything that was ready by the end of July. Since then 20 articles and notes totalling 89 pages have been received. Another issue can therefore soon be completed, but will not be ready by the end of this year so the position is similar to last year. An issue devoted to my account of the Diptera of Windsor Forest and Great Park is also not yet complete, so the next general issue may appear first.

The number of pages has steadily risen over the years and was usually below 100 until 2010. Until then the second part of a volume was published in the following year on several occasions. For four consecutive years, from 2011 to 2015, two issues were published within the corresponding year and most were of 102 pages. In order to return to this schedule and ensure that two issues are published within a calendar year and on a more regular basis, the committee has agreed that the number of pages can vary, but will not be below 78.

More contributions are always welcomed. I thank all authors for their support, Mike Pugh and Richard Underwood for proof reading and Richard for efficiently carrying out distribution.

**Peter Chandler**

## Chairman's Vote of Thanks

Victoria Burton was thanked for her role as Treasurer over the past 3 years. The Chairman also thanked Martin Drake for organising the weekend meeting and also the Spring workshop. He also thanked Amanda Morgan for her key role in ensuring the successful and smooth running of the society.

## Election of Officers

The Chairman is elected biennially. The Secretary, Treasurer and other Elected Officers with specific responsibilities (detailed below) require annual election. The constitution (7c) currently requires nominations 30 days in advance of the AGM. Ordinary elected committee members serve for two years. The Officers and General Committee proposed for re-election or election this year were as follows:

Office	Officer
Chair	Rob Wolton
Vice Chair	Howard Bentley (Proposed)
Secretary	Amanda Morgan (Proposed)
Treasurer	Phil Brighton (Proposed)
Membership Secretary	John Showers
Field Meetings Secretary	Vacancy
Indoor Meetings Secretary	Martin Drake (Proposed)
Bulletin Editor	Darwyn Sumner
Assistant Editor	Judy Webb
Publicity Officer	Erica McAlister
Website Manager	Chris Raper
Conservation Officer	Vacancy
<b>Members Elected 2016</b>	Stuart Ball Peter Boardman Victoria Burton Malcolm Smart
<b>Proposed Member 2017</b>	Martin Harvey Tony Irwin
<b>Ex Officio (Editor Digest)</b>	Peter Chandler

All those standing for re-election or election were agreed unanimously (proposer Alan Stubbs, seconder Richard Underwood).

**Chairman's thanks to hosts.** The chairman extended thanks from all attending to our hosts at the Liverpool World Museum and formally closed the meeting at 15:10.

Following on from the formal parts of the AGM, the following announcements were made:

- Congratulations extended to Jann Bilker on winning the NBN youth award for wildlife recording, to Derek Whiteley who received an NBN award on behalf of the Deame Valley Landscape Partnership and to Alan Stubbs who won an Animal Hero award as a result of his work with Buglife.
- A new manual of Afrotropical Diptera is about to be published.
- The 9<sup>th</sup> Congress on Dipterology will be held on 25-30 November 2018 in Namibia; there is some financial support for any students wishing to attend. Erica McAlister, who is on the committee for the Congress, advised that anyone thinking about going should look into permits for collection now, as the relevant administration is slow.
- An appreciation of the late distinguished dipterologist Ken Smith has been posted to the website by John Ismay.
- It had been agreed that there would not be a prize awarded for the best exhibit this year due to the small number of entries.
- Alan Stubbs thanked the committee as a whole for all the work being done and the several new initiatives being taken forward.

**Amanda Morgan (Secretary)**

## Forthcoming 2018

### Diptera Workshops 2018

#### Difficult Larger Brachycera & Anthomyiidae

**Preston Montford Field Studies Centre  
16 - 18 February 2018**

Tutored by Martin Harvey, Howard Bentley and Philip Brighton

**Details on Field Studies Council website: <http://www.field-studies-council.org/prestonmontford> from mid October**

(search in Courses, then Individuals & Families, then Natural History)

This workshop coincides with the compiling of this Bulletin. As I write this it's in the future but as you read it, you've missed it.

### Spring 2018 Field Meeting

#### New Forest

**18 - 20 May 2018**

Organisers Chris Spilling ([chrispp710@gmail.com](mailto:chrispp710@gmail.com)) & Roger Morris ([roger.morris@dsl.pipex.com](mailto:roger.morris@dsl.pipex.com))

To be announced on website

### Summer 2018 Field Meeting

#### Staffordshire

**23 - 30 July 2018**

Staffordshire University in Stoke-on-Trent is to be our base, offering accommodation at a competitive price compared with many other options. Check our website for further details, book via the Treasurer using the form at <https://tinyurl.com/y9u3pc44>

OS Explorer map 258 (Stoke-on-Trent & Newcastle-under-Lyme)

(see Bulletin #84 for details of the region)

### Annual Meeting 2018

**Saturday 10 & Sunday 11 November 2018**

#### Oxford University Museum of Natural History

We gather this year at Oxford Museum, a museum of great significance to British dipterists as the Verrall - Collin collection is housed here. The format will be as in recent years, with talks, exhibits and chat on Saturday, an evening meal in town, and a workshop or similar event on Sunday, when the collections can also be viewed. More detail will follow in the autumn Bulletin and on the website.

### Autumn 2018 Field Meeting

To be announced on website



# And now ...

## Seeds of despair, and hope

I have the impression that cleavers (goosegrass, *Galium aparine*) is becoming more of a problem to those who sample flies by sweeping. A single seed can give rise to a multi-stemmed array of shoots that sprawl out over other vegetation, extending from source by over 2 metres. The prolific seed is covered in hooked hairs which latch onto socks, clothing and nets, a very efficient means of aiding dispersal.

In various sites around Peterborough, some parts are becoming unsweepable because the net bag, as well as socks, become so covered in seed that it takes more time picking out seed than studying flies. I have to accept that my activities may have unwittingly aided the spread of cleavers. It is very easy to overlook or ignore a few seed and carry on regardless. Often it is a case of being unaware that the net had gone through a seed source, the more so if the only evidence is unnoticed on socks and other clothing.



This came to a head for me when I started to resample a site that I had not visited for many years. By mid-summer it was becoming unsweepable. Thus in spring 2016 I diligently removed every trace of cleavers from a large patch of carr and found that in 2017 there was virtually no reappearance of the plant, so the few examples were easily eliminated. That was enormously encouraging. Thus in 2017 the total clearance area of spring growth was extended (making it sweepable). In a remaining area removal was too late, in mid-summer when seed was maturing but at least the seed bank will have been depleted (by bagging up) before a planned final assault next spring. It has been a huge task of about 8 hours so far, but the only way in which I can monitor the implications of decline in vigour of what was one of the best spring and seepage fed carrs in eastern England (nearby building development has put a lid on part of the aquifer). A large black bin bag is now part of my equipment where cleavers is becoming too rampant on survey sample areas.

Of course cleavers is a native plant and a natural component of various vegetation communities, and supports a phytophagous fauna. However, 30 years ago the plant was scarcely evident in the carr concerned and clearly getting out of hand. That the carr is drying out contributes to changes in plant dominance, though cleavers flourishes even on very wet peat.

Wild animals are the natural agents of seed dispersal agents. However, cleavers is commonly found close to paths where walkers and dogs are ready agents of spread. Once established it extends its growth and seed production into adjacent ground where it becomes capable of forming a smothering blanket over the ground flora of woodland and various other situations. Opportunities for spread increase where public access increases, including new housing development near conservation sites. Dog urine and poo eutrophication along paths it well recognised as problem but the cleavers problem is not voiced.

Cleavers is not alone among the seeds which are spread in similar manner but it is perhaps the worst for colonising new ground and rate of spread. In the acra concerned I have also needed to uproot or cut back vigorous invasive bramble. The other plant causing me most anguish at Peterborough is hedge bindweed (*Calystegia sepium*), a perennial, which has been rapidly overwhelming sedge beds and other fen type vegetation but countering that one is not so easy, but at least its seeds are not of the hooked type.

Alan Stubbs

## Contributing Bulletin items

### Revised 2018

#### Text

1. Articles submitted should be in the form of a word-processed file either on disk (3.5<sup>2</sup>, CD or USB Flash) or via E-mail which should have the phrase “DF Bulletin” in the Subject line **or placed in the appropriate Dropbox, details of which are emailed out by the editors to committee members (others please enquire)**. Email text alone will not be accepted.
2. Please submit in native format ([http://en.wikipedia.org/wiki/Native\\_and\\_foreign\\_format](http://en.wikipedia.org/wiki/Native_and_foreign_format)) and in “text-only” Rich Text Format (.rtf) and additionally send pictures in their original format. An accompanying print-out (or pdf) would also be useful.
3. Please note the width of the borders used in Dipterists Bulletin; for conformity with style would newsletter compilers please match this format. The document must be A4.
4. **Do not** use “all capitals”, underlining, colouring, blank lines between paragraphs, carriage returns in the middle of a sentence or double spaces.
5. **Do not include hyperlinks in your document.** Since they serve no purpose in a printed document and the editor has to spend time taking them out again (the text is unformatable in DTP if it has a hyperlink attached), documents containing hyperlinks may be returned with a request for you to remove them. There’s a guide on how to remove Word’s default hyperlink formatting at <https://www.uwec.edu/help/Word07/hyperlinkfor.htm>
6. Scientific names should be italicised throughout and emboldened only at the start of a paragraph.
7. Place names should have a grid reference.

#### Illustrations

8. Colour photographs are now used extensively in the Bulletin, they appear coloured only in the pdfs of older Bulletins prior to 2018.
9. Please include all original illustrations with your articles. These **should** be suitably “cleaned up” (e.g. removal of partial boxes around distribution maps, removal of parts of adjacent figures from line illustrations) but please do not reduce their quality by resizing etc. .
10. Please indicate the subject of the picture so that a suitable caption may be included, in some cases it will be possible for the picture file’s name to be changed to its caption (e.g. 049.jpg becomes Keepers Pond NN045678 12 Oct 2008.jpg).
11. **Add the appropriate metadata to your picture. Your camera instructions will tell you how to add your own name to every shot you take. There is also a field for title (species name) and location which would have to be added afterwards.**
12. All group pictures should identify all the individuals portrayed.
13. **Powerpoint and Word files are a useful means of showing your layout but this is not an appropriate method of sending images. We’ll be glad of AGM presentations in Powerpoint if that’s all we can get.**
14. **Dropbox or similar is appropriate for submitting images for larger files.**
15. Line artworks are also encouraged - especially cartoons
16. Colour pictures and illustrations will be printed in colour from 2018
17. A suitable colour photograph is sought for the front cover (and inside front cover) of every copy of the Bulletin, note that it must be an upright/portrait illustration and not an oblong/

landscape one for the front cover.

18. Due to the short time-scales involved in production, the editors will not use any pictures where they consider there to be doubt concerning copyright. **Add your personal details to the metadata of the picture**, guidelines to this in Bulletin #76.

#### Tables

19. Tables should be submitted in their original spreadsheet format (e.g. Excel)
20. Spreadsheet format is also appropriate for long lists

#### When to send (deadlines)

##### Spring bulletin

21. Aims to be on your doorstep before the end of February, the editorial team has very little time available during January and so would appreciate as many contributions as possible by the middle of December; the deadline for **perfect copy is the 31st Dec**, it will be printed then distributed in late February. Please note that the date for contributions is now earlier than for previous Bulletins.

##### Autumn bulletin

22. Aims to be on your doorstep in early October, contributions should therefore be made to the editor **by the end of July**. It will be printed then distributed in time for final notification of the Annual Meeting, although late details may be posted on our website. Please note that the date for contributions is now considerably earlier than for previous Bulletin

#### Where to send

23. Would Bulletin contributors please ensure that their items are sent to **BOTH** Darwyn Sumner and Judy Webb.
24. Compiling and proofreading take place immediately upon receipt. Please send only your final proofs.

#### Determining resolution and dimensions

Different graphics applications have different means of displaying this information but typically, even if you use the default system that came with your camera, you should be able to find out the following image information:

**Dimensions:** Bulletin columns are 9cm wide. Your picture should be at least this size, but double that is excellent. At that size it must have the following resolution:

**Resolution:** Commercial offset printing (this Bulletin and Dipterists Digest) requests 300 dpi. Images larger than the required dimensions we scale down, thus increasing their resolution. This makes no difference to the commercial print quality but the pdf version will have better resolution when one zooms in.

#### Image metadata

The manual that came with your camera provides instructions on how to set the camera up so that your own name is automatically placed in the image metadata. This is a good practise for a variety of reasons.

The software that came with your camera (or you downloaded) will give you access to other metadata fields which you can add afterwards, many of them can be useful in managing your collection of images.

Consider adding the species name to the “title” field and location details to the “location” field.

Third party image organisers (termed “digital asset managers”) may be obtained and were discussed in Bulletin #76



# AGROMYZIDAE NEWSLETTER

## LATEST NEWS FROM THE NATIONAL AGROMYZIDAE RECORDING SCHEME

### A SPECIAL EDITION TO MARK THE FIRST YEAR OF THE NATIONAL AGROMYZIDAE RECORDING SCHEME

#### THE START.....

##### LAUNCH OF THE SCHEME

The National Agromyzidae Recording Scheme (NRS) was launched back in December 2016 after much deliberation by its organiser, Barry Warrington.

In the weeks before the launch of the scheme, discussions with the good people at the Biological Records Centre (BRC), Dipterists Forum and the known recorders of *Agromyzidae* took place, all of which were extremely positive and certainly underlined the need for such a recording scheme.

After these talks, the (rather daunting!) decision was made to get the scheme up and running. On 14<sup>th</sup> December 2016, the scheme was officially launched via the schemes Twitter account and has gone from strength to strength ever since.



This newsletter will discuss various aspects of the scheme, from the verification process to which are the most recorded species, as well as hopefully providing some insight into the ins-and-outs of running a recording scheme!

#### AIMS OF THE SCHEME

##### KEY POINTS

When the decision was made to start the NRS, the following key aims were identified;

- 1) Collate historical and current datasets;
  - gather records from Local Record Centres, Wildlife Organisations and the general public
  - work with the BRC (iRecord)
  - verify all records were possible
  - store all records in a master database
- 2) Increase public awareness of Agromyzidae;
  - utilise the power of social media to increase awareness of the NRS and its work
  - produce a monthly newsletter which appeals to anyone interested in *Agromyzidae*
- 3) Provide help and support to recorders;
  - respond to all queries within 24 hours
  - provide different means of contact (email, twitter, telephone)
  - Offer training/ID workshops

Although all three aims are equally as important when it comes to running the NRS, providing help and support to anyone interested in *Agromyzidae* is the driving force behind the scheme.

All too often, stories are heard of people been put off contacting 'experts' due to a lack of responses, a feeling of inadequacy or a worry of wasting their time.

The NRS actively encourages people to get in touch and would like to think that everyone who has been in contact with the NRS, by whatever means, for whatever reason, is greeted with a prompt, helpful and friendly response ☺.

Long-term aims include the NRS been able to produce an Atlas or possibly a field guide to Agromyzidae, along with the first training course/ID workshop taking place (this is been discussed for 2018).

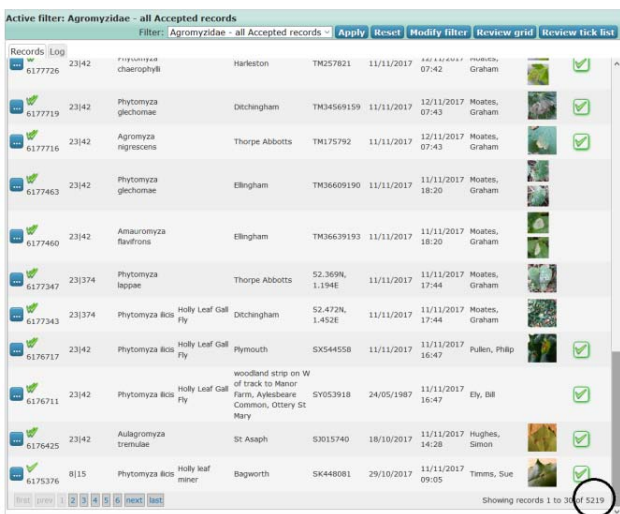
A website (*Descriptive & illustrative guide to UK Agromyzidae*) is currently under development but due to the time and effort required to complete this, the site will not be ready for the foreseeable future.

**IRECORD**

**SOURCE OF CURRENT RECORDS**

At the time of the NRS been launched, there were almost 4,000 unverified *Agromyzidae* records within iRecord!

Needless to say, it took *many* hours to go through each and every one but eventually, these were cleared and as it stands, at the time of writing, there are over 5,000 'accepted' records within the system.



As regular contributors will know, the NRS stipulates that all records must be supported by an image of the leaf mine. Unfortunately, many of the initial 4,000 records were not supported, therefore been rejected and not been incorporated into the NRS Database.

The requirement for supporting images is of course in no way casting doubt over a recorders ability, it is purely to aid the verification process and help build our ever increasing knowledge of *Agromyzidae*.

If records were accepted 'blindly', the door is wide open for erroneous data to creep into the database. Thankfully, most contributors are in total support of this requirement, which is very much appreciated indeed.

The NRS receives notifications from iRecord when records have been submitted and these are then scrutinized (usually) the same day.

If a record is incorrect, the NRS will always let the recorder know the reason why and if appropriate, the correct determination.

Although iRecord has standard templates for dealing with records in terms of accepting/not accepting or querying records, the NRS feels it's important to apply the personal touch and will endeavor to type a personalised message to the recorder.

During the twelve months the NRS has been active, the following 'accepted' records were submitted via iRecord;

Month	No. accepted records
December '16	171
January '17	130
February	139
March	105
April	102
May	134
June	106
July	172
August	168
September	241
October	347
November	169
<b>TOTAL</b>	<b><u>1,984</u></b>

The records received during December 2016 were boosted by a request put out via the NRS Twitter account for sightings of the Holly leaf-miner, *Phytomyza ilicis*.

Despite the NRS been active for only a few days, this resulted in almost 100 records been received in just a week, which really did exceeded expectation.

With regards to incorrect/not accepted records, a total of 82 records were received during the year, the majority of these were able to be re-determined and then accepted.

An increase in awareness of the NRS, along with the production of the monthly newsletter, is hoped to have influenced the increase in number of records received and the number of species recorded during the year!

Records are received from England, Northern Ireland, Scotland and Wales, from the West Cornwall (VC1) to Shetland (VC112).

Naturally, there are some areas of the UK which records are not received from and this will be discussed later in the newsletter.

Over 150 individuals have submitted records via iRecord, with approximately a third of these being regular contributors.

They range from retired folk with allotments to professional ecologists but each one is really helping to build our understanding of *Agromyzidae*.



Here is a comprehensive breakdown of each iRecord contributor to the scheme and the number of records they have submitted (as at 20.xi.2017);

<b>Recorder</b>	<b>No. of records submitted</b>		
Andy & Melissa Banthorpe	158	Simon Hughes	9
Graham Moates	112	Andy Godfrey	8
James McCulloch	108	Peter Smith	8
Sam Thomas	106	Lynn Read	8
Bill Ely	96	Elaine Wright	8
Robert Homan	91	Mike Higgott	7
James Emerson	86	Christian Owen	7
Graham Watkeys	64	Stephen O'Donnell	6
Graham Bell	62	Adam Parker	6
Gary Hibberd	50	Sarah Bebb	5
Sally Luker	47	David Brice	5
Ryan Mitchell	47	Sue Byrne	5
Richard Comont	41	Paula Lightfoot	5
Rodney Monteith	38	Pete Mella	5
Stuart Ogilvy	35	Alice Parfitt	5
Mike Shurmer	31	R. H. L. Disney	5
Kate Wright	31	David Slade	5
Geoffrey Wilkinson	29	Gerri Thomas	5
Jacob Everitt	28	Helen Bell	4
Kevin Rylands	27	Paul Bowyer	4
Ian Andrews	24	Paul Challinor	4
Laurie Jackson	21	D. de Courcy Henshaw	4
Neil Gregory	19	David Gould	4
Mike Lush	19	Gary Hedges	4
Jon Mortin	18	Wil Heeney	4
Graham Calow	17	Annie Irving	4
Harry Rutherford	16	Lee Johnson	4
Richard Shillaker	16	Steven Lewis	4
Andrew Watchorn	15	David Nicholls	4
Graeme Davis	14	Paul Parsons	4
Saharima Roenisch	14	Pem'shire Rec Group	4
David Fotheringham	13	Hilary Perry	4
Peter Hall	13	Phil Playford	4
Tim Hodge	13	Philip Pullen	4
Martin Harvey	12	Mark Steer	4
Annie & Bob Haycock	12	Sue Timms	4
Malcolm Jennings	12	Aaron Woods	4
Calum Urquhart	12	Andy Musgrove	3
Neal Gates	11	Pete Boardman	3
Dave Higginson-Tranter	3	Patrick Bonham	3
		Howard Burt	3
		Liam Crowley	3
		James Harding-Morris	3
		Glamorgan Botany Group	1
		David Inward	1

Robert Jaques	3	Jane Gilbey	1
Craig Mabbett	3	Keith Fowler & Jim Cresswell	1
Steve Mathers	3	Simon Knott	1
Claire Mayhew	3	Mariel Lubman	1
Liam Olds	3	Marco McGinty	1
Andrew Skotnicki	3	Samuel Millar	1
Stephanie Tyler	3	Richard Moyse	1
Karen Wilkinson	3	David Notton	1
Abdon Wildlife Group	2	Laura Palmer	1
Alan Cann	2	Robert Pennington	1
Ryan Clark	2	Phoebe & Candice	1
Derek Whiteley	2	Annie Pickering	1
Rich Edwards	2	John Pitts	1
Mark Evans	2	Jonathan Sadler	1
Sharon Flint	2	Chris Shortall	1
Gail Quartly-Bishop	2	Richard Shotbolt	1
Gary Lowe	2	Ali Shuttleworth	1
Ted Gaten	2	Bob Simpson & Lee Johnson	1
Cliff Henry	2	Mark Skevington	1
Ian Parker	2	Terry Slattery	1
Christopher Iles	2	Robert Smith	1
Keith Kerr	2	Catherine Thomson	1
Ben Mapp	2	Paul Tinsley-Marshall	1
Stephen McWilliam	2	Stuart Warrington	1
Kate Nightingale	2	Stephen Weeks	1
Mark Peacock	2	Sarah West	1
Mark Pollitt	2	Steve Whitbread	1
George Reiss	2	Emma Williams	1
Brad Scott	2	Steve Williams	1
Peter Sturgess	2	Graeme Wilson	1
Susan Ansell	1	Richard Wilson	1
Ashleigh Whiffin	1	Russell Wood	1
Martin Bell	1		
Suzanne Belshaw	1		
L Jackson & M Blencowe	1		
Simon Braidman	1		
James Calow	1		
Pauline Campbell	1		
Charlotte Haylock	1		
David Basham	1		
Edward Jackson	1		
Stephen Foster	1		

A **huge** thank you to every single person and group who has and continues to contribute to the NRS via iRecord. Your records really do help us to gain a much greater understanding in terms of the population and distribution trends of these fascinating little flies.

The images you include also help other recorders with making determinations, something which has been mentioned by many of the people just starting out in recording *Agromyzidae*.

Keep up the good work folks and keeping sending in those records – next year, maybe you could aim to beat your 2017 number of records submitted!!?



As mentioned earlier in the newsletter, the NRS receives records from all over the UK via iRecord (as at 20.xi.2017);

VC	County	No. of records	VC	County	No. of records
1	West Cornwall with Scilly	55	41	Glamorganshire	84
2	East Cornwall	1	42	Breconshire	49
3	South Devon	47	45	Pembrokeshire	18
4	North Devon	5	46	Cardiganshire	5
5	South Somerset	1	47	Montgomeryshire	1
6	North Somerset	9	48	Merionethshire	2
7	North Wiltshire	4	49	Caernarvonshire	5
8	South Wiltshire	1	50	Denbighshire	4
9	Dorset	26	51	Flintshire	9
10	Isle of Wight	4	53	South Lincolnshire	2
11	South Hampshire	21	54	North Lincolnshire	5
12	North Hampshire	17	55	Leicestershire (with Rutland)	76
13	West Sussex	79	56	Nottinghamshire	17
14	East Sussex	76	57	Derbyshire	34
15	East Kent	5	58	Cheshire	6
16	West Kent	15	60	West Lancashire	6
17	Surrey	90	61	South-east Yorkshire	58
18	South Essex	3	62	North-east Yorkshire	37
19	North Essex	16	63	South-west Yorkshire	7
20	Hertfordshire	19	64	Mid-west Yorkshire	38
21	Middlesex	15	65	North-west Yorkshire	1
22	Berkshire	8	66	County Durham	1
23	Oxfordshire	49	69	Westmorland (with Furness)	5
24	Buckinghamshire	13	70	Cumberland	61
25	East Suffolk	27	72	Dumfriesshire	2
26	West Suffolk	7	73	Kirkcubrightshire	2
27	East Norfolk	152	75	Ayrshire	2
28	West Norfolk	79	76	Renfrewshire	9
29	Cambridgeshire	19	80	Roxburghshire	1
30	Bedfordshire	108	81	Berwickshire	6
31	Huntingdonshire	7	82	East Lothian	1
32	Northamptonshire	2	83	Midlothian	5
33	East Gloucestershire	77	85	Fifeshire	2
34	West Gloucestershire	7	86	Stirlingshire	2
35	Monmouthshire	18	87	West Perthshire	3
36	Herefordshire	58	90	Angus	18
37	Worcestershire	34	91	Kincardineshire	2
38	Warwickshire	11	92	South Aberdeenshire	7
39	Staffordshire	14	103	Mid Ebudes	1
40	Shropshire	39	107	East Sutherland	1
			110	Outer Hebrides	1
			111	Orkney	6
			112	Shetland	1

Although iRecord does show *Agromyzidae* records for some of the VC's below, these were all before the NRS was launched and were not supported by images or it was not possible to verify based on the information provided. Therefore, based on this, the following VC's have no verified iRecord data for *Agromyzidae*;

VC	County	VC	County
43	Radnorshire	94	Banffshire
44	Carmarthenshire	95	Moray
52	Anglesey	96	E. Inverness-shire
59	S. Lancashire	97	W. Inverness-shire
67	S. Northumberland	98	Argyllshire
68	N. Northumberland	99	Dunbartonshire
71	Isle of Man	100	Clyde Isles
74	Wigtownshire	101	Kintyre
77	Lanarkshire	102	South Ebuades
78	Peeblesshire	104	North Ebuades
79	Selkirkshire	105	W. Ross & Cromarty
84	West Lothian	106	E. Ross & Cromarty
88	Mid Perthshire	108	West Sutherland
89	East Perthshire	109	Caithness
93	N. Aberdeenshire		

Most of these unrecorded areas are quite remote and most likely have few residents. Nevertheless, it would be fantastic if the NRS could have 'dots' for each VC in the UK! So, if you know anyone living in these areas or are planning a holiday in the VC, please try and gather some records, even *Phytomyza ilicis* would be fantastic!

## THE SPECIES.....

### IRECORD SPECIES RECORDED

Now on to the subject of the actual species of *Agromyzidae* you have recorded and submitted to the NRS via iRecord.

At present, there are around 400 species of *Agromyzidae* which have been recorded in the UK, not all of which are actual leaf-miners.

During the year, 125 species were recorded by iRecord users.

The table opposite shows the top 40 species recorded in the first year of the NRS (as at 20.xi.2017).

Species which have featured in the NRS Newsletter or mentioned via Twitter are highlighted in yellow.

Species	No. of records	% of total records
<i>Phytomyza ilicis</i>	826	43.22
<i>Phytomyza agromyzina</i>	56	2.93
<i>Phytomyza ranunculi</i>	50	2.62
<i>Liriomyza amoena</i>	43	2.25
<i>Phytomyza chaerophylli</i>	41	2.15
<i>Phytomyza lappae</i>	40	2.09
<i>Agromyza alnivora</i>	38	1.99
<i>Liriomyza eupatorii</i>	35	1.83
<i>Agromyza anthracina</i>	34	1.78
<i>Phytoliriomyza melampyga</i>	33	1.73
<i>Agromyza nana</i>	31	1.62
<i>Chromatomyia primulae</i>	30	1.57
<i>Chromatomyia aprilina</i>	25	1.31
<i>Liriomyza strigata</i>	25	1.31
<i>Phytomyza minuscula</i>	24	1.26
<i>Amauromyza verbasci</i>	23	1.20
<i>Amauromyza flavifrons</i>	22	1.15
<i>Agromyza alnibetulae</i>	21	1.10
<i>Aulagromyza luteoscutellata</i>	20	1.05
<i>Phytomyza glechomae</i>	20	1.05
<i>Agromyza flaviceps</i>	19	0.99
<i>Agromyza idaeiana</i>	19	0.99
<i>Amauromyza labiatarum</i>	19	0.99
<i>Chromatomyia lonicerae</i>	19	0.99
<i>Aulagromyza hendeliana</i>	14	0.73
<i>Chromatomyia scolopendri</i>	14	0.73
<i>Phytomyza hellebori</i>	14	0.73
<i>Cerodontha denticornis</i>	13	0.68
<i>Liriomyza congesta</i>	13	0.68
<i>Liriomyza flaveola</i>	13	0.68
<i>Phytomyza ranunculivora</i>	12	0.63
<i>Agromyza abiens</i>	11	0.58
<i>Phytomyza angelicastris</i>	11	0.58
<i>Agromyza ferruginosa</i>	9	0.47
<i>Agromyza sulfuriceps</i>	9	0.47
<i>Cerodontha iridis</i>	9	0.47
<i>Chromatomyia nigra</i>	9	0.47
<i>Phytomyza astrantiae</i>	9	0.47
<i>Chromatomyia syngenesiae</i>	8	0.42
<i>Phytomyza conyzae</i>	8	0.42



The Holly leaf-miner, *Phytomyza ilicis*, is way ahead in terms of the number of records received. However, during the past three months, its dominance is lessening as other species are being recorded more frequently.

After the monthly newsletters have been sent out to those who subscribe, the species highlighted in the 'what's about' section appear to be well recorded during the following weeks.

At the time of launching the NRS, there were close to two hundred records of the Hogweed miner, *Phytomyza spondylia*, in the iRecord dataset.

The first NRS newsletter back in June, along with the NRS Twitter account, made people aware that these mines cannot be distinguished from those of *Phytomyza pastinacae* unless adult males were reared from collected material.



*Phytomyza pastinacae/spondylia* mines

To start with, a few people were rather disgruntled that their records were no longer valid as they were not aware that there was another possible causer.

Since the NRS made people aware, no further records have been received for *Ph.spondylia*. As a side note, the NRS Organiser has only ever reared *Ph.pastinacae* from these mines on Hogweed!

The majority (98%) of the total records uploaded to iRecord are of larval mines. However, there are a few recorders who have dabbled in rearing and/or dissecting collected adult material.

Previous NRS newsletters have covered rearing and dissecting adult material and if more recorders were thinking of taking the 'next step', the NRS is always happy to help, answering any queries or issues you may have.

In conclusion, iRecord forms a vital part of the NRS in terms of receiving records and interacting with the recorders of *Agromyzidae*.

The initial set up, clearing the backlog of records and having stipulations in place for accepting records has caused a few headaches along the way, with the latter point possibly causing some recorders to be rather aggrieved!

However, as it stands today, the system in place works well and it ensures that the NRS Database contains records which are close to 100% accurate as is possible.

The NRS would like to thank Martin Harvey at the Biological Records Centre for all his help during the past twelve months.

Finally, of course, thank you to all the iRecord users who are providing their data to the NRS. It is hoped that the way in which records are verified and acknowledged is well received by the users but if you do have any issues, please do get in touch.

## RECORDS FROM OTHER SOURCES

### LOCAL RECORD CENTRES, ORGANISATIONS AND INDIVIDUALS

The NRS Database currently has over 26,000 records, 65% of which have been collated from Local Record Centres (LRC), Wildlife Organisations, County Recorders (CR) and individual recorders.

At the start of the year, all the known LRC's in the UK were contacted. Some had sadly closed, some never responded to the emails, whilst some were not prepared to provide their datasets.

The end result was that datasets were obtained from twenty-three LRC's, resulting in 12,500 records been received.

Datasets from three wildlife organisations were received, whilst records from nine individuals (inc CR) were kindly passed to the scheme.

Records and datasets continue to be sourced.

Unfortunately, it soon became apparent that a high percentage of the total records obtained from these sources were not verified.

Naturally, some of these will be correct with supporting material if needed, however, a lot were historic with no supporting evidence.

Therefore, a view had to be taken as to the likelihood of a record been correct. Any records which were considered dubious or incorrect were highlighted and removed from the NRS Database.

These are to be queried, if possible, at source, and dealt with on an ongoing basis.

Below lists the LRC's, wildlife organisations and individuals who kindly passed their records to the NRS;

Source	No. of records
<u>LRC's and organisations:</u>	
Bucks & Milton Keynes ERC	324
Bristol Regional ERC	326
CEDaR (NI)	233
Dorset ERC	284
EcoRecord	116
ERIC	52
Essex Field Club	2,965
Gloucester Wildlife Trust	120
Gr. Lincs Nature Partnership	208
Highlands Biological Recording Group	465
LR ERC	186
LWT GiGI	906
Merseyside BioBank	428
North East Scotland BREC	195
NEYEDC	290
Norfolk Biology Information Services	140
RECORD	3,700
RHS	242
Rotherham Records Centre	3,772
SER	168
SEWBReC	405
Sheffield Local Records Centre	47
Suffolk Biodiversity Info Services	122
South West Scotland EIC	31
W & E BRC	29
West Yorkshire Ecology Services	38

Source	No. of records
<u>Individuals:</u>	
Dr Andy Nunn	31
Graeme Lyons	21
Jenny Seawright	17
John Coldwell	419
John Newbould	17
Laurence Clemons (CR)	4,396
Peter Vincent	9
Rob Edmunds	124
Robert Homan	861

The NRS would like to say a massive thank you to all of the LRC's, organisations and individuals listed above who kindly agreed to have their data as part of the NRS Database.

## HELP AND SUPPORT

### A KEY ROLE OF THE NRS

As mentioned at the start of this newsletter, providing help and support to those who record *Agromyzidae* is a key aspect of the NRS.

It can be rather daunting when people first start recording a new subject. They are often fearful of making mistakes, not sure where or who to approach for help or are very wary about asking for help from 'experts'.

Of course, it is not only beginners who may feel like this! People with more experience also need help from time to time and not feeling comfortable asking for assistance often leads to them giving up on recording a particular subject matter.

The NRS is always happy to provide all the help it can, in a way which hopefully makes the individual feel comfortable asking for help or assistance.

Since its launch, the NRS Twitter account has answered almost 300 queries, most of which are responded to within an hour.

The NRS has also received over 150 emails, covering various aspects, again, most of which are answered within an hour.

Hopefully, the speed of response and the friendly, enthusiastic way in which queries are handled is appreciated by everyone concerned.



In the previous newsletter, it was mentioned that a training course/ID workshop may be offered in 2018. This is still being discussed and the content of any course would need some careful consideration.

Early suggestions range from a course for total beginners, with the focus being on identifying Agromyzid mines from other causers to one covering dissection of adult material.

Once a decision has been made, the news will be announced via the newsletter and the NRS Twitter account.

## READERS THOUGHTS AND COMMENTS

### WORDS FROM THE PEOPLE WHO USE THE NRS

In the last newsletter, the NRS asked for people to get in touch to pass on their thoughts, comments and suggestions on how NRS has performed and could be improved.

Here's what you have had to say!

**James Emerson** writes;

"A league table....

My suggestion is that in the monthly newsletter you could include one or two league tables (number of records received and/or number of species recorded) and rank the counties with the most records from that month.

Depending on how many counties have active recorders this could be a complete list or a top ten.

The reasons for doing this are twofold, linked to increasing recorder motivation and harnessing natural competitiveness.

At one end of the scale you could have people keen to keep 'their' county ahead of a rival county (e.g. Norfolk & Suffolk, Cornwall & Devon etc.).

After a few months it might become apparent which counties contribute similar numbers of species/records, and recorders in those counties may also develop a friendly rivalry.

At the other end of the scale it could highlight counties where you receive very few records from.

This might encourage passive newsletter readers (i.e. those who have an interest but are yet to take the plunge and submit records) to start recording, by showing how valuable any sightings from their part of the country are.

Recording Scheme feedback....

Despite having a general interest in wildlife since childhood, until the past few years I had only recorded a handful of leaf miners.

Recording events featuring members of our county moth group had encouraged me to develop an interest in lepidopteran mines a few years ago, but it wasn't until the Agromyzid Recording Scheme was launched that I began to look seriously at dipterous leaf mines.

At the time of writing I have submitted 77 verified records of 37 species (plus several more aggregates) during 2017, as opposed to six records of six species previously.

I attribute my developing interest and knowledge in no small part to the responsive way that Barry has run the recording scheme.

As a beginner it is easy to become discouraged or not seek help when you have made a mistake.

The quick ID help via Twitter and email, very fast iRecord verifications and useful feedback when errors have been made have all contributed to making recording Agromyzids a positive experience.

The introduction of monthly newsletters, in particular the 'what to look for this month' feature has also been a welcome learning aid. I'm now looking forward to spring, when I can look for species that a year ago I didn't even know existed!"

**James McCulloch** says;

"I would most certainly recommend the *Agromyzidae* as a starting point for any naturalist wanting to properly immerse themselves in the world of Diptera.

It's highly satisfying sending records into the Scheme knowing that they'll be used for studies in the future.

It's been brilliant to see how the Scheme has evolved over its first year, and I'm sure it will continue to increase in popularity and increase in volume of records as well!

For me the scheme has been incredibly supportive of me as I learn about this family of flies, and has stimulated me to go out recording even during my current busy school life".

**Graham Calow** writes;

"I've found recording Agromyzidae leaf-mines via the Agromyzidae Recording Scheme really rewarding.

Not only does it offer me the means of adding a significant number of new species to my VC55 list, but also extends the recording season into what would normally be the fairly quiet months of September, October and November.

It is so convenient, as almost every lane and hedgerow has potential host plants, even my own garden from time to time.

I was able to use the British Leafminers website to help with identification, but when the possible causer looked like a member of the Agromyzidae family I found that the Agromyzidae Recording Scheme provided both the means of adding my records to the national database (via iRecord) and, equally importantly, the scheme organiser Barry Warrington was willing to check my images to give me the reassurance of expert confirmation before I added the records.

Of course there are quite a number of mines that could not be identified from images alone, but these disappointments were more than offset by the new species that I was able to record".

**Lynn Read** says;

"I now find myself looking at every plant I pass for signs of leaf-mines, I can even identify a couple myself now thanks to the leaf-mine photographs and species information in the newsletter.

I have also collected a few tenanted mines and have had pupariums emerge on a couple of occasions and have passed them on to the schemes organiser Barry Warrington. He has identified several from photographs for me too (which is no mean feat given the quality of my photographic skills!).

The scheme really has helped me develop and learn more about leaf-mines and it is good to know the records I make are being used to gain a greater understanding of leaf-miners".

**Laurie Jackson** writes;

"I can clearly remember flies being one of the groups that really sparked my interest in wildlife as a child.

It is only in the last few years though that I have begun getting to know this fantastically diverse order, so when I stumbled across the Agromyzidae Recording Scheme this summer, I was keen to find out more.

Barry has been fantastic in supporting my fledgling recording efforts - sending me photographs of mines for comparison with my own, providing clear explanations of key features, and even answering identification questions when I sneaked over a photo of an *Anthomyiidae*! And all this with gentle encouragement and a sense of humour about the array of dodgy, crumpled leaf photos I have sent his way.

The elements of this scheme that really work for me are the helpful feedback on records that will hopefully refine my skills, as well as the tips in the newsletter about what to look out for in the coming weeks, and updates about the interesting finds that others have made.

It is also great to hear that there are plans afoot for a training workshop next year.

Whilst I never need much encouragement to get outside, this scheme has helped me to notice even more as I wander through the world.

Congratulations Agromyzidae Recording Scheme on such a successful first year!".

**Sam Thomas** emailed in;

"As someone who has dabbled in recording *Agromyzidae* for a few years I was very pleased when the scheme was set up. Barry's rapid and supportive responses to queries and iRecord entries has inspired me to dedicate much more time to recording *Agromyzidae* since the scheme's inception.

Thanks to the scheme's support I've now recorded 70 species of *Agromyzidae* and hope this total will continue to rise as I undertake more dissections and start attempting to rear more material.

I've found the newsletters very helpful both for the features on breeding and dissecting techniques and for inspiration on what to look for when through the well illustrated 'what's about' and occasional 'record request' sections.

October's 'record request' prompted me to look at lots of Ash and turned up my most interesting find to date; a large population of *Aulagromyza heringii* on planted *Fraxinus angustifolia* 'Raywood' in Oxfordshire.

I'll definitely be attending the proposed *Agromyzidae* workshop at Berrycroft Hub (just down the road from me). Personally I'd find some content around rearing and dissection particularly useful.

A few suggestions follow.....



"....Given the often confusing or conflicting information on the major websites and in the books something that I think would be really useful would be a draft list indicating which species can be identified from the mine or examination of the larva / pupa and those that have to be reared.

Something like the miner aspect of the Micro-moth Grading Guidelines ([www.mothscount.org/text/73/Guidance\\_notes.html](http://www.mothscount.org/text/73/Guidance_notes.html)).

This isn't to suggest that this would in any way replace verification but it would be a helpful initial source of information in situations like that of *Phytomyza vitalbae/Ph.fulgens* where the websites suggest they can be separated based on mines but scheme experience shows this to be untrue.

The coverage of *Agromyzidae* in the recent Provisional Assessment of the Status of Acalypratae flies is limited with only two species assigned conservation status and a further ten species mentioned as 'recent additions to the British fauna, some of which may qualify for a conservation status in future'.

In terms of targeting recording effort it would be interesting on an unofficial basis to have an indication from the scheme's perspective of which other species may be genuinely rare or uncommon.

As well as this perhaps an update on the ten recent additions as some seem common (*Phytomyza hellebori*) or very common (*Aulagromyza luteoscutellata*) where I record whereas some, I would presume, have been recorded very little if at all since their addition to the UK list.

I'd also be interested to see any information on recording methods and successes / failures relating to finding the non-leafmining species; the stem-borers, gall-causers and wood and seed feeders.

Overall I've been very impressed with the high activity and responsiveness of the scheme and I know that I'm far from the only person to have been inspired to record more *Agromyzids*".

**Jenny Seawright** says;

"I stumbled into recording *Agromyzidae* mines by accident when I spotted fly-mines on some Gromwell (*Lithospermum officinale*) I was searching for larvae of the micro moth *Ethymia dodecea* in Dorset last summer.

Internet research suggested *Agromyza lithospermi* and I contacted Barry Warrington to confirm it.

As a result of his enthusiasm, I now find myself deliberately looking for *Agromyzidae* mines when recording other taxa and it makes all the difference knowing my (frequent!) mistakes will be rapidly corrected!

The Scheme newsletters are very interesting but not being a fan of Twitter I would find a forum more helpful as it can be very informative to see other people's photographs and identification requests".

**Andy Banthorpe** has the following to say;

"I have found this scheme very useful. I had been trying to identify some *Agromyzid* leaf mines myself using on-line resources but when not sure I didn't really have anywhere to go to check.

Having Barry running this has meant that I have someone to go to with queries and it has encouraged me to submit my records which is so easy on my Android phone using the iRecord app or via the web if I have to scan leaves.

The newsletter keeps me up to date and inspires me to look for topical species that I would not think of searching for. I'm looking forward to the 2018 season already (along with looking of *Phytomyza ilicis* in the winter)".

Thank you to everyone who sent in their thoughts and comments on how they have found the scheme, they are very much appreciated indeed. The feedback is fantastic and it is great to know that how the scheme is being managed is encouraging you to get out there and record *Agromyzidae*.

The NRS will certainly implement some, if not all, of the suggestions you have discussed.

Finally, a big thank you to everyone within this newsletter, keep those records coming!

## CONTACT

IF YOU HAVE ANY QUESTIONS OR WOULD LIKE TO KNOW MORE ABOUT THE SCHEME, PLEASE DO GET IN TOUCH WITH US;



@AgromyzidaeRS



[agromyzidaeRS@gmail.com](mailto:agromyzidaeRS@gmail.com)







# Cranefly News

**Dipterists Forum Cranefly Recording Scheme**  
For Superfamily Tipuloidea & Families Ptychopteridae & Trichoceridae

**Newsletter No 33**

**Spring 2018**

**Editor: John Kramer**



*Idiocera sexguttata* Robert Wolton

## Editorial

Thanks to the contributors for providing another very interesting issue. Many of the articles push forward our understanding of the crane flies, either through observations on ecology, or the taxonomic definitions of the different species. There are many suggestions where further work is needed and it is perhaps not surprising in the natural world that only about 350 species of crane flies can generate so many questions and so much interesting work.

## Records and Recording

I am pleased to say that Pete Boardman will be taking over from me (JK) as the CRS Records Officer so please send your future records along to him. Many of you will know Pete for his work on Crane flies, his workshops and especially for his excellent Atlas of Shropshire Crane flies, the first issue of which has sold very well. Thanks to those of you who have already sent your 2017 records to me. I have passed some 2,000 of those on to Pete.

Pete will be using iRecord as the default data entry method though of course records submitted in Excel spreadsheets continue to be very welcomed. iRecord is being used in response to the large number of people who are now using this method to enter records, and when he became verifier for Crane flies nationally there was a backlog of around 5,000 records on there waiting to be looked at. iRecord allows for photographs to be submitted alongside the record so this enables beginners to have their records verified with some degree of confidence, as well as for the correct re-identification of howlers. He has also set up a Twitter account for the Crane fly Recording Scheme and hopes to use this to enable more people to identify species, to flag-up training events, work with new partners, highlight iRecord, support the Dipterists Forum Twitter account, and generally plug crane flies to a wider audience. It is also a good medium to discuss crane flies with international workers, and some discussion has already taken place about the use of data in phenology studies in the future. **Pete's email is:**

[pete.ento22@gmail.com](mailto:pete.ento22@gmail.com)

**and the Crane fly Recording Scheme Twitter account is - @CRStipula**

The 2017 records reveal among others, a new site for *Ellipteroides alboscuteellatus*, discovered near Oxford by Judy Webb (see below) and Andrew & Janet Graham have recorded a new Merionethshire site for *Idioptera linnei*. This is also a site for the Large Heath butterfly and they suggest that bogs and acid moorland where this butterfly occurs would be good places to search for *I. linnei*. The larvae of the Large Heath feed on cotton grass while those of *I. linnei* require *Sphagnum* moss. Pete Boardman has also recorded a new site for this species (see below). In addition there has been the second Lake District record of *Ctenophora flaveolata* reported as emerging from an ash log near Elterwater by Leila Todhunter

## Field work

### **Further information on the habitat requirements of *Idiocera sexguttata* (Dale, 1842) at Cors Geirch, the Llŷn, Wales.**

**Alan Stubbs and Robert Wolton**

*Idiocera sexguttata* is a small, attractive, but very rare crane fly known from only a handful of sites in Britain and from Denmark. In June 2016 Mike Howe discovered populations at Cors Geirch National Nature Reserve near Pwllheli on the Llŷn peninsula, north-west Wales (Howe, M.A. 2016. A new Welsh locality for the crane fly *Idiocera sexguttata* (Dale) (Diptera, Limoniidae) in 2015. *Dipterists Digest* **23**: 47-48). The numbers found at Cors Geirch, a sinuous valley mire system, were higher than from any other British site, and Mike stressed the need to retain a robust population there. During the Dipterists Forum 2017 summer field meeting (10-16 June) several participants visited Cors Geirch and recorded the fly. We visited on 15 June, specifically to try and improve our understanding of The fly's precise habitat requirements.



***Idiocera sexguttata*, Cors Geirch, 15 June 2017 Wing length 6mm. Photos Rob Wolton**

Mike had already noted (in the paper cited above) that the fly is associated with base-rich seepages, and that at Cors Geirch the seepages are characterised by bare silty muds interspersed with carpets of brown moss and tussocks of black bog-rush *Schoenus nigricans*. He also helpfully recorded a number of associated plants.

Initially we swept across large areas in the southern part of the NNR with short fen vegetation, focussing on those with much black bog-rush in a largely closed sward, but without success. Eventually we chanced upon a very small more open habitat patch, covering no more than 50m<sup>2</sup> where we quickly swept about ten individuals before desisting. Later we visited the northern part of the NNR and found another small habitat patch, of about the same size, which a few sweeps revealed to also have the crane fly in good numbers. At both locations we made notes of the habitat and plants present and so are able to add a little to knowledge about the crane fly's habitat requirements.

A few centimetres of still or gently-flowing water covered much of the surface of both habitat patches at the time of our visit, with patches of bare mud exposed here and there. Beneath the water, bladderworts were abundant at both sites, probably lesser bladderwort *Utricularia minor*. Frequent stems and leaves of blunt-flowered rush *Juncus subnodulosus* emerged through the water, and more sparsely those of common reed *Phragmites australis*, slender sedge *Carex lasiocarpa* and water horsetail *Equisetum fluviatile*. Patches of bogbean *Menyanthes trifoliata* and bog pondweed *Potamogeton polygonifolius* were frequent, as were mats of the mosses *Philonotis calcarea* and *Campylium stellatum*. Black-bog-rush *Schoenus nigricans* was present at low frequency in the southern site but was rare in the northern one: here its place was taken by the nationally rare slender cottongrass *Eriophorum gracile*.

Also present at the northern site but not the southern one were occasional plants of marsh lousewort *Pedicularis palustris*, marsh arrowgrass *Triglochin palustris*, bog pimpernel *Anagallis tenella*, few-flowered spike-rush *Eleocharis quinqueflora* and toad rush *Juncus bufonius*. The small sedges *Carex flacca/panacea* and *C. echinata* were scattered throughout both patches, with *C. demissa* and *C. lepidocarpa* at the northern one. Both patches contained many clumps of the bog-moss *Sphagnum subnitens* rising clear of the water and mud. Upon these grew a number of plants typical of more acidic conditions such as round-leaved sundew *Drosera rotundifolia*, tormentil *Potentilla erecta* and cross-leaved heath *Erica tetralix*. Bog-myrtle *Myrica gale* bushes dominated drier ground around the wet places where we found the crane fly.

It is possible that bladderworts (not mentioned by Mike in his paper) are indicative of habitat patches suitable for the crane fly at Cors Geirch. It would be interesting to know more about the distribution of these plants on the site. The uncommon damselflies small red *Ceragrion tenellum* and scarce blue-tailed *Ischnura pumilio* were both seen at the *I. sexguttata* patches, but were not restricted to them. The same applies for the flies *Erioptera nielsenii*, *Ochthera mantis* and *Oplodontha viridis*.

The crane fly apparently uses only very small parts of the NNR so the identification and maintenance of these may be critical for its long term survival there. The southern site was being grazed by a few ponies at the time of the visit and these appeared to be doing a good job of keeping the site open and the sward with a varied structure without causing excessive poaching of the crane fly patches. The northern part of the site had been grazed recently by cattle – again, these appeared to be doing a good job. Nevertheless a few alder seedlings *Alnus glutinosa* were present on the southern site, and grey willow *Salix cinerea* ones on the northern site, so an eye needs to be kept on these.

Thanks to John Day for advice on identification of bladderworts and for information about the NNR, to Mike Howe for checking through this note, and to Will Field for clever photo improvement.

**Alan Stubbs and Robert Wolton**



***Idiocera sexguttata* habitat patch at Cors Geirch.**



## A summary of crane-fly sightings from 2017

Pete Boardman

I have been lucky enough once more this year to have travelled around much of England with my job and so this a review of some of the crane-fly highlights of my year. One of the sites I regularly visited, Kings and Hargreaves Wood SSSI in Staffordshire, was not perhaps the most promising for crane-flies but turned up some interesting and unexpected species using the methodology of Vane trapping (i.e aerial-mounted flight interception traps. See photo) that were run from April until October. Whilst this was done principally for beetles there was a reasonable amount of fly by-catch including crane-flies. Amongst the crane-flies that found their way in the traps were *Ctenophora pectinicornis*, *Tipula irrorata*, *T. truncorum*, *Achyrolimonia decemmaculata*, *Atypophthalmus inustus*, *Neolimnophila carteri* (Nationally Rare), and *Rhipidia ctenophora* (Nationally Rare). The latter two species appear to be new to Staffordshire. It seems *Tipula truncorum* is difficult to find without using such a methodology as this.

I spent a day in late May on some arable margin sites in the Brecks where *Nephrotoma crocata* had been seen only a couple of days earlier by one of my colleagues, a non-entomologist, who had sent me a photo on WhatsApp saying "just seen this pretty crane-fly, what is it?". That species is my long term nemesis and I always seem to miss it. Anyway on my visit predictably I didn't see that *N. crocata* but did find several *Nephrotoma submaculosa*, which are usually coastal but clearly the warm sands of the Brecks are suitable habitat.



I did some work on various heathlands in the south of England where I found *Phylidorea abdominalis* and *Erioptera nielsenii* fairly frequently on Winfrith Heath and Hartland Moor in Dorset. I and my colleagues Vicky Gilson and Des Sussex all found *Idioptera pulchella* at Ash Ranges in Surrey alongside other bog species *Molophilus occultus*, *Phylidorea squalens*, *Prionocera turcica*, and *Tricyphona schummeli*.

Whilst passing Sullington Warren in Sussex I called in to look once more for the enigmatic *Nephrotoma sullingtonensis*, once more without success. (John Kramer and I failed to find it in 2016). I'm going to give it another go next year with a friend as it would be amazing to know whether it is still on the site after which it was named, having never been recorded anywhere else in the UK. If anyone else fancies joining us drop me a line.

I was mightily surprised to find a new location for *Idioptera linnei* in Shropshire in late June. The site, Hodnet Heath SSSI is somewhat from the known populations at Fenn's, Whixall & Bettisfield Mosses NNR. It was found on a bakingly hot day on some former ponds that have been overtaken by Sphagnum mosses and formed into a schwingmoor, though this habitat is really quite limited at the site. Pretty much all other parts of the site were bone dry but it is hoped the hydrological problems at the site will be resolved.

I visited the River Rye at Duncombe Park, North Yorkshire, on a few occasions and recorded *Eloeophila apicata*, *E. verralli*, *Gonomyia*

*abbreviata*, *Hoplolabis vicina*, and *Rhabdomastix edwardsi* from the riverine sediments. I'm not sure I quite agree how the crane-fly keys separate out *Gonomyia abbreviata* in terms of the angle of the R2 vein as my specimens weren't as vertical as is implied. Fortunately Pjotr Oosterbroek's Catalogue of the Crane-flies of the World website (<http://ccw.naturalis.nl/>) came up trumps with a wing photo that matched my specimens exactly. *Eloeophila verralli* was notable by how many flies were present with twenty or thirty swept at a time.

I surveyed part of Lindisfarne NNR on a couple of occasions during the year and found a range of common species with the saltmarsh specialist *Molophilus pleuralis* the pick. *Prionocera turcica* was swept from wet rushy dune slacks. There are not many records in the area for that species.

My favourite location of the year was the week spent on the slumping coastal cliffs on the Isle of Wight. A couple of surprising finds were *Molophilus czizeki* and *Dicranota claripennis*, both new to the IOW. *M.czizeki* seems to be more of an upland thing apparently with few other records. I'm more used to encountering *Dicranota claripennis* in hilly, moorland locations, so it was a surprise to find it close to the sea on the Isle of Wight. Other interesting flies were the more expected *Dicranomyia goritiensis* from coastal cliffs, only the second IOW record for *Dicranomyia morio*, and *Gonomyia conoviensis*.

Talking of crane-flies in unexpected places I was intrigued by some DNA work that a company called Naturemetrics did around the Bernwood Forest area on the Oxfordshire / Buckinghamshire border this year. The work concentrated on identifying invertebrates within the dung of Bechstein's Bat. Amongst the list of identifiable insect debris with enough DNA to use were two crane-flies; a *Nephrotoma* (species unknown) and *Molophilus occultus*. There are no "traditional" records of *M. occultus* from either Oxfordshire or Buckinghamshire (unless you know different, reader) and it is a species of wet heath and bog, again not ten a penny in those counties. From what I'm led to believe the samples were taken in woodland, which is far from *M. occultus* habitat, so the

mystery remains. Is the DNA analysis accurate? Was the crane fly a random stray that was unfortunate enough to be gobbled up the bat? Are there populations of this species in Oxfordshire / Buckinghamshire that remain to be found? We are being encouraged to get involved and develop more and more DNA projects at work and they may indeed enable us to carry out survey work more cheaply and more thoroughly than using the taxonomic identification methods we all know and love. But without the knowledge to interpret these results and question the outputs, and give it context, is it valid? Time I guess will tell.

**Pete Boardman**

## **An inland record of *Dicranomyia goritiensis* (Mik, 1864) from Dartmoor, Devon**

**Robert Wolton**

This crane fly occurs at numerous localities around the coasts of Wales and south-west England, and sporadically elsewhere around Britain – but just about always on steep seepages and flushed rock faces not far from the coastline. So, it was with some surprise that I found it last year on Dartmoor, at a place which is about as far away from the coast as it is possible to get in Devon and at an altitude of 280m above sea level. The location is a very small disused quarry, Meldon Aplite (SX56809209), on the north-western side of Dartmoor near Okehampton. Here I found the fly in 2017 on 2 May (one female), 11 May (one male) and 22 May (one female) by sweeping a sheltered vertical rock face streaming with water and covered with bryophytes.

Meldon Aplite Quarry is a geological Site of Special Scientific Interest (SSSI) notified for the presence of a suite of very rare granitic minerals. Many of these are unknown elsewhere in Britain and only known from a few localities in the world. The aplite (fine-grained igneous rock) is lithium- and beryllium- rich, with caesium and boron.



*D. goritiensis* wing. Photo. R. Wolton The site comprises two quarries – *D. goritiensis* was found in the small northern one, now largely hidden behind scrub. I do not know the Ph of the water running down the rock face, but the vegetation suggests it is moderately base-rich. There are, however, no limestone outcrops in the immediate vicinity as far as I know.

Geoff Hancock (Crane fly Recording Scheme Newsletter No. 17, Autumn 2008) gives details of a specimen in the Hunterian Museum (Zoology) (University of Glasgow) collected on 26 June 1967 by Geoff Hosie from the Spout of Ballagan (NS572801), near Strathblane (about 10km north of Glasgow). Here a waterfall flows over lime-rich rocks at a height of 200-250m above sea level. This would appear to be the only other inland record in Great Britain. John Kramer (Crane fly Recording Scheme Newsletter No. 18, Spring 2009) has checked as many sources as he could on this account, including the collections held in the National Museum of Wales and the Natural History Museum. He asked recorders to explore suitable inland sites, including quarry faces. Sound advice, but my discovery was by sheer chance.

In continental Europe, *D. goritiensis* appears to be regularly recorded inland (e.g. Kolcsár *et al.* (2015). New records of Limoniidae and Pediciidae (Diptera) from Croatia. *ZooKeys* 513: 23–37).

No other crane flies of particular note were found in the northern quarry at Meldon Aplite despite visiting the site most months between May and November. However the southern quarry, which has shallow standing water supporting mire and bog plant communities typical of the acidic conditions typically found on Dartmoor, had numerous *Triogma trisulcata* (Schummel, 1829) on 2 May 2017. The scarce blue-tailed damselfly *Ischnura pumilio* (Charpentier, 1825) was recorded there on 22 July.

My thanks to Pjotr Oosterbroek for the excellence of his online *Catalogue of the Crane flies of the World* as a source of references.

**Robert Wolton**

## **Riverflies and Tipulidae**

**Alan Rowland**

In co-operation with Anglers Riverfly Monitoring Initiative (<http://www.riverflies.org/>) and Cornwall Wildlife Trust (<http://www.cornwallwildlifetrust.org.uk/>) the Riverfly project was introduced to Cornwall in late 2016.

After some training and selection of sites, our surveys commenced in the spring of 2017. Initially the surveyors, most of whom were new to freshwater invertebrates, were happy to be able to identify and quantify seven mayfly larvae and one *Gammarus* species to genera. However once they were confident with these eight, they began to notice the regular appearance of other invertebrates. Almost the first ones were the huge unsightly (!!!) and, initially unwelcome crane fly larvae. Now, these regularly feature in the monthly surveys, with two other Tipuloid larvae being queried as to species.



Larvae of the genus *Tipula* (Family Tipulidae) are large, up to 50mm, and have two posterior spiracles (looking like eyes!) and up to eight lobes depending on species. Gaseous exchange, and perhaps osmoregulation, take place through these lobes, or papillae. (Fig. 1a and 1b)

Larvae of *Dicranota* (Family Pediciidae) are smaller, up to 40mm and have 5 pairs of prominent prolegs. (fig 2a and 2b) which are diagnostic.

Larvae of *Pedicia* (Family Pediciidae) are up to 20mm and characteristically inflate their penultimate segment and have 4 pairs of less obvious pro-legs.



**Figure 1. a)** Larva of *Tipula fulvipennis*.

**b)** lobed posterior gills.

Every month surveyors revisit their selected locations and perform a standard 3-minute kick sample. The resulting catch is then sorted into the eight indicator species – cased and uncased caddis larvae (Trichoptera); four different mayfly larvae (Ephemeroptera) belonging to mayfly families Ephemeridae, Ephemerellidae (Blue-winged olive), Heptageniidae Flat-bodied mayfly, and Baetidae (Olives); stonefly larvae (Plecoptera) and the adult freshwater shrimp (*Gammarus pulex*). Each site has a trigger level related to presence and abundance. If the figure each month is more than this figure then the site remains healthy. Falling to or below the trigger instigates a review process which ultimately can result in EA involvement to ascertain if there has been a pollution incident.



**Figure 2** Larva of *Dicranota* – Head (on right) partially retracted and 5 pairs of prolegs. These thin walled structures will also act as gills.



**a)**

**b)**

**Figure 3** Larva of *Pedicia* to show jaws.

These are voracious predators and their dangerous-looking jaws are evidence of this. (Fig. 3b)

In Cornwall we have sites in 4 catchment areas – most are in the Bude area covering the Strat/Neet catchment, a few more in Looe covering the East and West Looe catchments, with the remainder in West Penwith on the Cober catchment with a few sites on the Fal and around Hayle.

## Results

So far, in the first year, up to the end of 2017 we have recorded the large conspicuous *Tipula* larvae at 16 of the 20 sample sites. *Pedicia* (4 sites) and *Dicranota* (4 sites) have been recorded much less frequently, but they may also be less abundant at the sample sites, since both of these pedicciines are secondary consumers and higher up the food chain as can be seen from their dangerous-looking jaws in fig. 3. It will be interesting to see what differences occur at the different recording stations as the work continues.

## Acknowledgements

Thanks to my colleagues Alison Wood, Martin Dancey, Euan McPhee, Gill Weghofer, John Eddy, Matt Nott, John Meakin, Lowena Arnold, Steve Woods, Laura Fox and Teagen Hill who shared the field- and identification work to collect this data.

## A new regional checklist for the craneflies and winter gnats of Lancashire and Cheshire Phil Brighton

Over the past five years, I have made several mentions in the *Bulletin of the Diptera of Lancashire and Cheshire Part I* by Leonard Kidd and Alan Brindle, covering the families from Tipulidae to Syrphidae. The main volume was published in 1959, with two supplements by Leonard Kidd detailing additions in 1964 and 1971. It has become my over-arching objective to update this work and extend it to cover the Acalyptratae and Calyptratae. A big step forward this year has been the production of the regional list for the Craneflies and Winter Gnats, as covered by the Cranefly Recording Scheme (Tipulidae, Cylindrotomidae, Pediciidae, Limoniidae, Ptychopteridae and Trichoceridae). The area covered is the three vice-counties of Cheshire (VC58), South Lancashire (VC59) and West Lancashire (VC60). This article summarises the information which can be found in a full report which is available from the Liverpool Museum Tanyptera Project website.

Data was gathered from a variety of sources including: the Manchester Museum card index started by Harry Britten which was the basis of Kidd and Brindle's list; the NBN Gateway; iRecord; the four local records centres operating in the region; and my own personal records. The total was over 14,900 records which break down by source and vice-county as follows:

Data Source	VC58	VC59	VC60
Harry Britten cards	1126	869	66
iRecord & others	24	43	99
LRCs	3947	1365	155
NBN Gateway	1569	2093	1227
P Brighton	901	1441	34
<b>TOTALS</b>	<b>7567</b>	<b>5811</b>	<b>1581</b>

Only limited validation has been carried out. A number of records of rare and implausible species have been omitted, primarily where the recorder was anonymous or a non-specialist. A number of other records were found with incorrect grid references and a few others had dates incompatible with the active dates of the named recorder. Such records have also been omitted. Numerous uncertainties remain, which may or may not be resolvable by further enquiries: these could take a long while, and it has been thought better to issue the list now rather than seeking an unachievable state of perfection.

The combined dataset has been analysed using Excel spreadsheets and pivot tables to provide distributions of records by decade and by hectad (10km) square.



First by decade:

Decade	VC58	VC59	VC60
<b>Pre-1900</b>	68	94	0
<b>1900s</b>	10	23	0
<b>1910s</b>	89	24	0
<b>1920s</b>	433	273	10
<b>1930s</b>	332	268	7
<b>1940s</b>	899	411	7
<b>1950s</b>	170	897	99
<b>1960s</b>	88	213	107
<b>1970s</b>	392	1102	541
<b>1980s</b>	124	313	141
<b>1990s</b>	1850	359	320
<b>2000s</b>	1828	195	29
<b>2010s</b>	1284	1638	320

This table shows the influence of Harry Britten during the 20s, 30s and 40s, with Cheshire visited rather more often than Lancashire. Alan Brindle's records start in 1937 but were interrupted by war service. His contributions then extend from the 1950s through to 1982 when he retired from Manchester Museum. His records are strongly concentrated in areas of both the Lancashire vice-counties. It is also worth noting that he had a particular interest in crane fly larvae, and also other aquatic larvae. There was a lull in crane fly recording in the 1980s but during the 1990s and 2000s, the Cheshire numbers were greatly increased by Bill Hardwick. In the present decade, my own records have contributed at a similar level of effort in Cheshire, and rather more so in South Lancashire. Of course, many others too numerous to list have also contributed.

There is a marked variation in the number of records per hectad. For instance, square SD42 has only 5, even though it contains part of the Ribble Estuary National Nature Reserve and the RSPB's Hesketh Out Marsh. The following table shows the most-recorded hectads in each vice-county.

VC	Hectad	Description	No. of records	No. of species
58	SJ57	Frodsham and Delamere Forest	1090	139
58	SJ66	Winsford and the Weaver Valley	1056	127
58	SJ88	South Manchester and Wilmslow	819	142
58	SJ98	Stockport, Marple and Poynton	776	109
59	SJ69	NE Warrington and the Manchester Mosses	1189	109
59	SD73	Whalley and Padiham	559	126
59	SD61	NW Bolton and Winter Hill	397	107
59	SD84	Pendle Hill and Barnoldswick	318	96
60	SD47	Silverdale area	573	117
60	SD63	Longridge area	165	74

The tally for SJ57 was significantly boosted by an invertebrate survey in 2003 for the Lost Meres and Mosses project by Martin Drake, and I have been carrying out further surveying there in the last few years. SJ66 is the home square of Bill Hardwick and as well as the Weaver Valley it contains the classic dipterising sites of Pettypool and Newchurch Common. SJ88 includes the Bollin Valley and Cotterill Clough: the latter was much frequented by Harry Britten and appears to have retained much of its diverse crane fly fauna despite its proximity to Manchester Airport (see the Spring 2016 Crane fly News #32 in the Autumn 2016 DF Bulletin). SJ98 also owes its prominence largely to historic records by Harry Britten and others.

Turning to South Lancashire, my home square SJ69 has become the most worked of all in the region but is relatively poor in species, as it has little extent of woodland and no upland areas. Alan Brindle worked extensively in SD73 and SD84 near to his home town of Nelson. SD61 was covered by entomologists based at Bolton Museum in the 70s and 80s and is the scene of renewed recording effort following the acquisition of the Smithills estate by the Woodland Trust.

The large number of species in the last three VC59 hectads relative to the number of records is noteworthy. The SD73 and SD84 records are largely due to Alan Brindle, and SD61 was explored by staff from Bolton Museum, who had a base at Smithills Hall.

As a result of the much lower overall level of recording only two squares VC60 rank alongside the above. The Silverdale records were boosted by the Dipterists Forum Field meeting of 1999. There is no simple relation between number of records and the number of species recorded in a hectad. Apart from the underlying numbers of species present, this is affected by the increasing propensity of recorders in recent decades to record common species more thoroughly and at a higher grid resolution. The species lists for each vice-county use a format similar to that of the Cumbrian diptera checklists produced by Steve Hewitt (see the Carlisle Natural History society website). Here is an extract for the Cylindrotomidae in Cheshire:

VC58 (Sub)Family/Species	No of Records	Earliest	Latest	No of Hectads
<b>CYLINDROTOMIDAE</b>	65	1905	2017	14
<i>Cylindrotoma distinctissima</i>	27	1920	2015	8
<i>Diogma glabrata</i>	15	1937	2003	4
<i>Phalacrocer replicata</i>	22	1905	2017	7
<i>Triogma trisulcata</i>	1	2016	2016	1

A combined regional checklist is also included, with additional information on additional status and a flag for species not recorded in one of the pre-1970 and post-1970 periods, corresponding to the date of the last checklist update. For the Cylindrotomidae, all species have at least one record in both periods.

(Sub)Family/Species	National status	Pre/post 1970	VC58	VC59	VC60	Total
<b>CYLINDROTOMIDAE</b>						
<i>Cylindrotoma distinctissima</i>			27	9	14	50
<i>Diogma glabrata</i>	Scarce		15	8	14	37
<i>Phalacrocer replicata</i>	Scarce		22	16	2	40
<i>Triogma trisulcata</i>	Rare		1	11		12

The full report includes notes on remaining uncertainties in the data for the scarce and rare species and comments on the distributions in space and time for these and other less common species. Full species accounts have not been included, as there is information for most of our species readily available elsewhere.

The number of species on the list for each vice-county are 235, 224 and 192 for VC58, VC59 and VC60 respectively, and the overall list has 264 species, amounting to 75% of the British total of 353. These numbers are subject to uncertainty because as noted above not all records have been or indeed can be fully verified. This compares to only 58% for the soldierflies and allies, a group with many species confined to the south, and 69% for the Sepsidae, a relatively poorly recorded family. Pete Boardman's *Shropshire Craneflies* found 245 species based on 10,000 or so records. In Cumbria, Steve Hewitt's list has 271 species from only 6092 records indicating perhaps a greater extent of relatively undisturbed habitats.

There are 25 species listed as nationally rare and 55 as nationally scarce. 15 species have not been recorded since 1970, but 33 species have been added to the list. No general conclusion can be drawn from this, but the predominant reason is probably simply the amount of recording effort, including several specialised surveys. For a few species an apparent systematic local or national pattern of expansion of range or change in abundance has been detected, and is discussed in notes in the Appendix of the report. However, that is not to say that more such changes might come to light with a more extensive examination of the data.

### Acknowledgments

Thanks are due to RECORD, Merseyside Biobank, Greater Manchester Local Records Centre, Lancashire Environmental Record Network and the NBN Gateway for the provision of data, to World Museum Liverpool and Manchester Museum for access to their collections and internal records, and of course to all the original recorders.

**Phil Brighton**



## A new site for *Ellipteroides alboscuteatus*



Male *E. alboscuteatus*.

Photo JK. ©NHM London

*Ellipteroides alboscuteatus* is a very local crane fly the ecology of which has been well studied by David Heaver (Heaver, 2006. *Dipterists Digest* 13, 1, Heaver, 2014. *Dipterists Digest* 21, 1). It is strongly associated with 'perched springline' calcareous tufa flushes, and a faithful indicator of this habitat is the moss *Palustriella commutata commutata* (= *Cratoneuron commutata commutata*)

Judy Webb found this crane fly in good numbers on 7 July 2017 at the Local Wildlife Site, Worton Wood, near Oxford. They were flying around tufa springs where the moss *Palustriella (Cratoneuron) commutate* grows, together with an assemblage of other crane fly species. The sample was sent to JK and some 24 other crane fly species were found in that community. Many were common woodland or wet woodland species, but others such as *Gonomyia recta* and *Paradelphomyia dalei* are indicators of a calcareous habitat. *Neolimnomyia batava* was abundant, and amongst the *Molophilus* were *bifidus* and *corniger*.

It would be interesting to see how the geology of this new site fits with the general pattern in relation to David Heaver's detailed work. If your local Bryologists have a recording scheme it would be well worth visiting any *Palustriella* sites. The flight period is from 10 June (exceptionally early) to 28 August, with July being the most likely time of emergence.

**John Kramer**

## Some early spring records of crane flies from sandy stream margin in Stirlingshire, 2016

**E G Hancock**

As part of a Bioblitz event at the Altquhur Burn (NGR: NS481867) on 22 April 2016, a number of crane flies were recorded. Following an extensive period of subzero temperatures there were two days of warmth and sunshine on the second day of which the following species were swept or collected by searching on this small tributary of the Endrick Water near Loch Lomond. The whole of the Endrick catchment area flows through alluvial deposits and is extremely well endowed with exposed riverine sediments (ERS) habitat. Although narrow and bordered by alder at this particular section of the stream there was a considerable amount of fine sand and silt in addition to coarser gravels. Most of the collecting was confined to fine sand so I did not expect to find *Dicranota robusta* with two other pedicines, *D. bimaculata* and *D. guerini*. The final list included *Tipula lateralis*, *Eriocnopa trivialis*, *Erioptera lutea*, *Hoplolabis vicina*, *Limnophila punctata*, *Limonia nubeculosa*, *L. dilutior* and *Ptychoptera albimana*. Not all these are associates of ERS; the main interest on this occasion was the number of species at an early date prior to which none of the usual vernal crane flies, such as *Tipula rufina* had been seen anywhere locally in 2016. Give the very cold conditions immediately preceding this day the adults seem to have emerged and become active on a very short time scale.

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

**Pjotr Oosterbroek** will need no introduction to many in the CRS. He has been working professionally in Amsterdam with crane flies for many decades and has set up the indispensable 'Catalogue of Crane flies of the World' (<http://ccw.naturalis.nl>) He has also done a lot of work since the 1970's with the genus *Nephrotoma* (the yellow and black tiger crane flies) and he offers the observations below on a part of the current version of the 'Key to species of Long-palped Crane flies other than *Tipula*' It is with female specimens that some confusion can occur and the flagellar segments of female *lunulicornis* are shorter than those of female *dorsalis* and not longer as stated in the current key. If possible, any key needs to distinguish between species where the antennae are absent or damaged, and future revisions of the British key will need to bear this in mind. There are 15 *Nephrotoma* currently on the British list and this paper deals with 5 of these which, for those wishing to amend their keys, are near the end of the *Nephrotoma* section. **Ed.**

## Recognition of the species of the *Nephrotoma dorsalis* group

**Pjotr Oosterbroek**

In Northwest Europe, including the British Isles, we find four species of *Nephrotoma* belonging to the *dorsalis* group. These species are characterized and easily recognizable by the straight lateral stripes on the dorsal thorax, in combination with an elongated body (fig. 13). In other *Nephrotoma* of NW Europe the lateral thoracic stripes are downcurved at the anterior end with the exception of *N. aculeata*, a member of the *N. cornicina* group, which has an isolated spot below the anterior end of the lateral stripes (fig. 7). This spot,

however, is known to be absent in a few specimens, in which case the dorsal thoracic stripes resemble the *N. dorsalis* group. Therefore, *N. aculeata* is included in the key presented as an appendix below. First short descriptions are given of the four *N. dorsalis* group species. Plates are presented on the final pages. This is without references to the very distinctive male genitalia. For this see the descriptions and illustrations in Oosterbroek 1979 and Tangelder 1984 (the images from these two papers are repeated, including many others in Oosterbroek 2018).

***Nephrotoma dorsalis*** (Fabricius, 1781)

Male antenna long, more than 2x length of thorax, with 19 segments, lower flagellar segments distinctly reniform (Fig. 1), female with 15 antennal segments (Fig. 2). Head with a distinct and elongate occipital marking, lateral side of head without dark spot along eye margin. Dorsal thoracic stripes uniformly dark brown (Fig. 1, 2). Wing stigma distinct, dark brown; crossvein below wing stigma clouded, as in *N. lunulicornis* (Fig. 9).

Mainly found at exposed riverine sediment habitats but also in wet and dry deciduous woodland; adults prefer shade or at least tall vegetation for resting in, needing sandy water margins for development (Drake 2010, Roper 2004, Wolton et al. 2017).

Distributed throughout Great Britain. Period of flight from the end of May to the end of August.

***Nephrotoma lunulicornis*** (Schummel, 1833)

Male antenna about 1.5x length of thorax, male basal flagellar segments not reniform, with basal nodes only, male and female with 13 segments. Head with a distinct and long occipital marking, side of head with dark lateral spot along eye margin (Fig. 8). Dorsal thoracic stripes uniformly dark brown (Fig. 8). Wing stigma distinct, dark brown; crossvein below wing stigma clouded (Fig. 9).

A species of exposed riverine sediment habitats but also of wet and dry deciduous woodland; adults prefer shade or at least tall vegetation for resting in, needing sandy water margins for development (Drake 2010, Hewitt et al. 2005, Nielsen & Nielsen 2009).

Distributed throughout Great Britain. Period of flight from the beginning of May to the end of August.

***Nephrotoma quadristriata*** (Schummel, 1833)

Male antenna long, about 2x the length of the thorax, with 13 segments, lower flagellar segments distinctly reniform (Fig. 11), female with 13 antennal segments. Occipital marking ranging from weak to distinct, if distinct than triangular (Fig. 11) or acute but never as broad and prolonged up to the frontal tubercle as in *N. dorsalis* (Fig. 3) and *N. lunulicornis* (Fig. 8); lateral side of head with dark spot along eye margin (Fig. 11). Dorsal thoracic stripes uniformly dark brown (Fig. 11). Wing stigma usually weak to light brown, rarely dark brown; crossvein below wing stigma not clouded (Fig. 10).

The species has been recorded from a large variety of habitats, ranging from sand dunes, fairly dry pine (*Pinus*) and beech (*Fagus*) forests to meadows, springs, mountain streams, and swampy river beds. It apparently has a strong preference for sandy or gravelly soils in combination with nearby moist places (Oosterbroek & de Jong 2001 and references cited therein). Further details are in Stubbs 2003.

In Great Britain the species is largely confined to the major sand dunes systems at the west coast of England and Wales, with only a few records inland and along the south coast. Period of flight from mid May until the end of September.

***Nephrotoma scurra*** (Meigen 1818)

Male antenna about 1.5x the length of the thorax, male basal flagellar segments weakly reniform, male and female with 13 segments. Head usually with a weakly indicated occipital marking, the area between eyes and occipital marking being often somewhat infuscated (Fig. 12, 13); rarely with lateral spot along eye margin. Dorsal thoracic stripes not uniformly coloured, especially the two stripes on the postsutural part (between the wings) lighter coloured towards their end, lateral stripes frequently also in part lighter coloured (Fig. 12, 13). Wing stigma weakly indicated, at most light brown; crossvein below wing stigma not clouded (Fig. 13).

The most common species of the *N. dorsalis* group. In general associated with dry sandy soils such as lowland heath, coastal sand and grassland, sandy river margins, adults prefer hedgerows and scrub edges; in a few instances found on peat, swamps or on farms with a variety of soils (Stubbs 2003, Boardman 2007, 2016, Kramer 2008, Ujvarosi & Poti 2006).

Distributed throughout Great Britain. Period of flight from mid May to the end of September.

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## Appendix

### Key [Please see pages 15 & 16 at the end of the newsletter for the figures]

- 1.a. Dorsal thoracic stripes not uniformly coloured, especially the two stripes on the postsutural part (between the wings) lighter coloured towards the end, lateral stripes frequently also in part lighter coloured (Fig. 12, 13). Dorsal abdominal stripe narrow, about 2x diameter of femora (Fig. 13).  
*Nephrotoma scurra*
- 1.b. Dorsal thoracic stripes uniformly dark brown (Fig. 1, 2, 7, 8, 11). Dorsal abdominal stripe variable but spots broader than 2x diameter of femora, sometimes and especially in males stripe or spots less distinct toward end of abdomen. 2
- 2.a. Lateral side of head without dark spot along eye margin (Fig. 1, 2, 7). Male antenna with 19, female with 15 segments (Fig. 1, 2: *N. dorsalis*) or both sexes with 13 segments (*N. aculeata*). 3
- 2.b. Lateral side of head with dark spot along eyemargin (Fig. 8, 11). Male and female with 13 antennal segments. 4
- 3.a. Antenna in male with 19, in female with 15 segments (Fig. 1, 2). Anatergite (thoracic part next to mediotergite) yellow (Fig. 1). Abdominal dorsal stripe usually narrower on tergite 1, at most as broad as on tergite 2; tergite 8 black (Fig. 3, 5). Male hypopygium: sternite 8 with the extended lateral parts forming a pair of lobes (Fig. 3). Female ovipositor: cerci apically somewhat downcurved with a blunt end (Fig. 5).  
*Nephrotoma dorsalis*
- 3.b. Antenna with 13 segments. Anatergite blackened (Fig. 7). Abdominal dorsal stripe on tergite 1 broader than on first part of tergite 2 (Fig. 7); tergite 8 not entirely black (Fig. 4, 6). Male hypopygium: sternite 8 bearing a spine-like median projection (Fig. 4). Female ovipositor: cerci slightly upturned with a more acute end (Fig. 6).  
*Nephrotoma aculeata*
- 4.a. Head with a distinct and elongate occipital marking (Fig. 8). Wing stigma distinct, dark brown; crossvein below wing stigma clouded (Fig. 9).  
*Nephrotoma lunulicornis*
- 4.b. Occipital marking ranging from weakly indicated to distinct, if distinct than triangular (Fig. 11) or acute but never broad and prolonged up to the frontal tubercle as in *N. dorsalis* (Fig. 2) and *N. lunulicornis* (Fig. 8). Wing stigma usually weakly light brown, rarely dark brown; crossvein below wing stigma not clouded (Fig. 10).  
*Nephrotoma quadristriata*

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## ***Nephrotoma crocata* (Linnaeus, 1758) reared from riverbank sand deposit in Cumbria**

**Steven Hewitt**

In spring 2017, whilst searching for stiletto fly larvae in flood-deposited sand on the banks of the River Eden in Cumbria I also collected other Dipteran larvae encountered. All larvae were reared individually in plastic pots containing a little sand and emergent adults were identified. In one sample on 26 April from the river near Lazonby (NY565391) a single Tipulid larva was collected from a 1m<sup>2</sup> quadrat of thinly vegetated sand, partially shaded by riparian trees. The quadrat was on a bank of loose sand on the field margin at the top of the riverbank 3m above river level and 10m from the water's edge. This bank of sand having been bulldozed off the field after it was inundated in a flood some 16 months previously. The larva later pupated and, in due course, an adult male of *Nephrotoma crocata* emerged.

Falk (1991) lists *N. crocata* as nationally Rare, with records widely dispersed in England, extending thinly into Wales and up to Midlothian in Scotland. He notes a marked decline in observations of the species, which in the past was quite frequent in southern counties and parts of northern England, particularly Yorkshire and Surrey.

This pattern of decline is also apparent in the Cumbrian data, where a number of early 20th century records made by members of Carlisle Natural History Society (CNHS) are recorded in the manuscript list of Cumbrian Diptera compiled by F.H. Day (Day 1950) - Tarn Lodge [NY55H], Cowran Cut [NY5156] (G.B. Routledge); Orton [NY35H] 10 June 1900, Gelt Wood [NY5258] (F.H. Day). These records are supported and enhanced by voucher specimens of *N. crocata* held in Tullie House Museum: Tarn Lodge [NY55H] 1896 and 17 June 1916, Cowran [NY5156] 19 June 1916 (G.B. Routledge Collection); Orton [NY35H] 10 June 1900 and 6 June 1942 (F.H. Day Collection). The Crane-fly Recording Scheme (NBN 2017) has a record by [W.E.]China for Windermere SD4198 in June 1947 (NBN 2017). Despite the presence of active dipterists such as Neville Birkett and John Parker in the county and determined effort on recording crane-flies over the last 20 years, there were no further records of *N. crocata* in Cumbria for over 60 years, when a female was photographed by Glyn Freeman ovipositing in sand by the River Eden at Eden Lacy NY564390 on 5 June 2006. The photograph was sent to John Parker and myself for identification. Coincidentally, another female was found very close by at Force Mill, Eden Lacy NY562380 on 7 June 2016 by Mike Clemenston and brought to a meeting of Carlisle Natural History Society for identification.

Falk (1991) states that the species' habitat requirements are unclear, but that heathy woods and fen woodland seem to be favoured. He also reports that the larva has been found in damp soil. The historical Cumbrian data supports these observations with the locality 'Orton' generally used to refer to Orton Moss, which in the early 20th century was a lowland mire covered in heathy woodland. Similarly, Tarn Lodge, the former home of G.B. Routledge, stands adjacent to Hayton Moss.

It is remarkable then that all three recent Cumbrian records of *N. crocata* come independently from the same stretch of river and that these are all associated with sandy riverine sediment. A further correlation may or may not be significant; The River Eden has suffered two major flood events in the last 50 years, both of which resulted in serious flooding in Carlisle. These flood events occurred in January 2005 and December 2015 and resulted in large amounts of sand being dumped high on the riverbanks at various locations along the river. It could be that these floods caused a dramatic increase in available larval habitat resulting in an increase in the Eden Lacy population to observable levels. Another possibility is that the crane-fly survives locally at a nearby location and has colonised the sand deposits on the river created by these flood events. There are however no obvious wet heathy woods or fens in the immediate vicinity.

Although these recent Cumbrian records are all associated with riverine sand deposits, the species does not show high fidelity to this habitat. A recent thread on the Dipterists Forum website (Dipterists Forum, 2017) reports several observations of *N. crocata* in sandy quarries in Lincolnshire Shropshire and Nottinghamshire. Falk (1991) judges the species to be threatened by habitat loss to agriculture and intensive forestry; scrub invasion on heaths; drainage of any damp areas. He suggests that conservation management might include maintaining a full range of conditions including a high, relatively stable water level in any marshy areas and preventing scrub invasion on heathland and in rides and clearings of woods. To these considerations might be added the maintenance of natural flow regimes on rivers together with conservation of riparian habitat and exposed riverine sediments.

Other crane-flies that John Parker and I have reared from larvae collected in sand deposits on riverbanks and in-channel shoals include, *Nephrotoma analis*, *N. appendiculata*, *N. lunulicornis*, *N. submaculosa*, *Tipula couckeii*, *T. lateralis*, *T. maxima* and *T. montium*. Some of these are considered specialists of exposed riverine sediments whilst other are more generalist species.

I thank Simon Jackson at Tullie House Museum, Carlisle for access to the collections there.

### **References**

- Day, F.H. (c.1950) Manuscript list of Diptera in Cumberland. Archive of Tullie House Museum, Carlisle.  
Dipterists Forum (2017) <http://www.dipteristsforum.org.uk/t1260-Nephrotoma-crocata-nest-site-preference.html> accessed 17/12/2017.  
Falk, S.J. - 1991, A review of the scarce and threatened flies of Great Britain (Part 1). *Research and survey in nature conservation*, No. 39.  
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**Steven Hewitt**



### ***Ula mixta* Starý, 1983, Pediciidae.**

Despite several records, the status of *Ula mixta* in Britain must remain very uncertain due to the dearth of specimens. Because it closely resembles *U. mollissima* identification is not easy. Males and, with greater difficulty, females, can be confirmed by the structure of their genital apodemes. As Dick Vane-Wright states below, we need more material, more records with voucher specimens, if we are to understand the distribution and ecology of this species in Britain.

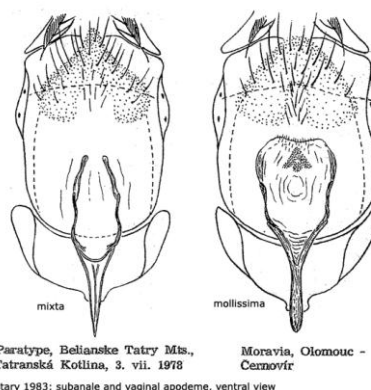
I'd be grateful to receive any *Ula* specimens, but it would be even better if you can use the 'Key to Pediciidae' and exclude the easier-to-identify *U. sylvatica*. **JK. Ed.**

### ***Ula mixta* Starý, 1983 in Britain.**

#### **Dick Vane-Wright**

There are few UK records for *U. mixta* so far. In addition to the Shropshire localities mapped by NBN, due to Peter Boardman, it has also been noted from Clumber Park, Nottinghamshire, where it was reared in numbers by Andy Godfrey (2010, unpublished) from an unidentified bracket fungus. Ken Merrifield's (2003) first British record was based on specimens caught by Ken & Rita at Cawdor Castle, Inverness-shire and determined by Alan Stubbs.

In Europe the species is distributed from Finland to Austria and as far east as Russia.



**Left: Female *Ula mixta*: habitus; Middle: ventral view of part of the sclerotized structures of the *U. mixta* genitalia. Right: corresponding female genitalia of the closely related *U. mollissima*. (Starý 1983).**

With both hairy eyes and hairy wing membranes, the genus *Ula* is unmistakable. The medium-small species have a wing length 6–10 mm, and are on the wing in UK between May and November.

My identification of a single, yellowish female of *Ula* collected at Dyke's Wood and shown above, is tentative. Following Hutson & Vane-Wright (1969), two species of *Ula* were recognised from Britain: *Ula sylvatica* (Meigen, 1818), and *U. mollissima* Halliday, 1833. Since then Merrifield (2003) added a third species to the British list, *U. mixta* Starý, 1983. The October 2014 specimen is certainly not *U. sylvatica*, and does not look right for *U. mollissima* (in which the vaginal apodeme looks like a catapult!). However, although the critical characters of the female correspond to the published drawings for *mixta* tolerably well, they do not seem a perfect match. These are tricky things to illustrate however! More material is needed. This is the first time I have encountered what appears to be this species.

### **References**

- Hutson, A.M. and Vane-Wright, R.I. 1969. Corrections and additions to the list of British Nematocera (Diptera) since Kloet and Hincks 'A check list of British Insects' (1945). Part 1. Introduction and families Tipulidae, Trichoceridae and Anisopodidae. (Tipuloidea). *Entomological Gazette* **20**, 231-256.
- Kramer, J. 2018. Fungal hosts of *Ula* Haliday (Diptera, Pediciidae) in Britain, with reference to the collection of P.A. Buxton in the Natural History Museum, London. *Dipterists Digest* **24**, No. 2
- Merrifield, K. 2003. [Communication at meeting of British Entomological and Natural History Society on 13 May 2003]. *British Journal of Entomology and Natural History* **16**, 199.

**Dick Vane-Wright**

### Some recent publications relating to craneflies in 2016-17

1. Sims and P. Chandler. March 2017. Diptera recorded from hypogean pitfall traps at Jealot's Hill, Berkshire. *British Journal of Entomology and Natural History* **30**: Part 1, 42-45

The two buried pitfall traps were sited in a grassy field margin during the winter and spring of 2014 as part of an investigation of soil invertebrates. Larvae of four species of *Nephrotoma* and 4 species of *Tipula* were captured in the traps.

2. *British Journal of Entomology and Natural History* **30**: Part 2 July 2017, 90-96.

Peter Chandler writes about the Diptera of Windsor Forest and Great Park, including *Metalimnobia quadrimaculata* and *Gnophomyia elsneri*. R.J. Dickson records *Geranomyia bezzi* from Hornsea Island

3. Corrections and changes to the Diptera Checklist (36) – Editor. *Dipterists Digest* **23**, No. 2: 151

*Symplecta scotica* (Edwards 1938 – *Erioptera*) is raised to species rank. Ref. Stary and Brodo, 2009. *Canadian Entomologist* **130**, 1-30.

4. Drake, C.M. 2016. The relative importance to Diptera of pasture and ditch margins on an English grazing marsh. *Dipterists Digest* **23**, No. 1: 1-22.

A list of flies from Catcott N.R on the Somerset Levels. Includes records of 35 species of craneflies including: *Phalacrocer replicata*, *Nigrotipula nigra*, *Tipula pierrei*, *Erioptera flavata*, *Erioptera squalida*, *Molophilus pleuralis* and *Pilaria scutellata*,

5. Kramer, J. 2016. The rarer British species of the genus *Tasiocera* Skuse (Diptera, Limoniidae) in the Natural History Museum, London. *Dipterists Digest* **23**, No. 2: 169-175.

6. Wolton, R.J., Chandler, P.J., Drake, C.M. & Stubbs, A.E. 2017. The relative importance of wet woodland and wet grassland for Diptera conservation: a case study from Devon, England. *Dipterists Digest* **24**, No. 1: 79-94.

Samples were taken from Scadsbury Moor in Devon. 53 limoniid species and 20 tipulid species were recorded. Species included *Gonomyia abscondita*, *Thaumastoptera calceata*, *Rhipidia uniseriata*, *Idioptera pulchella*, *Nephrotoma dorsalis* and *Tipula luridirostris*.

**Ed.**

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### Next Copy Deadline

Please send all copy for the Autumn issue of Cranefly News #34 to reach me by 20<sup>th</sup> July 2018.

Thank you. John Kramer.

john.kramer@btinternet.com

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Fig.1 *N. dorsalis* male (P. Ketola)



Fig.2 *N. dorsalis* female (V. Woodmen)

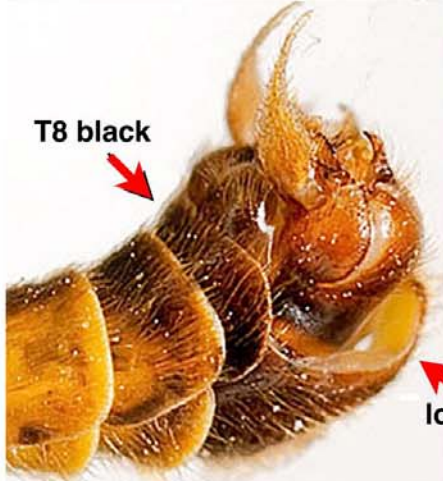


Fig.3 *N. dorsalis* hypopygium (P. Ketola)

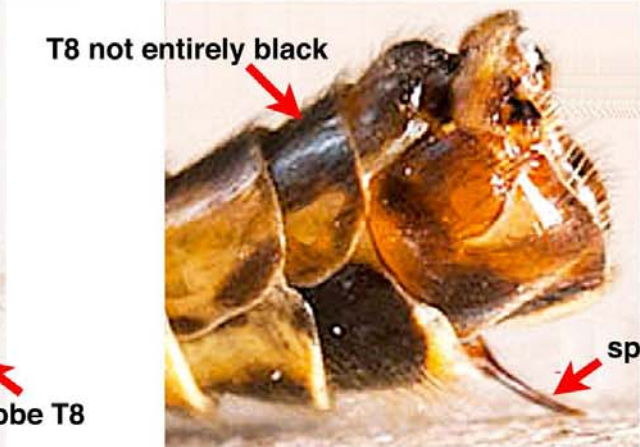


Fig.4 *N. aculeata* hypopygium (P. Ketola)

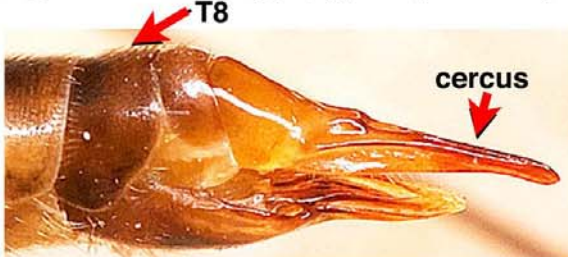


Fig.5 *N. dorsalis* ovipositor (P. Ketola)

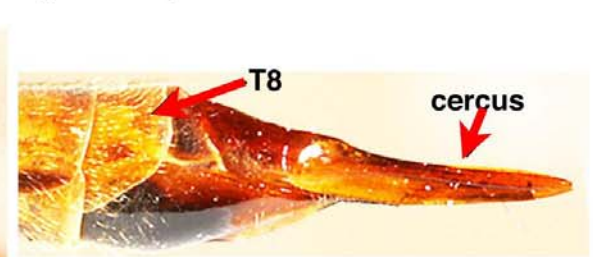


Fig.6 *N. aculeata* ovipositor (I. Altmann)



Fig.7 *N. aculeata* female (K. Peeters)



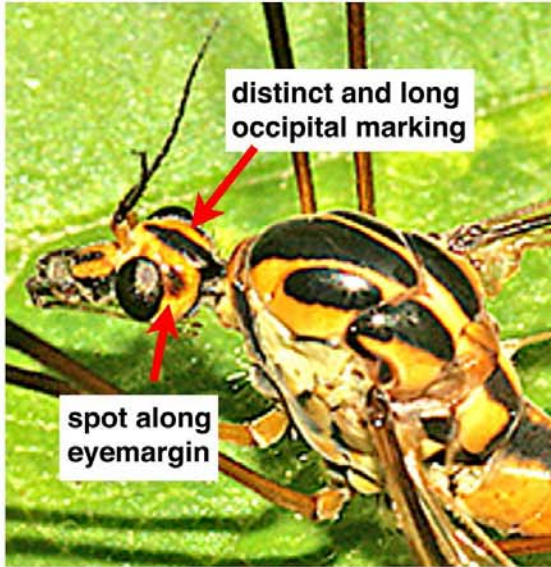


Fig.8 *N. lunulicornis* female (J. Kersten)



Fig.9 *N. lunulicornis* wing (J. Kersten)



Fig.10 *N. quadristriata* wing (K. Peeters)



Fig.11 *N. quadristriata* male (K. Peeters)



Fig.12 *N. scurra*, detail of Fig. 13



Fig.13 *N. scurra* male (K. Peeters)

# Flat-footed Fly Recording Scheme

Newsletter 2      Spring 2018

## Introduction

The Flat-footed Fly Recording Scheme was launched in the 2016 Autumn Bulletin and the first Newsletter reported the recording situation as it was at the end of July 2016. The scheme covers the 35 British species of the family Platypezidae, but also accepts records of the single British species of Opetiidae.

Records are acceptable in any form and specimens can be submitted to me for checking. Data received is being added to the spreadsheet begun in 2016, which now includes all records known to me, presently 4700 of Platypezidae and 945 of Opetiidae. These are arranged under the following headings in the sequence: species name, grid reference, county, locality, date, recorder, number and gender of specimens. If it is in a museum collection or a published record, this is noted under these additional headings.

The first Newsletter included sections on identification, fieldcraft (with separate accounts for smoke flies *Microsania* and for the others), fungus hosts, recognition of immature stages, phenology of adults, and the history of platypezid studies in the British Isles. The updated manuscript key mentioned in the identification section, and colour versions of both Newsletters are available as pdfs on request.

More recently a comprehensive work on the Dutch Platypezidae (Reemer & de Jong 2016) has appeared and was reviewed in the 2017 Spring Bulletin. The text is in Dutch but an English translation of the key is included. The most useful and attractive feature is the inclusion of colour photographs of live adults of most species, with at least one sex represented for 37 species and both sexes for 30 of them. This work is recommended as a helpful guide to identification of the British species.

Since the Recording Scheme was launched additional platypezid data has been provided by Howard Bentley, Mike Bloxham, Phil Brighton, Laurence Clemons, John Coldwell, Andrew Cunningham, Martin Drake, David Gibbs, Martin Harvey, Tony Irwin, Nigel Jones, Mark Mitchell, Ivan Perry, Jeremy Richardson, Del Smith, Mark Welch and Rob Wolton. I thank them for the interest they have shown.



It seems that 2016 and 2017 have been rather unproductive of platypezid records and several recorders who sent me their past records in 2016 have reported that they have few or no records to add for the latest two field seasons. They have been particularly sparse on Forum field meetings. The July 2016 summer meeting in Kent produced only one record of *Callomyia amoena* caught by Alan Stubbs at Clowes Wood (TR1363), and no platypezid records came from the June 2017 Snowdonia meeting. However, there are records of 24 species from the two years, 22 species for 2016 and 20 species for 2017 (see pp 5-6).

The female of *Polyborivora ornata* (above photo by Jeremy Richardson) has been adopted as the emblem of the Recording Scheme.

## Status review

Newsletter 1 also included discussion of the level of knowledge of distribution nationally and its bearing on conservation status. The Status Review, first compiled in 2012 [updated from that in Falk & Chandler 2005], has since been further revised. It is expected that this Review will have been published on the Natural England website in January 2018.

In reaching the final assessment of statuses for the Review it was fortunately possible to take into account records submitted to me for the Recording Scheme after the appearance of the first Newsletter. In particular this provided a good number of additional post-1989 records which gave a better idea whether there had been any changes in status since the pre-1990 period. Criteria by which statuses can be moderated have also now been adopted by Natural England, which has enabled Nationally Scarce status to be excluded from the more frequent and widespread species that are presently recorded from less than 100 post-1989 hectads.

IUCN statuses have been applied to *Callomyia elegans* (Critically Endangered – it may be extinct in Britain), *Agathomyia collini* (Endangered) and *Agathomyia lundbecki* (Vulnerable), while six species are treated as Data



Deficient: *Agathomyia sexmaculata*, *Callomyia dives*, *Microsania collarti*, *M. pallipes*, *M. straeleni* and *Platypeza hirticeps*. These statuses are based on post-1989 records only. The status of all *Microsania* species is unclear because of lack of records other than at smoke.

For GB rarity statuses all of the above species would qualify for Nationally Rare status, i.e. known from less than 16 post-1989 hectads. Thanks to the moderation procedure mentioned above, only the following three species are now to be treated as Nationally Scarce, a status applied to species likely to occur in from 16 to 100 post-1989 hectads: *Agathomyia boreella* (14 hectads, so on the cusp), *A. woodella* (23 hectads) and *Seri obscuripennis* (21 hectads). The two latter species have shown an increased number of hectads over the earlier period (12 and 4 respectively). The biology of *A. woodella* remains unknown but the increased recording of *Seri* may result from its development in common species of *Polyporus* becoming well-known.

Three of the six species only recorded in Britain since 1990 are treated as adventive (i.e. likely to be recent arrivals in this country), so are not assigned a conservation status: *Agathomyia cinerea* (33 hectads), *A. wankowiczii* (58 hectads) and *Paraplatypeza bicincta* (26 hectads). The above number of known hectads is greater than stated in the Review (for these three and for *Seri*) because of further records becoming available since it was finalised, and the continuing spread of these species tends to confirm their adventive status. Two other species only recorded since 1990 that have few records, *Microsania vrydaghi* (3) and *Platypezina connexa* (1), were not evaluated. The position of the sixth species added in the later period, *Agathomyia sexmaculata*, is also uncertain, as discussed below in relation to the two further records that have accrued.

### Status of *Callomyia dives*

*Callomyia dives* is a curious case as it is widespread in Britain, but most records are of single individuals, so it apparently has low population levels that are easily overlooked. There are only 8 known post-1989 hectads but 27 hectads from the earlier period, with two in common. Its present status is unclear, and it cannot be certain if a significant decline has taken place. There are 39 records altogether, of which 15 are pre-1960 and 16 are in the period 1960-1989, so only 8 since then might suggest a decline but there was little in common between the periods in the counties and sites where it was recorded. The eight recent records are widely scattered – from Kent, Middlesex, Berkshire, Oxfordshire, Cumbria, Stirlingshire, Inverness-shire and Glamorgan, so it is apparently still widespread.

The most recent record of *C. dives* is, however, of interest in that it was from the Warburg Reserve (SU7187), Oxfordshire on 26 July 2014, a male found by Ivan Perry. This was a site where I had also found a male of *C. dives* on

9 July 1972 and it had not been not found there in the intervening period, despite intensive surveys of the site by Ivan in recent years. The only other post-2003 record was a female from Waterhouse Plantation (TQ1469) in Bushy Park, Middlesex on 22 August 2012, caught by Erica McAlister when she accompanied me at this locality. This record was unavailable when my account of the Diptera of Bushy Park (Chandler 2015) was written, and was unexpected given my frequent recording there with results including 14 species of Platypezidae but not *C. dives*. These findings tend to confirm that a species with low population numbers can be readily overlooked even in well-worked sites.

### The two species confused under *Callomyia amoena*

It was reported in Newsletter 1 that two species had been confused under *Callomyia amoena* by Chandler (2001), and that both occur in Britain. Only a few British males of one of these species, that had dark-stemmed halteres and differently formed surstyli, had been seen from northern England, while the other species usually identified as *C. amoena* is common throughout the British Isles. It was unclear to which of these species the name *amoena* Meigen, 1824 correctly applies, but Meigen's types have been obtained on loan so that resolution of this problem should now be possible.

### Advances in knowledge of distribution

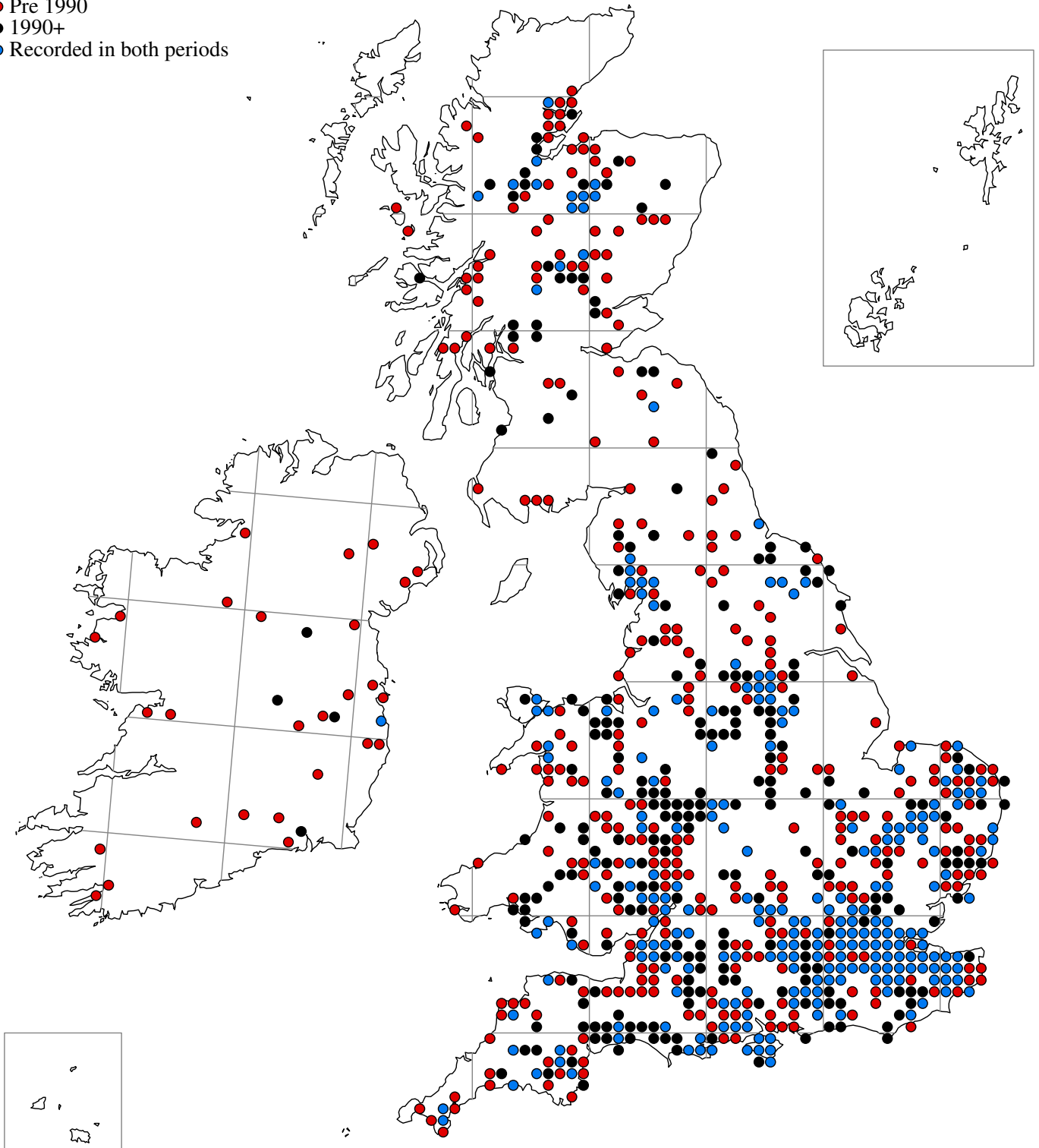
The available data on which the maps in the first Newsletter were based included records from 738 of the hectads in the British Isles, of these 711 were in Great Britain or 25 per cent of the total hectads (2845), but there were records from only 27 hectads in Ireland. Of these 711 hectads, 522 had records up to 1989, while only 377 had records from 1990 onwards, with just 188 in common between the two periods. Although not all of the British hectads include woodland, in which most platypezids are found, this indicated a relatively low level of recording nationally, which has now been taken into account in determining status.

The data, on which the map opposite is based (also included in the new Review), include records from 769 hectads in Great Britain and 32 in Ireland. This takes into account all records received by the end of 2016. The number for both periods in Great Britain had increased, now 540 pre-1990 but more substantially (466) for the more recent period to the end of 2016; there were now 238 hectads with records from both periods.

There have been no records at all of the genus *Microsania* in the British Isles since 2008 – a situation entirely due to potential recorders not having encountered bonfire smoke attracting male swarms since then.



- Pre 1990
- 1990+
- Recorded in both periods



**Distribution of all British Isles Platypezidae records to 2016, showing date classes to 1989 (red), 1990-2016 (black) and records from both periods (blue).** The updated map still demonstrates the extensive gaps in recording and the south-eastern bias, with concentrations of records in some other areas indicating location of collectors or of field meetings, particularly those taking place in the autumn. There remains plenty of scope for recording in new or underworked regions, and in Ireland, where only 16 species have hitherto been recorded.

## ***Agathomyia sexmaculata* – two more British records**

This was first recorded in Britain from a single female that I swept at Thompson Common, Norfolk on 13 October 2002 (Chandler 2002b). It could not be certain if this was a vagrant or represented an established population, and subsequent searching at the site by Ivan Perry didn't produce any further examples or any likely fungus hosts. As reported in Newsletter 1, larval development is in the bracket fungus *Bjerkandera fumosa*, with which it has been found to be associated in the Netherlands and Finland, respectively on *Populus* and *Salix* (Reemer *et al.* 2014).

However, on 4 October 2016 Alan Stubbs found a male of *A. sexmaculata* at Alwalton, Cambridgeshire, about 80km due west of Thompson Common. The site at TL133963 was a small area of willow carr with a ground cover of nettles. Alan commented that this carr, which is adjacent to the River Nene, is subject to winter flooding, but that the carpet of nettles suggested that flooding is transient. On 22 October Alan returned to Alwalton in very dull conditions, but located only two small clusters of bracket fungi on the crack willows *Salix fragilis*, but neither was *B. fumosa*.

Then on 3 October 2017, Ivan Perry caught a female of this species at Flitwick Moor Nature Reserve (TL046352) in Bedfordshire, a site that he has been surveying intensively since 2014 (see Fungus Gnat Newsletters). This includes wet alder woodland as well as birch and oak woodland (see p. 6 below regarding other species found at this site).



***Agathomyia sexmaculata* female (photo Dmitry Gavryushin)**

These new finds confirm that *A. sexmaculata* is an established member of the British fauna, now known from three widely separated localities. The male is all black and best identified by examination of its genitalia, but the female is easily recognised as it is mainly grey dusted with a black triangle each side of tergites 3-5. *Bjerkandera fumosa* is widespread in Britain, and it is hoped that a fungus host association for the platypezid in Britain can soon be confirmed.

## ***Agathomyia collini* – a new record from London**

While looking at the Natural History Museum collection after the 2016 Dipterists Forum AGM, I was surprised to find a female of *Agathomyia collini* collected by David Notton on 15 July 2012 at Lewisham (TQ376762) in South London; it had been identified by Nigel Wyatt. This remains the most recent find of this species in Britain and is only the second for this rare species in the present century, the other being a male caught by Ivan Perry at Bradfield Wood (TL930573), Suffolk, but near to a garden, on 22 May 2007. Although the biology is unknown, it is considered probable that the larvae develop in bracket fungi like other members of the genus, and occurrence of the fly in orchards and gardens has suggested that a fungus that grows on old fruit trees of the family Rosaceae, e.g. *Phellinus tuberosus* (= *P. pomaceus*), might be the host.

David Notton confirmed that the fly had been caught in his garden, which is small and contained some young rosaceous trees that lacked fungal growth, though there was a large log pile which bore a range of small (mainly encrusting) fungi. However, the garden backed on to the Brookmill Nature Reserve, a wooded mound that was a disused railway embankment that is now managed for dead wood, with a range of mature trees, mainly ash and sycamore, but said to include a large plum tree, which might have been relevant.

I visited the site on 2 July 2017, when I saw several small plum trees around the perimeter, but didn't locate the large plum tree said to be present. No platypezids or bracket fungi were observed, though presence of the fungus gnat *Mycetophila cingulum* suggested that its host *Polyporus squamosus* must have fruited there earlier in the year. I did record about 40 species of flies, including 10 species of hoverflies on hogweed flowers lining a ride on the summit of the mound, *Volucella zonaria* and *Cheilosia soror* among them. Apart from flies the highlight was a Jersey Tiger moth *Euplagia quadripunctaria*, flitting along the track, which I hadn't seen alive before; it is well established in this part of London (David Notton and Nick Pond *pers. comm.*).



***Agathomyia collini* female (photo Thomas Legrand)**

## ***Agathomyia cinerea* new to Scotland**

This is thought to be one of the recent arrivals in this country (so not given conservation status for that reason) as the first British record was Hankley Common, Surrey in 1992, since when it has spread widely across S England. There are also two Welsh records, from Monmouthshire in 2008 and Anglesey in 2012. The most northerly previous record was Winscar Reservoir (SE1503) in S Yorkshire, three females collected by John Coldwell on 26 and 29 September 2015, so that finding that it had already reached Scotland was unexpected. There are now records from 33 hectads nationally.

On 9 September 2017 I swept a male of *A. cinerea* at Ross dhu (NS3589), a former deer park that is now a golf course, situated by the west shore of Loch Lomond. It was amongst low vegetation in a wet hollow beside the track into the site, and was apparently freshly emerged though not near any obvious fungi. Its recent rearing in the Netherlands by Reemer (2015) from the bracket fungus *Ischnoderma benzoinum* growing on pine was discussed in Newsletter 1. The male can be recognised, among other mainly black *Agathomyia* males, by having indistinct pale yellow patches on the sides of the abdomen, while the female is one of the species with zoned coloration on the abdomen (see below).



***Agathomyia cinerea* female (photo Nigel Jones)**

## ***Agathomyia falleni* new to Wales**

Bryan Formstone sent a photograph of a female of *A. falleni* (wing length 4.9mm), taken on 2 October 2017 from an old beech trunk at Erddig Hall (SJ328484), a National Trust property near Wrexham, in Denbighshire (V.C. 50). He reports that the wood at Erddig Hall has many very large old beech trees, of which several have blown down over the years, while a couple have snapped 25 feet from the ground, leaving good standing trunks. The trees at this site are left

where they fall to decompose naturally, and many bracket fungi are present on them. This is a significant extension to the range of this species – the nearest previous record to Wales was the find on 7 October 2010 by Martin Drake at Lord's Wood (SO547151) in the Upper Wye Gorge SSSI in Herefordshire. The most northerly English records are from two sites in Norfolk, in 2004 and 2013.



***Agathomyia falleni* female from Erddig Hall, Denbighshire (photo Bryan Formstone)**

## **Other recent records**

Records cited here relate only to 2017. Altogether, records of only 20 species are so far available for the year, comprising 75 species/site records from 37 hectads, of which 9 hectads are new for the family and another 7 new for post-1989 records. This recent sparseness of records has no bearing on conservation status, as that is based only on the number of hectads in which a species has been recorded since 1989, so is determined by range rather than abundance.

On the 2017 autumn field meeting based at Farnborough, Hampshire (see Fungus Gnat Newsletter) they were rarely encountered, with only *Protoclythia modesta* seen more than once (six sites, usually where honey fungus *Armillaria* was sprouting). However, four other species were recorded; *P. rufa* at Hazeley Heath, *Agathomyia falleni* (caught by Mark Mitchell) and *Platypeza consobrina* at Yateley Common and *Seri obscuripennis*, a female caught by Alan Stubbs at Selborne Hanger on 16 October.

On my visits to Windsor Forest and Great Park in 2017 records, mostly of single individuals, were made for *Agathomyia antennata*, *A. viduella*, *Callomyia amoena*, *Lindneromyia dorsalis* (on an *Agaricus* species cap) and *Protoclythia rufa*. My visits to Blenheim Park, Oxfordshire also produced records of 5 species, including the only 2017 record known to me of *Bolopus furcatus*; females were present on a colony of its host fungus *Polyporus squamosus* on a fallen horse chestnut branch on 14 June. Four species found at Blenheim on 12 October included a female of



*Paraplatypeza bicincta*, as well as *Agathomyia unicolor* and both *Protoctythis* species. On the Scottish trip when *Agathomyia cinerea* was found, the only other platypezid seen was a male of *Callomyia amoena* at Glen Feochan (NM876246) on 14 September.

Records of *Agathomyia wankowiczii* continue to be added based on mycologists finding galls on *Ganoderma applanatum*. Seven 2017 records, all by different recorders, include Derbyshire, Cheshire and South Lancashire near its known northern limit.

Ivan Perry recorded 5 other species apart from *Agathomyia sexmaculata* (see above) at Flitwick Moor in 2017, including *A. falleni* and *A. woodella*, *Callomyia amoena*, *Polyporivora ornata* and *Protoctythis modesta*. This increased the total he has recorded there since 2014 to 12 species. He also found *Lindneromyia dorsalis* at two sites.

Richard Fortey reared *Polyporivora ornata* and *P. picta* from their usual host *Trametes versicolor* at his Grim's Dyke Wood (SU738843), Oxfordshire. Adults emerged in December 2016 to January 2017.

Jeremy Richardson had a poor season generally and noted only 4 species from his usual recording areas at Tottenham and Hackney: *Agathomyia antennata*, *Lindneromyia dorsalis* and both *Protoctythis* species.

Phil Brighton provided records of males of three species: *Agathomyia antennata* at Thurstaston Common (SJ243850) and *Lindneromyia dorsalis* at Red Rocks Nature Reserve (SJ206879), both sites in Cheshire, on 29 August 2017, and *Agathomyia lundbecki* at the Smithills Estate (SD675125), South Lancashire, on 14 September 2017.

Howard Bentley swept a female of *Agathomyia viduella* from ground vegetation in mixed deciduous woodland at Vinters Valley Local Nature Reserve (TQ775561), Kent on 11 May 2017.

Andrew Cunningham recorded the two species of *Protoctythis* in Devon, both at Tiverton and *P. rufa* also at Exeter, in October 2017.

Mark Mitchell also found both *Protoctythis* species and *Platypeza consobrina* on honey fungus at the Brookwood Cemetery (SU9556), Surrey on 13 October 2017.

Mark Welch reports a female of *Polyporivora picta* pootered from a pile of birch logs in a woodland ride at Roydon Common NNR (TF693225), Norfolk on 14 October 2017.

Sam Thomas recorded a male *Protoctythis rufa* on a *Cornus* leaf at Monument Park (SU647973), Oxfordshire on 21 August 2017.

Nigel Jones recorded 7 species of Platypezidae and *Opetia nigra* in Shropshire in 2017. He reports below (pp 7-8) on the Shropshire fauna of these families.

## Acknowledgements

Stephanie Rorke is thanked for providing the map included here, which also appears in the Status Review. Martin Harvey kindly alerted me to the platypezid records on iRecord, which added some useful data. New data was also obtained during visits I made to the Manchester University Museum, the National Museum of Wales, Cardiff and the Natural History Museum, London; I am indebted to the authorities of these museums for the opportunity to examine their collections. I am grateful to Nigel Jones for his contribution on the flat-footed flies of Shropshire. David Notton provided details of his find of *Agathomyia collini*, which assisted my visit to Lewisham described above; I am grateful to Jessica Kyle and Nick Pond of Lewisham Borough Council for permission to record at the Brookmill Nature Reserve. Alan Stubbs and Ivan Perry are thanked for information on their finds of *A. sexmaculata*, and Bryan Formstone for letting me know of his find of *A. falleni* in Wales. I also thank all other recorders cited above for their contributions. I thank Dmitry Gavryushin and Thomas Legrand for use of their photographs of *Agathomyia* species.

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Peter Chandler

## Flat-footed flies (Platypezidae and Opetiidae) in Shropshire

by Nigel P. Jones; email: nipajones@talktalk.net

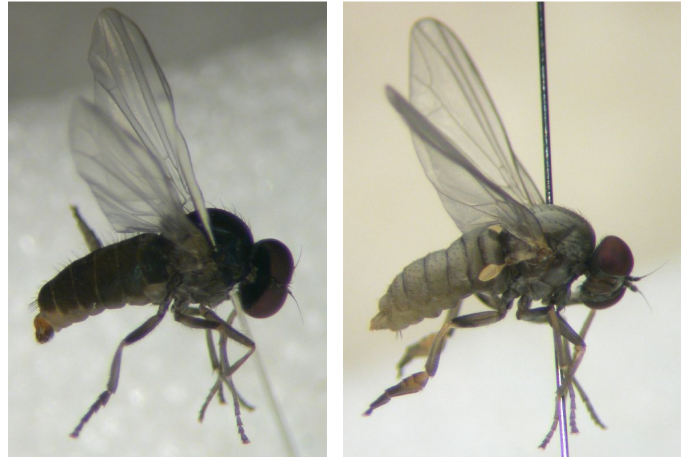
For many dipterists, finding numbers of even the commonest Platypezidae is not easily achieved, and this has certainly been my experience. Looking back over my own Shropshire records, I find I've managed a rather meagre 123 records of 17 species over an eleven year period (2006 – 2017), and many of these are multiple records from one site or another. Nonetheless, Peter Chandler informs me that I have been one of the more successful recorders, and on that basis I offer here a short review of Shropshire Platypezidae. Fortunately, my own records can be bolstered by those of a few other recorders, not the least of whom is Wallace Pugh, who collected numerous specimens of 16 species during the 1920's and 30's. Peter Chandler has re-determined all of Pugh's surviving material, which is held at Manchester University Museum. At the end of 2017 I am aware of 24 species that have been recorded in Shropshire.

The earliest Shropshire records of Platypezidae were made by Wallace Pugh (Pugh 1926-39), beginning with the common *Paraplatypeza atra*, which he recorded several times in the Oswestry area during June – August. This has since proved to be the most widely recorded Shropshire platypezid, with records from eleven, largely woodland sites. Few of the remaining species have been encountered widely, but *Lindneromyia dorsalis* has been noted on 18 occasions from five sites, with 13 of those records coming from my own Shrewsbury garden. Field mushroom *Agaricus campestris* is the host fungus, so *L. dorsalis* is likely to occur in many open situations across the county.

Continuing in the subfamily Platypezinae, another ten species have been discovered in the county. Three of these were recorded by Pugh in the Oswestry area, but have not been found since – *Platypeza fasciata* during September and October in 1927-33; *Polyporivora picta* September – October in 1931 and 1935 and *Protoclythia rufa* on 25 September 1938. There are October 1987 records, by Peter Chandler from Lydham and Caynham Dingle, and by Alan Stubbs from Blakeridge Wood near Bishop's Castle, for *Platypeza hirticeps* – this is the fourth species awaiting rediscovery in the county.

The most notable of the remaining platypezines is *Seri obscuripennis*, which was regarded as rare enough in Britain to merit "Near Threatened" status by Falk & Chandler (2005), so it was rather surprising that I found it in two woodlands in the Shrewsbury area – it is, however, now known more widely in S England, with records from 21 hectads; three sites in Norfolk are the most northerly previous records. My first encounter arose from the collection of platypezid-infested *Polyporus badius* fungi at Stevenshill Wood (SJ5603) in May 2008. From this fungus,

between 24 July and 27 August, some 35 specimens of *S. obscuripennis* emerged. Interestingly, 22 of these (14 ♂ and 8 ♀) emerged on the first of these dates. Seven years later, on 20 October 2015, I swept a single female from the floor of broadleaved woodland at Haughmond Hill (SJ5414), near Shrewsbury.



***Seri obscuripennis*: male left, female right**

*Paraplatypeza bicincta*, which was first noted in Britain in 2001 in S England at Esher, Surrey (Chandler 2002a), has clearly expanded its range since; I have recorded *P. bicincta* during 2016 and 2017 in the woodland at Haughmond Hill.



***Paraplatypeza bicincta* female**

This woodland has also provided a single record of *Platypeza aterrima*, which was also recorded by Pugh at Oswestry (October 1928), and by Peter Chandler at Lydham (October 1987). Pugh recorded *P. consobrina* at Morda near Oswestry (September 1931), whilst I have found it at Haughmond Hill, in my Shrewsbury garden and from woodland near Ironbridge, indicating that this is likely to be a widespread species in the county. *Polyporivora ornata* has been recorded on a number of occasions by Pugh, David Gibbs and myself; from Oswestry, Much Wenlock and central Shropshire. My own records include two from open

situations; most notably on one occasion when I swept a swarm of males, hovering next to a single large dead oak standing alone in an open arable field near Brompton (SJ539082). *Proctoclythia modesta* has been widely recorded in Shropshire. I found it for the first time in 2017, when I swept a few males that were running around on sycamore leaves during September in the productive woodland at Haughmond Hill, but prior to this Wallace Pugh, John Ismay, Mike Pugh and Peter Chandler had all noted it from several sites in Shropshire, mainly in September and October, but with one July record from Wallace Pugh.

Ten species of Callomyiinae have been discovered in Shropshire, the most widespread of which appears to be *Callomyia amoena*, which has been noted from ten woodlands dispersed across the county, including four different locations on Wenlock Edge – records made by David Gibbs in mid June 1992. *Callomyia speciosa* has been found at four woodland sites in the vicinities of Oswestry (1935), Shrewsbury, Ironbridge and Wenlock Edge.

*Agathomyia unicolor* has been found in six woodlands in central and south Shropshire. I have made two records of *A. antennata* from the woodland at Haughmond Hill and from nearby Attingham Park, whilst Pugh recorded it from Candy Wood near Oswestry in May 1933. Pugh recorded *A. viduella* twice - in 1928 from Oswestry and in 1939 from Llanforda Wood, to the west of Oswestry, and I have taken it from woodland near Pontesbury in 2016.



***Agathomyia viduella* female**

*Agathomyia wankowiczii*, so readily recorded from galled brackets of *Ganoderma applanatum*, has eluded me, but early in 2017 Roger Littleover sent me a clear image of galled *G. applanatum* from woodland at Dudmaston near Bridgnorth (SO7489), and later, Herefordshire mycologist Jo Weightman sent another record from the same woodland.

The remaining *Agathomyia* species recorded from Shropshire have all been found at one site each: *A. cinerea* (♀ 13 October 2015) and *A. woodella* (♀ 25 September 2016, ♂ 22 September 2017) at Haughmond Hill; *A. lundbecki* from trees along riverside at Preston Montford

Field Centre, 1♀ on 2 October 2016, and *A. boreella* which David Gibbs found on Wenlock Edge on 17 June 1992.



***Agathomyia woodella* female**

Despite investigating the smoke from fires near trees on several occasions, I have not yet found any *Microsania* (smoke flies). Pugh's 1937 record of *M. pectipennis*, from the smoke of a fire at Wrekin Scout Camp, remains the sole Shropshire record of any Microsaniinae.

Finally, the "honorary platypezid" *Opetia nigra* (Opetiidae) has been widely recorded across the county, from 14 sites – mainly woodlands and occasionally from damp sites with a good tree presence.

## Finding flat-footed flies

The well-known habit of many Platypezidae to run rapidly around on large leaves, helps the dipterist to spot them when walking through woodlands. I have found platypezids most in evidence when such leaves are sunlit. However, I find that sweeping across ground vegetation in woodlands yields far larger numbers of platypezids. Warm days with sunshine are useful, but overcast days can be productive too, particularly if sweeping is targeted on areas with prone dead wood and/or where fungal fruiting bodies are prominent. Sweeping as high as one can reach across tree foliage in woodland also captures reasonable numbers of platypezids, and is very effective for collecting *Opetia nigra*. I often inspect fungi for the presence of platypezids and I collect fruiting bodies that are infested with Diptera larvae. To date though, for me, this has only yielded the discovery of *Seri obscuripennis* described above. I shall keep looking.

**Acknowledgement:** My thanks are due to Peter Chandler for kindly allowing me access to the recording scheme data and for helpful comments on my text.

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# Fungus Gnats Recording Scheme

Newsletter 10 Spring 2018

The previous Newsletter, which appeared in the 2016 Autumn Bulletin, mainly related to 2015. It included 2016 records only for *Macrorrhyncha hugoi*, *Greenomyia mongolica* and *Trichonta fusca*. Other findings for 2016 and those for 2017 are included in the present Newsletter.

The total number of species for which records were so far available from all sources for 2015 was reported as 356. The total for 2016 was 382 and for 2017 it was 369, so these results with disparate levels of recording in different regions are remarkably consistent. Thus records for approaching 200 of the British species are missing in a given year, but this is not unexpected given the relatively small number of recorders and the coverage of sites visited. 2016 and 2017 together provided records of 412 species. The three years including 2015 reached a total of 436.

## Results of Field Meetings in 2016 and 2017

There were three Dipterists Forum field meetings in each year. I attended the summer meeting in 2016 and the autumn meetings in both 2016 and 2017.

The number of species recorded at each meeting were:

**2016:** Somerset Levels 20 – 22 May (20); Canterbury, Kent 2 – 9 July (114); Northamptonshire 9 – 12 October (79).

**2017:** Northamptonshire 25 – 28 May (62); Snowdonia 10 – 16 June (81); Farnborough, Hampshire 14 – 17 October (178).

**Somerset Levels 20-22 May 2016:** the only fungus gnats seen were obtained by Martin Drake at three sites, Rodney Stoke Wood, Priddy Mineries and Ebbor Gorge. *Mycomya pectinifera* was among 16 species at the latter site (ST522455) on 22 May.

**Canterbury, Kent 2-9 July 2016:** a summary of the findings at this meeting was given by Stubbs (2016) and occurrence of *Trichonta fusca* was reiterated in Chandler (2016). Several other species were new records for Kent and some of these are mentioned by Alexander (2017c) as they also occurred in his survey at Ashenbank Wood in West Kent. It was also good to see *Leptomorphus walkeri* at two sites, Fagg's Wood (TR9834), 6 July (Rob Wolton) and Dering Wood (TQ9044), 7 July (Andrew Halstead).

**Northamptonshire 9-12 October 2016:** most sites visited were unproductive, due to previously prevailing dry weather, but some interesting records were obtained. On 9 October, *Exechiopsis davatchii* was found at Old Sulehay (TL064985) and *Rymosia fosteri* at Bedford Purlieu (TL0499). At the rather isolated Aversley Wood Nature Reserve (TL1682), near Sawtry, on 11



October, *Macrocera maculata* and *Ditomyia fasciata* were recorded. The latter was also found at Brampton Wood (TL1869) on the same day. By a track (at TL001972) from King's Cliffe towards Westhay Wood on 12 October, ivy flowers were attracting *Greenomyia mongolica*, *Leia fascipennis* and *Macrocera nigricoxa*. On the same day *Mycetophila stricklandi*, a scarce but widespread species, was found at Glaphthorn Cow Pasture (TL003902), a woodland despite its name.

While returning from this meeting on 12 October, I stopped for a short survey at the Tysoe natural burial ground (SP350458) in Warwickshire, where *Macrocera crassicornis* was found in the perimeter hedge.

**Northamptonshire 25-28 May 2017:** apparently only Alan Stubbs recorded fungus gnats on this meeting, with 26 species found in Salcey Forest but most records coming from Yardley Chase, where a stream gully was remarkably productive on 27 May. This site is described in the report by John Showers (2017) as neglected birch woodland, with "a large amount of standing and fallen dead wood", in which Alan's catch was said to be "one of the best hauls he'd had in 20 years". It comprised 1037 specimens of 50 species, all common with the exception of *Phronia sudetica*. That has a scattered distribution, with an earlier Northamptonshire record from Buckingham Thick Copse in the 1990s.

**Snowdonia 10-16 June 2017:** it was reported (Stubbs 2017) that fungus gnats were in low numbers, "probably a combination of drought and cool conditions". Most samples seen confirmed this assessment, with relatively few species found at most localities. Eight people contributed specimens: Andrew Cunningham, Martin Drake, Andrew Halstead, Tony Irwin, Nigel Jones, John Mousley, Alan Stubbs and Rob Wolton. Of 32 sites with records, Coed Lletywalter (SH6027) had the highest number with 18 species. The bog species *Macrocera fascipennis* was found at Cors Fochno (SN636938) and Afon Cynfal (SH742416). *Keroplatus testaceus*, with relatively few Welsh records, was found at Trawsfynydd (SH696387).

**Farnborough, Hampshire 14-17 October 2017:** this meeting covered diverse sites in Surrey and Hampshire. It was attended throughout by Roger Morris and Alan Stubbs, joined by Mark Mitchell on 14-15 October, Tony Davis on 15-16 October, and by Andrew Halstead and myself on 15-17 October. Altogether 21 sites were visited and a total of 178 species of fungus gnats were recorded. The highest site totals were for Fleet Pond (SU8254; 62) and Zebon Copse, also adjacent to Fleet (SU7951; 60). Other

sites with more than 50 were Selborne Hanger (SU7333; 56), Yateley (SU8259; 53) and Shortheath Common (SU7736; 51), Hampshire and Winterfold Woods (TQ0643; 53), Surrey. Roger caught *Sciophila varia* at Yateley and at Fleet Pond (the recent Scottish records of this species and development in *Hydnum repandum* are mentioned on pp 7-8).

The occurrence of *Mycomya danielae* at four sites (Yateley, Odiham Common (SU7553), Rye Common and Zebon Copse) suggested that this species is becoming widespread, at least south of the Thames. It was new to Britain from Headley Heath on the 2013 Surrey meeting, and had since been recorded only at Piple Wood, Studland on the 2015 meeting and at Chippenham Fen in 2016 by Ivan Perry. 2017 records from Chippenham Fen and Windsor Forest are mentioned below (pp 5 and 7). Other recent additions to the British list that turned up on this meeting were *Exechiopsis seducta* from Winterfold Woods, *Mycetophila sublunata* from Selborne Hanger and *M. stylatiformis* from Selborne Hanger and Zebon Copse. It seems that these are all becoming widespread in S England.

## Gnats new to Britain

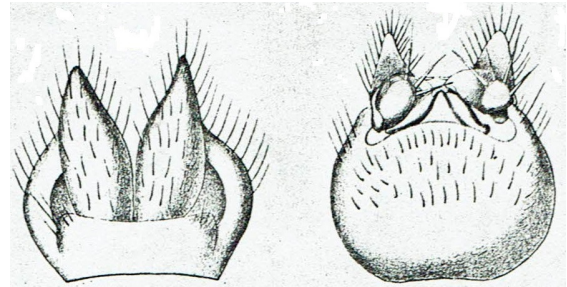
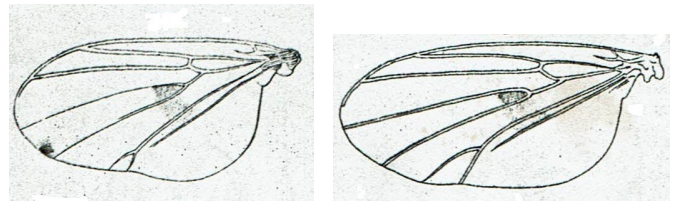
Like other recent additions to the British list, the species dealt with here can presently only be treated as Data Deficient.

### *Macrobrachius kowarzii* Dziedzicki, 1889

This was added from Ashenbank Wood, Kent where Keith Alexander obtained 7 males in a trapping survey in 2016, and it has already been published as new to Britain (Alexander 2017c). As the only European species of the genus it represents a genus new to the British fauna. The distinguishing characters were described in the above paper, and references to its wide European distribution were provided. As mentioned there, these specimens and males that I have seen from elsewhere in Europe have unmarked wings (as shown in the habitus photograph by Jostein Kjærandsen), while ill-defined markings are present on the female wing. Dziedzicki (1889) described and figured examples of similarly marked male wings. Here his figures of this species are reproduced, showing variation in the short posterior fork.



*Macrobrachius kowarzii* male (from Kjærandsen 2015)

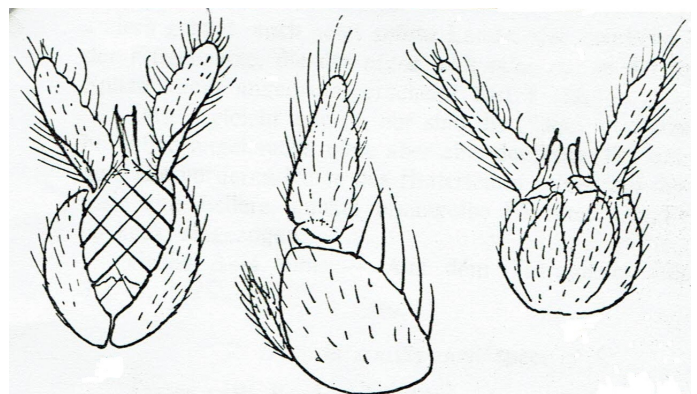


*Macrobrachius kowarzii* Dziedzicki, 1889: wings and male genitalia – dorsal left, ventral right (from Dziedzicki 1889)

### *Phronia longelamellata* Strobl, 1898

One male was found at Walberswick NNR (TM460728), Suffolk on 29 April 2017, by Ivan Perry.

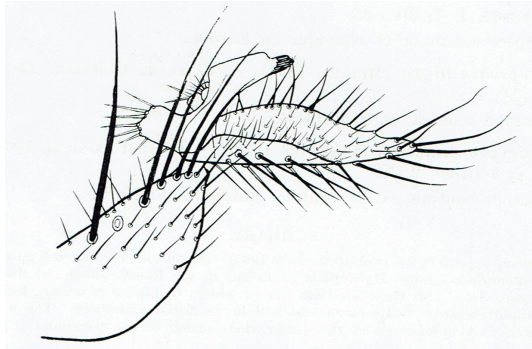
The name *longelamellata* has previously been on the British list for the species now under the name *P. vitrea* Plassmann, 1999. As explained in Chandler (2006), this was because Lundström (1906) had misidentified this species as *longelamellata* Strobl, 1898. Strobl provided no figures of his species and the elongate cerci found in *P. vitrea* led to this interpretation of the name. In the true *longelamellata* it is the gonostyli that are elongate and it closely resembles the common species *P. nigricornis* (Zetterstedt), also found by Ivan at Walberswick, in structure of the genitalia, the more elongate gonostyli being the most obvious difference (not longer than the gonocoxites in *P. nigricornis*). The identity of *longelamellata* was clarified by Kallweit (1998) from examination of Strobl's type; this species was previously known as *P. minuta* Landrock, 1928 and the figures reproduced below are from that publication.



*Phronia longelamellata*, male genitalia – ventral (left), lateral and dorsal view (from Landrock 1928, as *P. minuta*)

The European distribution of *P. longelamellata* extends from France through central Europe to Scandinavia and northern Russia. It is also considered likely that *P. dubioides* Matile, 1969 described from Iran is synonymous, as indicated by the genitalia figure.



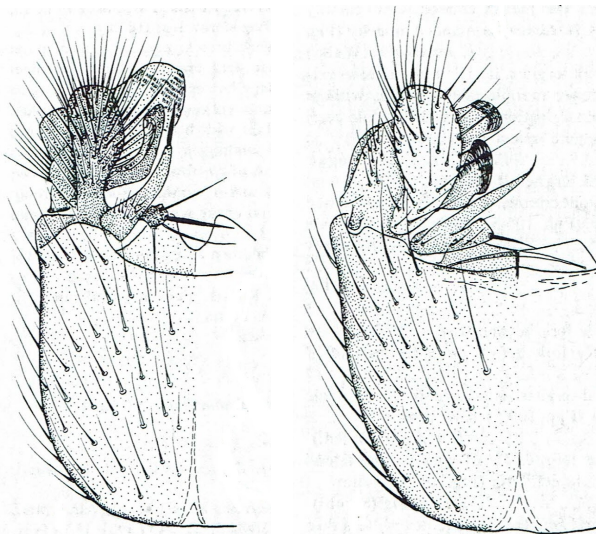


*Phronia dubioides* Matile, 1969, male genitalia, ventral view (from Matile 1969)

### *Trichonta tristis* (Strobl, 1898)

I swept a male near the perimeter of the Lodge grounds (NH3214) at Dundreggan, on 25 August 2016. A second male was found by Alan Stubbs at Glen Fruin (NS300874) in an alderwood on 9 September 2017.

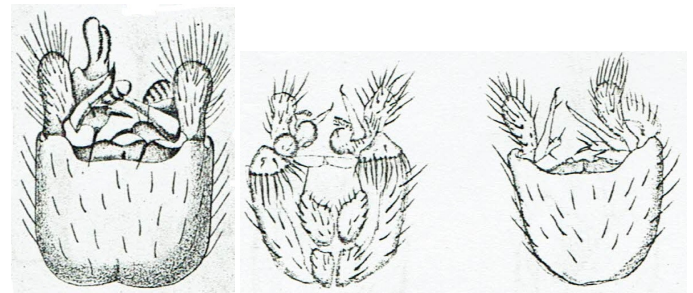
These specimens agree with the genitalia figure of *T. tristis* by Zaitzev (2003). This species closely resembles *T. vulcani* including in the structure of its genitalia but there are small differences, and most obviously the gonocoxites are yellow while they are brown in *T. vulcani*. Both species have the posterior wing fork shorter than usual in *Trichonta*, arising beyond the base of the median fork and tending towards the condition in *Phronia*, in which genus both species were first described.



Male genitalia of *Trichonta* species, ventral view (from Zaitzev 2003): left, *T. tristis* (Strobl); right, *T. vulcani* (Dziedzicki)

A nomenclatural problem is anticipated as Jakovlev (2014) pointed out (based on a communication to him by Jostein Kjærandsen) that the genitalia figures by Dziedzicki (1889) for *Trichonta vulcani* probably belong to this species, which would make *T. vulcani* a senior synonym of *T. tristis*, although Dziedzicki described the genitalia as brown. Genitalia figures from Dziedzicki and Lundström are shown below. Jakovlev (*op. cit.*) suggested that the valid name for the species usually known as *T. vulcani* would then be *Trichonta trifida* Lundström, 1909. However, Kallweit (1998) placed *Phronia appropinquata* Strobl,

1900 as a synonym of *T. vulcani*, based on examination of Strobl's type, so *appropinquata* is the senior available name if these conclusions are correct.



Male genitalia of *Trichonta* species: left, *T. vulcani*, ventral view (from Dziedzicki 1889); right, dorsal and ventral views of *T. trifida* (from Lundström 1909)

*Trichonta tristis*, in the sense of Zaitzev (2003) followed here, has been recorded from Austria, Switzerland, Finland, Norway and Russia (Karelia, Murmansk Province and East Russia).

### *Brevicornu arcticum* (Lundström, 1913)

A male of *Brevicornu arcticum* was caught by Ivan Perry at the Warburg Reserve (SU715879), Oxfordshire, which is mixed woodland on chalk, on 6 August 2016 (also see p. 6 below).

In Newsletter 6 (Chandler 2013), an as yet unnamed species close to *B. arcticum*, found in Oxfordshire in 2011 by Judy Webb, was newly recorded from the British Isles. It was then noted that the true *B. arcticum* remained known in the British Isles only from a single Irish specimen, found on 10 July 1971 at Powerscourt Deer Park, Co. Wicklow (recorded by Chandler 1977; the genitalia figures from that paper are reproduced in Newsletter 6). It had the distinction of being the only fungus gnat known in Ireland that had not hitherto been found in Britain. The Warburg Reserve specimen agrees with that from Ireland in the structure of its male genitalia, so this species is here reported as new to Britain. As reported in that Newsletter, *B. arcticum* was described from Northern Siberia and Kjærandsen (2015) indicates its occurrence also in Norway, Sweden and Finland, though some records may relate to the above-mentioned similar species.

### The Scottish Gnats

The continuing discovery of gnats new to Britain in the Scottish Highlands, albeit in small numbers, suggests that there is still considerable potential for finding previously overlooked species there. As suggested in Newsletter 9, the extent of deforestation in recent centuries may have resulted in some impoverishment compared to comparable habitats in northern Europe. Nevertheless, isolated populations of many species have evidently managed to hang on and may have recently had the opportunity to increase again with reforestation. Several species formerly known only from Scotland within the British Isles have been recorded in the south of England in recent decades, and some are now quite widespread. It may be speculated that the southern populations of some of these species result from new arrivals from the continent, rather than having spread from the Highlands, as is very likely with a number of species new to Britain that have turned up and then spread rapidly within a few



years (*Greenomyia mongolica* is an obvious one that is not likely to have been overlooked earlier).

## More Scottish gnats arrive in England

Here are reported single English records of two more “Scottish” species, *Sciophila rufa* and *Phronia sylvatica*, and one of *Docosia morionella*, known in the British Isles otherwise only in Scotland and Ireland. The number of species known only in Scotland remains fairly static as species turning up further south are compensated for by new discoveries in Scotland.

### *Docosia morionella*

At Chippenham Fen (TL645693) on 20 February 2017, Ivan Perry found a male of *D. morionella* on the ground while searching for sphaerocerids.

This is the first English record, so the early date is of particular interest. It was only known in Britain from a Scottish female, caught on a house window at Logie on 23 September 1904 by Francis Jenkinson, and was not found again in the British Isles until a male was obtained on 8 October 2010 in Keith Alexander’s catch from St John’s Wood, Roscommon in Ireland (Alexander & Chandler 2011). Its biology is unknown.

### *Phronia sylvatica*

This species was till recently only known in Britain from a single male caught by Alan Stubbs in open moorland at Loch Tromlee (NN0423) on 11 June 1976. Then Ivan Perry obtained a second Scottish record at Strath Rory (NN652777), 1 male caught by an upland stream fringed with sallows on 13 June 2016. It was then quite unexpected when I found a male of *P. sylvatica*, in Windsor Great Park on 20 July 2017; it was swept along the shallow dry streambed in Old Windsor Wood (SU9773), to the south of Bear’s Rails Pond.

### *Sciophila rufa*

Not having made his annual trip to Scotland in 2017, Ivan Perry concentrated his attention on Flitwick Moor, Bedfordshire, where the wet woodland has proved to be a rich site for fungus gnats. As mentioned below (p. 7) it had been a good year there for the often elusive genus *Sciophila*, with eight species recorded but it was, nevertheless, a surprise when a female of *S. rufa* was found there on 23 September 2017. While females of most *Sciophila* species are not identifiable, that of *S. rufa* can be recognized, apart from its robust appearance and uniformly reddish orange coloration, by presence of anterodorsal bristles on the fore tibia, a character that applies to both sexes.

Unlike the above two species, *S. rufa* has been recorded widely in Scotland and is often first detected by the conspicuous larval webs and cocoons under brackets of *Fomes fomentarius*, usually growing on decaying birch trunks. The fungus occurs in S England, often growing on beech, and *S. rufa* is common on this fungus on beech in N France so there is no obvious reason why it has been so restricted in Britain.

**Species presently known in Britain only from Scotland (49) (where 3 or fewer localities are known – 25 species – or there are no records after 1990 – 6 species – this is stated)**

*Bolitophila bimaculata*

*Bolitophila fumida* (1931 Aviemore)

*Diadocidia valida*

*Symmerus nobilis* (1997 Glen Coiltie)

*Macrocera aterrima* (1953-1969 montane habitats)

*Macrocera zetterstedti*

*Anatella pseudogibba* (1967 Kinrara, 1982 & 1993 Grantown)

*Boletina digitata* (latest record 1934)

*Boletina groenlandica*

*Boletina kivachiana*

*Boletina landrocki* (1999 Abernethy Forest)

*Brevicornu canescens* (latest record 1913)

*Brevicornu fennicum*

*Brevicornu improvisum* (2015 Birks of Aberfeldy)

*Brevicornu parafennicum* (2010 Dundreggan)

*Creagdhubhia mallochorum* (1994 Creag Dhubh; 2000 Braemar)

*Dynatosoma nigromaculatum*

*Ectrepesthoneura tori* (1999 Abernethy Forest, 2015 Rannoch)

*Eudicrana nigriceps* (1933 Loch Garten; 1991 Ardvasar, Skye)

*Exechiopsis forcipata* (2013 Loch Morlich)

*Gnoriste bilineata*

*Gnoriste longirostris* (1964 Ben Ledi)

*Mycetophila abbreviata*

*Mycetophila lapponica*

*Mycetophila mohilevensis*

*Mycetophila morosa*

*Mycetophila schnablii*

*Mycomya bicolor* (2015 Rannoch)

*Mycomya denmax* (3 records, Skye and central Highlands)

*Mycomya disa* (2012 Dundreggan)

*Mycomya fuscata*

*Mycomya lambi*

*Mycomya nigricornis*

*Mycomya permixta*

*Mycomya punctata* (1921 Fort William, 1970 Cluadale, Eigg)

*Mycomya shermani*

*Phronia bicolor* (2014 Boat of Garten)

*Phronia caliginosa*

*Phronia tiefii* (2004 & 2011, 3 sites in Spey Valley)

*Polylepta borealis* (1947 Aviemore, 1992 Rannoch)

*Rymosia acta*

*Sceptonia longisetosa* (2011 Dundreggan)

*Sciophila krysheni* (1988 Rannoch, 2000 Braemar)

*Sciophila limbatella* (1910 Nethy Bridge, 2000 Braemar)

*Sciophila salassea* (1999 Abernethy Forest)

*Syntemna setigera* (1999 Abernethy Forest)

*Syntemna stylata*

*Trichonta flavicauda* (1908, 1923 Nethy Bridge, 2003 Braemar)

*Trichonta tristis* (2015 Dundreggan, 2016 Glen Fruin)

**Species that are also now known from S England (first English records are since 1990; year of first record stated) (7)**

*Docosia morionella* (2017; only Scottish record 1904)

*Dynatosoma cochleare* (England 1990, Wales 1999; widespread in Scotland, now widespread but still scarce in S England north to S Yorkshire, 1 site in S Wales)

*Ectrepesthoneura pubescens* (1990 Dry Sandford Pit, Berkshire, only English record; 4 Scottish sites 1978 – 2002)

*Mycetophila caudata* (1997; widespread in Scottish Highlands, now also becoming so in SE England)

*Phronia sylvatica* (2017; two Scottish sites 1976 and 2016)

*Sciophila rufa* (2017; widespread in Scotland)

*Trichonta bicolor* (1994 King’s Forest, Suffolk; 1998 Epping Forest, Essex; 2016 Flitwick Moor, Bedfordshire (see p. 7 below); only one old Scottish record 1909 Dingwall)

## Recording at Windsor Forest and Great Park

A full account of the Diptera of Windsor Forest and Great Park is still in preparation. In 2016 I made 17 visits, continuing to cover the area of the Great Park south of Bishops Gate on 10 visits and also including the copse known as “Wilderness” to the south-west of this area, not previously sampled since 1967, on four of these occasions. The Highstanding Hill and Cranbourne Chase areas of Windsor Forest, Cranbourne Park, Russell’s Pond and Bear’s Rails Pond were also visited. Altogether 129 species of fungus gnats were recorded. The further find of *Macrorrhyncha hugoi* was reported in Newsletter 9. *Mycetophila stylatiformis* was found in several areas. A copulating pair of *Neoempheria bimaculata* was seen in flight near the stream south of Bishops Gate on 14 September. At Cranbourne Chase on 5 October, a female of *Leptomorphus walkeri* was found – it had only been recorded once before at Windsor when it was reared in 1979. This and some other fungus gnats were included in an exhibit on the Diptera fauna of Windsor Forest and Great Park at the 2016 Exhibition of the British Entomological & Natural History Society (Chandler 2017), that also appeared at the Dipterists Forum AGM in that year.

In 2017 I made 14 visits, covering most of the same areas, but also including two visits to the Blacknest Gate (west) end of Virginia Water, and latterly several visits to the South Forest, which had not been included in other visits in recent years. The annual total of 159 species was boosted by autumn visits to South Forest, which also added several species to the overall list for the estate, now standing at 291. Most of the additions were widespread species, but the visit on 22 November added *Mycomya danielae* and *Trichonta nigritula*. *Dynatosoma cochleare*, previously found at Highstanding Hill in 2014, was recorded at Cranbourne Chase on 7 July, when 71 species of fungus gnats were among large numbers of flies sheltering in a dry but humid stretch of streambed. The vicinity of Bear’s Rails Pond and the area of Old Windsor Wood to the south of it were also visited, and the most unexpected find in 2017 was from this area, a male of *Phronia sylvatica*, of which the only previous British records were two from fairly open habitats in Scotland (see p. 4).

Malaise and interception trap samples obtained by Keith Porter at several sites on the estate in 1992 and 1993 were determined during 2016 and included 161 species, of which 7 have otherwise not been recorded for the estate.

## Lincolnshire

David Sheppard has been running Malaise traps at a range of nature reserves in Lincolnshire in recent years. Since October 2017 he has passed to me the fungus gnats from these catches. These were mainly from the period 2014 to 2016, with some 2017 samples. As this is an under-recorded part of the country this material, which included 187 species, was very welcome.

The most productive site was Snipe Dales (TF327683) with 136 species recorded; this is a complex of wooded and grassland valleys - part was planted with conifers in the 1950s/60s, but these were clear-felled in the 2000s and the wooded areas are now managed by natural regeneration. Notable species from this site were *Dynatosoma cochleare* (August 2015) and *Allodia angulata* (August to October 2017).

*Brevicornu arcticoides*, with only two previous British sites known (Sandwell Valley, Staffordshire, 1988; Sutton Broad, Norfolk, 1989, 1990), was found at three sites, the inland Raithby Beck Wood (TF3668) and two coastal sites, Wolla Bank Pit (TF555748) and Gibraltar Point (TF562579), respectively north and south of Skegness. Raithby Beck Wood is a recently developed woodland/grassland conservation area with three ponds, a marginal stream and several very old willows along the edges, with some planted trees now about 10 feet tall and is densely shaded along the streambanks. Wolla Bank Pit is one of the clay pits dug to build the new sea walls after the 1953 east coast floods; it has a couple of large ponds, surrounded by willows and some areas of grassland and scrub. At Gibraltar Point traps were run alongside bramble and hawthorn scrub on fixed dunes, now isolated from the sea by one or two outer rows of dunes and saltmarsh.

The above location at Gibraltar Point, with 75 species recorded in April-October 2016, also provided records of *Macrocera crassicornis*, *Azana anomala*, *Mycetophila caudata* and *Sceptonia tenuis*. Trapping at a different part of Gibraltar Point (TF563582) in August 2017 produced 35 species, including *Sciophila pomacea* (1 male and 2 females), bringing the recent list for this reserve to 86 species. There are earlier records made in 1968 by B. Wilkinson (without precise grid reference) of 18 species, of which 9 are in common with the recent trapping.

*Sciophila pomacea*, of which there are relatively few British records, is thought to be specific to the bracket fungus *Phellinus tuberosus* (= *P. pomaceus*) which grows on trees of the family Rosaceae. At Gibraltar Point, however, it is possible that the host is *Phellinus (Fomitiporia) hippophaeicola*, which grows on sea buckthorn *Hippophae rhamnoides* (Elaeagnaceae), which is very common at this site as elsewhere on the Lincolnshire coast (Charlie Barnes *pers. comm.* to David Sheppard).

*Mycetophila caudata*, also recorded at Minting Wood (TF160737), and *Dynatosoma cochleare* are examples of species formerly recorded in Britain only in Scotland, but now being found widely in S England, as discussed above (p. 4); in the case of *M. caudata* it is a northern extension of its southern range.

## North Wales

Since 2015 Andrew Graham has supplied spreadsheets of records of fungus gnats he has identified from North Wales, already amounting to 114 species. These include *Exechia styriaca*, one of the few species within Britain only recorded from Wales, from Trawscoed (SH848322) on 30 September 2015 – it is known from 8 hectads in N Wales from the 1970s, with a more recent record from one of the same localities (Mallwyd in 1994) and one locality in S Wales, Stradey Woods in 1995; the new record provides an additional hectad for this species.

Twenty species were obtained at MV lights, among them *Paratinia sciarina*, a species well known to be attracted to light traps, at Trawscoed (SH845326) on 2 August 2015 and 28 March 2017. Other species found in this way were *Boletina gripa*, *Coelosia tenella*, *Neoempheria pictipennis*, *Phthinia mira*, *Anatella setigera*, *Brevicornu griseicolle*, *B. sericoma*, *Cordyla crassicornis*, *Exechia spinuligera*, *Mycetophila fungorum*, *M. luctuosa*, *M. marginata*, *M. ocellus*, *M. ornata*, *M. rudis*, *M. unipunctata*, *Phronia biarcuata*, *P. humeralis* and *Zygomia humeralis*.

Andrew's sister Janet has photographed most of the species they have recorded, and her excellent photographs of genitalia and whole insects can be viewed on her Flickr site:  
<https://www.flickr.com/photos/149164524@N06/sets/72157680963188901/>

## Mitcham Common, Surrey

Roger Morris has been investigating the Diptera fauna of Mitcham Common, Surrey during 2017, and has provided samples of fungus gnats collected on 25 dates from 28 August until 18 November. While they have only occasionally been numerous in certain areas, the overall results are encouraging with records of 120 species. There were very few previous gnat records from this site. Roger had published an account (Morris 2003) of some groups of Diptera from the Common, in which 9 species of fungus gnats were listed in an Appendix. Altogether 15 species were collected by Roger in the 1990s and 3 by Alan Stubbs in 1974. An entomological survey of the Common in 2008 by Graham Collins (Collins 2008) added one fungus gnat *Macrocera phalerata*. All but 4 of these earlier recorded species were also found by Roger in 2017.

Mitcham Common comprises 182 hectares (452 acres) of ancient common land on gravels overlying London Clay. Having earlier been grazed, in the 19<sup>th</sup> century it was subject to extensive gravel extraction, of which some of the present ponds are a relict. It was local opposition to the gravel extraction that resulted in survival of the Common. George Parker Bidder QC (1836-1896) was responsible for its protection under the Metropolitan Commons Act of 1891. He had roamed the Common as a boy, when his family resided at Mitcham Hall, purchased in 1846 by his father, the civil engineer of the same name. A memorial to him was erected on the Common after his death from a road accident in 1896, by which time his son, another George Parker Bidder (1863-1953), had begun his career as a marine biologist, specialising in sponges, and had moved away from Mitcham.

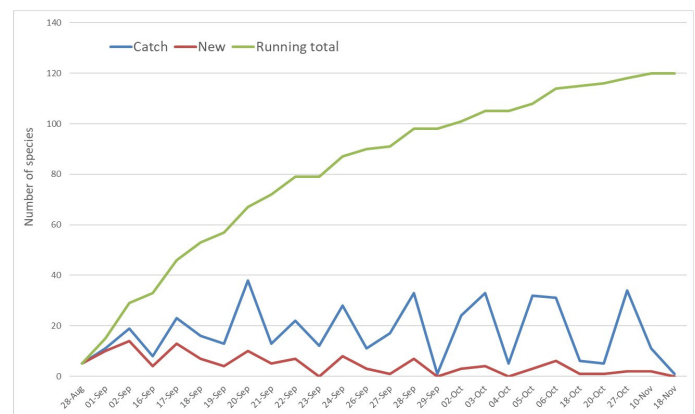
From 1891 the Common has been managed by a board of conservators, whose present priorities are restoration of acid grassland and heathland, and there is now a range of habitats including scrub and dry woodland dominated by oak and hawthorn. The oldest existing woodland on the Common has apparently developed since 1891, as it is estimated to be about 100-120 years old; a row of oaks on one boundary (Gunsite & Golf Course) is older, around 170 years, but woodland in the Seven Islands Pond area and two woods on the Golf Course are no more than about 70 years old (Roger Morris *pers. comm.*). The extent to which saproxylic species have colonised is therefore of interest.

The vicinity of the golf course (TQ2867) was most productive with 85 species recorded, closely followed by the area around Seven Islands Pond (TQ2868) where the total was 83. The Gunsite (also in TQ2867) provided 34 species, and several locations within TQ2967, which overlaps the golf course, produced 35 species. The Seven Islands Pond area was found to be rich in fungi by Tortelli (2009); his survey was carried out in a dry year when areas of oak woodland were most productive.

Of those gnats found at Mitcham with known biology 56 develop at least in part in saproxylic fungi, and at least 25 have an obligate association with saproxylic fungi or rotten wood. Some species are probably recent arrivals in the area, e.g. *Mycetophila sigmoides*, of which the first British record was in 1998 and it is

now widely distributed in S England north to Yorkshire – it develops in tough polypores, especially *Daedaleopsis confragosa* (recorded on willow at Mitcham by Tortelli 2009). The same applies to some species of unknown biology, such as *Mycetophila caudata* (discussed on pp 4 and 5) and *Exechiopsis davatchii*. *Keroplatus testaceus*, found on five dates and in three of the areas, is clearly well-established at Mitcham. This and *Ditomyia fasciata*, also on five dates and in two areas, have both evidently increased and spread more widely over the country in recent decades. Perhaps the most unexpected find for the reasons stated below was *Manota unifurcata*, one male in the Seven Islands Pond area on 28 August. This, like most of the saproxylic species, will have arrived as the Common became more wooded and suitable habitats for saproxylic fungi developed.

Roger has provided this chart to show how the total of 120 was achieved by a steady rise in the number of species caught over this period. As the sampling started quite late in the year, he expects to add spring and early summer species in 2018.



## Other recording in 2016 and 2017

Batches of fungus gnats were received from Keith Alexander, Pete Boardman, Andrew Cunningham, Martin Drake, Adrian Dutton, Andrew Foster, Tony Irwin, Nigel Jones, Mark Mitchell, Roger Morris, Ivan Perry, Alan Stubbs and Rob Wolton. Records were also provided by Paul Bowyer and Alistair Shuttleworth. Further species reared from reliably named fungi were received from Richard Fortey.

Ivan Perry made five more visits to the **Warburg Reserve** (SU715879), Oxfordshire, which is mixed woodland on chalk, from 29 May to 8 October 2016, and recorded 143 species of fungus gnats, a similar total to the previous year. He again recorded *Exechiopsis davatchii* there (24 September). The most significant new records for the site were *Mycetophila hyrcania* (1 ♂ on 24 July) and *Brevicornu arcticum* (see p. 3 above). This is the second British record of *M. hyrcania* which was added to the British list in Newsletter 9 from three males obtained in an aerial trap at Chalkhills Farm (SU640780), Buckinghamshire by Martin Townsend in 2014.

Ivan continued to visit **Flitwick Moor**, Bedfordshire, adding to his previous records for that site, which comprises both wet alder wood and oak and birch woodland. He made 13 visits in 2016 and 14 visits in 2017. Additional species recorded in 2016 increased the list to 226, and in 2017 this rose to 259. *Phronia portschinskyi* continued to be recorded here annually, while all other British records are from wetlands in Wales and East Anglia. *Mycetophila stylatiformis* and *Sciophila buxtoni* were



again found in both years. In 2016 finds included *Exechiopsis davatchii*, *Rymosia britteni*, *Trichonta bicolor* and *Neoempheria bimaculata*. In 2017 the genus *Sciophila* was particularly well-represented with 8 species recorded, of which four were new records for the site: *S. antiqua*, *S. interrupta*, *S. lutea* and most surprisingly *S. rufa* (see p. 4).

On a visit to the New Forest from 16-20 July 2016, Ivan recorded 114 species, with most records from **Denny Wood** (SU334069) and **Pondhead Inclosure** (SU309074). Denny Wood produced *Sciophila baltica*, *Mycetophila caudata* and *Phronia sudetica*. *Trichonta clavigera* was found at both sites. At Pondhead Inclosure on 19 July *Zygomyia matilei* was among the catch. It was new to the mainland of Britain when Ivan found it at the Warburg Reserve in 2011 (Chandler 2013), having previously been known from the Channel Islands, and it has since been found by Rob Wolton in Devon (Wolton *et al.* 2017; see below).

At the edge of a ride on **Chippenham Fen** (TL645693) on 29 October 2016, Ivan found *Phronia portschinskyi* and *Mycomya danielae*, which had then only recently been recorded as new to Britain from Surrey (Chandler 2014). In 2017 he again found *M. danielae* there on 27 October. Also recorded in that year were *Paratinia sciarina*, *Mycetophila sigmoides* and *Trichonta nigrifulva*; the latter species was quite frequent at the edge of a reedbed. More remarkable was the finding of *Docosia morionella* (see p. 4) on the very early date of 20 February 2017, the only fungus gnat seen on that visit.

Ivan's trip to Scotland from 12-18 June 2016 experienced wet weather and the catch was limited to 92 species. On the other hand he explored new ground in Ross and Sutherland, reaching the north coast in adverse conditions. The most significant find was the second British record of *Phronia sylvatica* (see pp 4-5). Among other finds in 2016 was *Neoplatyura biunbrata* at The Gannel, Cornwall (SW798610) on 8 September, and *Mycetophila stylatiformis* at Walberswick Fen Covert (TM460728) on 30 June and 15 August. His total catch in 2016 was 280 species.

Tony Irwin supplied samples from **Winterton NNR** (TG48-49/19-20), East Norfolk, caught by a Malaise trap progressively deployed at several sites across the reserve from April 2014 to October 2014 and then from October 2015 to April 2016. The sites included various dune and heathland habitats, with some birch and oak woodland. The 52 species found included *Pyratula perpusilla*, *Anatella dampfi* and *Cordyla insons*.

Roger Morris toured Scotland from 31 May to 9 June 2017 and recorded fungus gnats at 30 sites, with 94 species among the catch. Those with a mainly Scottish distribution were *Bolitophila nigrolineata*, *Rymosia setiger*, *Mycetophila bohemica*, *M. signata* and *M. subsigillata*, all from Craigellachie NNR (NH889121), the most productive site with 42 species; *M. bohemica* was also found at NN914390, and *R. setiger* at NM725927.

Keith Alexander provided gnats from three sites that he surveyed in 2016, of which **Tyntesfield**, Gloucestershire and **Ashenbank Wood**, Kent were the subject of articles in *Dipterists Digest* (Alexander 2017b, 2017c), citing the less common fungus gnats recorded. Most significant was the addition of *Macrobrachius kowarzii* to the British list from Ashenbank Wood (see p. 2). *Mycetophila stylatiformis*, evidently now well-established in England, was recorded at both those sites. He also obtained fungus gnats in catches from three sites in 2017. **Pixton Park, Dulverton** (SS9226-9227) produced records of 52 species

including *Manota unifurcata* (see below); a site in Cumbria produced 165 species, including *Mycetophila immaculata*.

Rob Wolton continued to run a Malaise trap at **Scadsbury Moor**, Rutleigh (SS518014), on his Devon farm in 2016, and again obtained a considerable catch of gnats. The results of this and the previous two years were summarised in Wolton *et al.* (2017), in which those fungus gnats with conservation status were listed. The total of fungus gnat species recorded for the site was 204. The most significant 2016 records were of *Monocentrotroa favonii*, *Manota unifurcata*, *Neoempheria winnertzi* and *Zygomyia matilei*. Together with the earlier records from other parts of his farm, the overall total of fungus gnat species for the farm has reached 257 (all within hectad SS50). Material was also collected by Rob at several sites in 2017 (see *Epicrypta fumigata*, p. 8).

Martin Drake provided, in addition to his catches from the Kentish and Welsh Field Meetings discussed above (p. 1), numerous samples collected by him in 2016 and 2017 in Devon and Somerset. The overall species total of fungus gnats was 171 for 2016 and 108 for 2017. These included *Leptomorphus walkeri*, of which there are few south-western records, from Woolfardisworthy (SS8208) on 14 July 2016. Hook Wood (ST3005) produced *Mycetophila strigatoides* and *Synplasta ingeniosa* in 2017. *Trichonta pulchra* was found at Dawlish Warren (SX983790) on 12 August 2017.

Richard Fortey continued to send flies for identification that he had reared from fungi collected at **Grim's Dyke Wood** (SU738843), his own woodland in the Chilterns. These included *Sciophila baltica* reared from the tooth fungus *Hydnum repandum* in October 2017; *S. baltica* was reared together with *S. varia* from the same fungus from Devon in 1980. There are only nine previous British records of this species, all in S England.

Gnats received from Pete Boardman included *Sciophila interrupta*, another species known to develop in *Hydnum repandum*, from Kings & Hargreaves Wood SSSI (SJ866392) at Trentham, Staffordshire, on 31 July 2017.

Diptera samples collected at five sites in the East Anglian fens, examined for Adrian Dutton, included *Rutylapa ruficornis* from Woodwalton Fen (TL232847) on 30 June 2016.

I made further visits to the Trees for Life Estate at **Dundreggan** in both years, 21-25 August 2016 and 6-8 September 2017. On the first visit 99 species of fungus gnats were recorded, on the second which was mainly wet weather only 38 species. Together they increased the total species for the estate to 219. The record of *Sciophila varia* on 21 August 2016 has already been published in the above-mentioned note on this species (Alexander 2017a). Also on that trip *Mycomya nigricornis* was found along the Wild Boar Trail (NH3314) on 22 August. *Trichonta vulcani* was found by a stream in the woods north of the Lodge (NH325140) on 23 August, and it was realised sometime later that a similar specimen found on 25 August, near the Lodge differed in its genitalia and was the first British specimen of *T. tristis* (see p. 3).

After leaving Dundreggan in 2016, I joined a party of dipterists staying at **Kingussie** for a week, from 26 August to 2 September, organised by Roger Morris. As well as Roger, others adding to gnat records were Alan Stubbs, Andrew Halstead, and John and Barbara Ismay. Keith Alexander contributed the rearing of *Sciophila varia* from Logie (Alexander 2017a). We covered a good number of sites and recorded at least 179 species. Species found that only occur in Scotland within the British Isles were

*Brevicornu fennicum* from three sites (Altnagloich, NJ163284; Loch Morlich, NH9809; Rothiemurchus, NH91), *Mycetophila abbreviata* (Ellan Wood, Carrbridge, NH9022) and *M. schnablii* (Darnaway Forest, NH985481). *Phronia vitrea* was found at three sites: Bridge of Brown, NJ122204; near Loch Belivat, NH959473; Lynachlaggan, NH821024. *Mycetophila lubomirskii* was found on the shore of Loch Insh (NH83505).

There was a similar pattern in 2017, when on 8 September I travelled from Dundreggan to **Tarbet**, on the west side of Loch Lomond to join some of the same party as at Kingussie, until 15 September. Roger, Alan and Andrew again contributed to gnat records. Keith collected *Hydnum repandum* at Cormonachan Woods (NS1997) and again succeeded in rearing *Sciophila varia*. This week was showery, but fieldwork was possible on all but one day and a good number of sites around and to the west of Loch Lomond were visited. Altogether 142 species of fungus gnats were found. These included the second British record of *Trichonta tristis* (see p. 3) and two males of a *Phronia* species that has yet to be identified – one male each from two sites, Drimsynie Forest (NN191050) and Glen Nant NNR (NN012296). *Keroplatus testaceus* was also found at Glen Nant, *Pseudorymosia fovea* and *Speolepta leptogaster* at Glen Loin (NN3005). At Falls of Falloch (NS334207), *Rymosia acta*, with only 5 previous sites recorded, from Perthshire to Sutherland, and *R. armata* were among the catch.

Following the BENHS saproxylic field meeting at Leigh Woods, Bristol on 24 June 2017, Bob Fleetwood sent for identification flies trapped near a sap run on ash at this wood, which included 12 species of fungus gnats, among them *Mycetophila sigmoides*.

In 2017 I made three visits to **High Park, Blenheim** as part of the ongoing survey there, organized by Aljos Farjon. With dry conditions prevailing at this limestone site, 51 species were recorded. On the final visit on 12 October, a more humid area of plantation woodland just outside the survey area was also visited; here a dry gully was sheltering gnats and 43 species found here added 27 to the total for the Park. No rare species were found.

My further visits to **Fleet Pond** Nature Reserve, Hampshire, with diverse woodland and wetland habitats in the 1km squares SU8154, SU8254 and SU8255, had increased the total for the reserve to 108 species. The visit on 17 October 2017 during the field meeting (see pp 1-2) added 19 species, bringing it to 127.

## Other significant records

### *Ditomyia fasciata*

Egglestone Abbey (NZ062150), North Yorkshire (south bank of River Tees), 7 September 2017; Wingate (NZ3937), Durham, 24 June 2017 (R. Morris).

Records from 2015 included some from Derbyshire and Nottinghamshire that were close to the then known northern limit of its distribution, so these extensions north are quite significant.

### *Keroplatus testaceus*

Steeple Clump (NT1582), Dalgety Bay, Fife (V.C. 85), small mixed woodland (Scots pine and mostly sycamore), pupae 24.ix.2017, adult emerged sometime before 3.x (pupae found by Vladimir Krivtsov, reared by Alistair Shuttleworth). Pupae with an appearance of being "trapped in ice" were found under some rotting wood, from which an adult emerged. A larva was found at the same time. There are several Scottish records, but this is the first from the east side of the country.

### *Epicypta fumigata*

Whiddon Deer Park (SX724891), 1.ix.2017, 1 ♂ (R. Wolton).

This species was new to Britain when recorded by Rob Wolton from Scadsbury Moor (SS520015), Rutleigh, Devon in successive years from 2013 to 2015 (Chandler 2014, 2015a, 2016). It had yet to be found elsewhere in Britain, so it is interesting that Rob has found it at another Devon site.

### *Greenomyia mongolica*

Anglesey Abbey (TL528624), Lode, Cambridgeshire, 14.v and 28.viii.2017, 1 ♀ around compost heap on each date (I. Perry); Fenny Meadows (TL158968), Peterborough, 11.vii.2017 (A.E. Stubbs); Shrewsbury, garden (SJ491113), 10 October 2017 (N. Jones).

The biology, distribution and recent spread of this species were discussed in a previous Newsletter (Chandler 2015a). Records from Kent, Hampshire and Cambridgeshire were added in Newsletter 9; a Northamptonshire record is also cited on p. 1.

### *Manota unifurcata*

Pixton Park (SS929270), South Somerset, 12.vii-24.x.2017, 1 ♂ in flight interception trap hung inside a cavity in a hollow ash, bearing a bracket of *Inonotus hispidus* (K.N.A. Alexander).

This species was discussed in some detail in Newsletter 7 (Chandler 2014), including a distribution map showing scattered records in S England north to Cambridgeshire, and in S Wales. It was mentioned that it is possibly too secretive in behaviour to be detected more frequently. In Newsletters 8 and 9 (Chandler 2015a, 2016) records from Surrey, N Wales, Derbyshire, Nottinghamshire and Devon were added. Further records from Devon (Wolton *et al.* 2017) and Mitcham Common, Surrey are cited above (pp 6-7).

### *Mycetophila immaculata*

Zephon Common (SU796519), Hampshire, 24.x.2017, 1 ♂ (M. Mitchell). A 2015 record by Andrew Foster from Horner Wood, Somerset was reported in Newsletter 9 as the first British record in the present century, and another 2017 record from Cumbria is cited above (see p. 7); there are earlier records from ten hectads, the latest of these being from Scotland in 1999.

## Looking for *Leia*



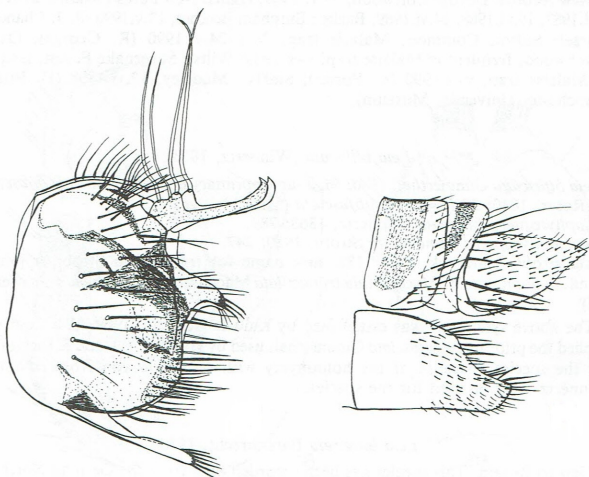
The above photo was taken from a TV screen, when the wearer was talking about a new Star Wars film. Perhaps she didn't know the gnatty significance of her quest. Clearly it was an encouragement for all gnat enthusiasts to go out and search for this interesting genus of fungus gnats. Acquiring the tee-shirt is obviously a must, so their mission can be identified in the field.

*Leia* are attractive gnats. Most are mainly yellow, sometimes with various black markings, and there is usually a preapical wing band with more extensive wing markings in some species.

We have ten species of *Leia* in the British Isles, of which all but one, *L. longiseta*, can be named using Hutson *et al.* (1980). Their key included *L. arsona*, a species of subtropical origin that has been introduced to Europe with imported plant material, though it occurs outdoors in southern Europe and even in the Channel Islands. It was described by Tony Hutson (Hutson 1978), when it had been found infesting root ginger of Brazilian origin at a warehouse in London previously used for banana ripening. The only other record in Britain was when Andrew Halstead (Halstead 2004) reported its association with decayed bulb scales of a potted cultivar of *Hippeastrum* (Amaryllidaceae). That plant had originated from the Netherlands, where *L. arsona* has since proved to be common in nurseries and it is probably dependent on fungal decay of various hot-house plants (Chandler & Pijnakker 2009).

Of the nine native species only five have been recorded in 2016-2017, although two others (*L. subfasciata* and *L. crucigera*) are not infrequent. In Europe, however, there are at least 20 species, of which most occur in central and southern Europe. Unusually for fungus gnats, the Scandinavian fauna is not richer than ours – nine species are also included in the checklist of Nordic gnats (Kjærandsen 2015), with the difference that they have *L. picta*, a widespread species in Europe, but lack *L. piffardi*.

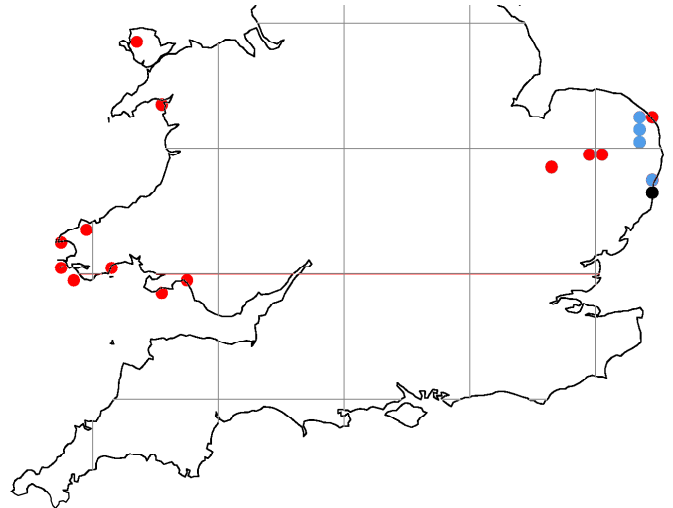
*Leia longiseta* was added to the British list by Chandler (1992); it was described from the Netherlands in 1938 and had by 1992 only also been recorded from the German North Sea islands; Kjærandsen (2015) indicates occurrence in Norway and Finland. It has distinctive male genitalia; the figure below shows the obvious reason for its specific name. It runs to couplet 8 (*L. bimaculata* and *L. piffardi*) in the key by Hutson *et al.* (*op. cit.*). It is variable in coloration but resembles some specimens of *L. bimaculata* in having black thoracic markings, differing in having a cloud behind the posterior wing fork, as in *L. piffardi*.



***Leia longiseta*: left male genitalia, right female ovipositor, both left lateral views (from Chandler 1992)**

It was found in trapping surveys of wetlands in Wales and East Anglia, where it occurred in great numbers at some sites. The Welsh records are from the period 1987 to 1989, with all sites curiously close to the coast. On the floating fen at Llyn Hafodol, Anglesey, on 11 July 1987, adults were also found on *Salix* foliage by Alan Stubbs and myself. The East Anglian records span the years 1988 to 1993, with two exceptions that David Gibbs recorded it at Minsmere in August 2004 and Martin Drake

found it at Sutton Fen, a known site, on 24 June 2012. Then Martin also recorded it on 19 July 2012 at Catcott (ST3939) on the Somerset Levels, the only recorded hectad not shown on the map below, which was prepared in 2011. It appears to be restricted to wetlands, its habitats including *Salix* carr, fens, reedbeds and a basin mire with *Menyanthes*, but its biology remains unknown. It should be sought in similar habitats elsewhere.



***Leia longiseta*: records to 1989 (red), 1990-2011 (black) and from both periods (blue)**

The other rarely recorded species is *L. piffardi*, with records from only eleven hectads. Nine of the 13 British records were obtained by rearing from bird nests (blackbird, song thrush, magpie and buzzard are recorded) or dreys of both red and grey squirrels. This suggests that adults are elusive, and it may be overlooked because of occurring mainly in the canopy. My only experience of this species was on 3 July 1985 in Somerset, where a male was swept from the edge of Withial Combe (ST565380) near West Pennard, and that is apparently the most recent British record. It resembles paler specimens of *L. bimaculata* with a yellow thorax but has quite different male genitalia.

Another species with similar habits is *L. bilineata*, the third species with Nationally Scarce status but in this case fairly widespread throughout Britain. It has also been reared from the drey of a red squirrel, from under oak bark (possibly a pupation site) and from bird nests; however, Kurina (1994) reared it from the polypore fungi *Piptoporus betulinus* and *Phellinus igniarius*, so its precise biology is difficult to understand.

Their arboreal habits are shared with most other members of the genus. Even the commonest species such as *L. fascipennis* and *L. winthemii* are most often found by sweeping tree foliage, especially at woodland edge and in hedges. The biology of the genus is poorly known – only *L. bimaculata* is well known as a fungus feeder; it is highly polyphagous in soft fungi, terrestrial as well as saproxylic. Otherwise *L. winthemii* has been reared from species of *Lactarius*, *Paxillus*, *Lentinellus*, *Peziza* and *Pleurotus* and *L. crucigera* once from *Neolentinus tigrinus*. The absence of any rearing records for the commonest species *L. fascipennis* suggests that its larvae are unlikely to feed in fungi, at least of the more readily sampled sorts. *Leia cylindrica* is another fairly common species; Jakovlev (2011) reported that it has been found in an emergence trap over decaying logs, but nothing else is known of its biology.



There is plenty of scope for the *Leia* hunter to find new information on the behaviour and biology of this distinctive genus. There is even the chance that some of the other European species may turn up here, as happened with the related genus *Greenomyia* – we still only have *G. mongolica* while three other *Greenomyia* species occur in Europe. Perhaps *Leia picta* is the most likely to arrive – it is found in most European countries, including France and the Netherlands.

## Acknowledgements

I thank all those who have provided records and specimens for examination, and in particular Keith Alexander, Pete Boardman, Martin Drake, Adrian Dutton, Bob Fleetwood, Richard Fortey, Andrew Graham, Andrew Halstead, Tony Irwin, Nigel Jones, Mark Mitchell, Roger Morris, Ivan Perry, David Sheppard, Alistair Shuttleworth, Alan Stubbs and Rob Wolton for the opportunity to include their records here. I am indebted to Nick MacFarlane for enabling me to record Diptera at Fleet Pond. I thank Natural England and the Crown Estates for permission to continue with surveys of Windsor Forest and Great Park, Alan Watson Featherstone of Trees for Life, for the assistance and hospitality shown to me during my visits to Dundreggan, and Aljos Farjon for the opportunity to record at Blenheim Park.

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Peter Chandler



# **Dipterists**Forum

Affiliated to the British Entomological and Natural History Society

## **Assessment criteria for applications to the Dipterists Forum for grant to produce identification keys**

1. Priority will be given to keys for taxonomic groups for which current provision is poor or markedly outdated.
2. Priority will be given to dichotomous keys, although accompanying keys in other formats will be welcomed.
3. It is expected that key characters will be illustrated either with line drawing or photographs. Whole fly photos are often a helpful addition.
4. Keys must be tested by peers before publication.
5. Authors must be able to satisfy DF that there are no copyright issues.
6. Grant will normally be offered only towards production and publication costs, including the provision of illustrations, and not for time spent on development.
7. Grants will not normally exceed £1,000 (even for large families) and will be awarded only to DF members. DF will not provide funding if it is available in full from elsewhere. Keys must be published within 3 years of any DF grant offer.
8. Keys should be available to users as hard copies and/or as PDFs that can be printed out from the DF website or sent electronically. The provision of interactive versions which can be used on electronic devices (either online or offline) will be a welcome addition.
9. Publications, whether available as hard copy or electronically, or both, will be priced at a level affordable to most potential users, if not free. No organisation should expect to make a profit from grant-aided keys.
10. DF must be acknowledged, including use of our logo.





## Events Calendar Spring 2018

**16 - 18 February 2018, DF Advanced Identification Workshop.** Families: **Difficult Larger Brachycera and Anthomyiidae.** Tutored by Martin Harvey, Howard Bentley and Philip Brighton. Preston Montford Field Studies Centre, Shrewsbury. Details on FSC website: <http://www.field-studies-council.org/prestonmontford>

**3 March 2018 Introduction to Craneflies Workshop.** Tutor Pete Boardman. BENHS Dinton Pastures Country Park, Hurst, Reading. See <http://www.benhs.org.uk>

**3 March 2018 Staffs Invertebrate Science Fair.** Contact Andy Jukes, @ConopsEnto

**3 March 2018 Introduction to Flies Workshop, 10:00-4:00.** Tutor Martin Harvey for Sussex Wildlife Trust. Woods Mill, Shoreham Rd, Henfield BN5 9SD. For fees and booking details see: <https://sussexwildlifetrust.org.uk/whats-on/category/woods-mill>

**10 March 2018 Workshop on Tachinidae identification.** Tutors: Matt Smith and Chris Raper, BENHS, Dinton Pastures Country Park, Hurst, Reading. See <http://www.benhs.org.uk>

**24 March 2018 BENHS Annual General Meeting and Presidential Address.** See <http://www.benhs.org.uk>

**12 May 2018 Bees, hoverflies and flowers: pollinators and pollination,** Tutor Martin Harvey - Bishops Wood (near Kidderminster). Field Studies Council.

**23- 30 June 2018, DF Summer Field meeting based at Staffordshire University. Details TBA.**

**30 June 2018 Bees, hoverflies and flowers: pollinators and pollination,** Tutor Martin Harvey - Bushy Park, south-west London. Field studies Council.

**6 October 2018 AES Annual Exhibition and Trade Fair,** Kempton Park, London Sunbury-on-Thames, TW16 5AQ, UK. DF will have a publicity stand and publications for sale. See [www.amentsoc.org](http://www.amentsoc.org)

**3 November 2018 BENHS Annual Exhibition and Dinner,** Conway Hall, 25 Red Lion Square, Holborn, London WC1R 4RL. See <http://www.benhs.org.uk> . Bring your best fly exhibits for the Diptera table.

**November 2018 DF AGM, Dipterists Day and Indoor Meeting. Details TBA**

**20–25 November 2018.** 9<sup>th</sup> International Congress of Dipterology is scheduled to take place in Windhoek Namibia (note change of venue). See website : (<http://icd9.co.za/>)

**1 December 2018 Discovering Diptera: Flies under the Microscope,** Tutor Martin Harvey - Epping Forest. Field Studies Council.

*Throughout the Year:*

**BENHS Dinton Pastures Open Days** in the Pelham-Clinton Building, Hurst, Reading. Open 10:30-16:00 on second and fourth Sunday in each month except April to September when only on the second Sunday of each month (except for August when there are no Open Days). We encourage you to bring along your pinned flies and use the Diptera Collections and library for identification. Other Dipterists are usually present meaning good chat and assistance with identifications may be possible. The grid reference for Dinton Pastures is SU 784718, turn left off the B3030 driving North from Winnersh. The site is about 15 minutes walk from Winnersh station, which has trains running on a half-hourly service from Reading and Waterloo. See: [www.benhs.org.uk](http://www.benhs.org.uk)

**The Northants and Peterborough Diptera Group** hold meetings every weekend from end of April until sometime in September/October. See: [northantsdiptera.blogspot.co.uk](http://northantsdiptera.blogspot.co.uk) or contact John Showers on email: [showersjohn@gmail.com](mailto:showersjohn@gmail.com)

**The Devon Fly Group** will be holding regular field meetings throughout the year. Contact Martin Drake (01460 2206650, email: [martindrake2@gmail.com](mailto:martindrake2@gmail.com)).

# County Recorders

# Dipterists Forum



## Scotland

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

## Ireland

- CEDAR (Ulster Museum)

## North West England

- Cumbria Biodiversity Data
- Greater Manchester
- Lancashire Env. Rec. Net.
- Merseyside
- rECOrd
- Isle of Man

## Wales

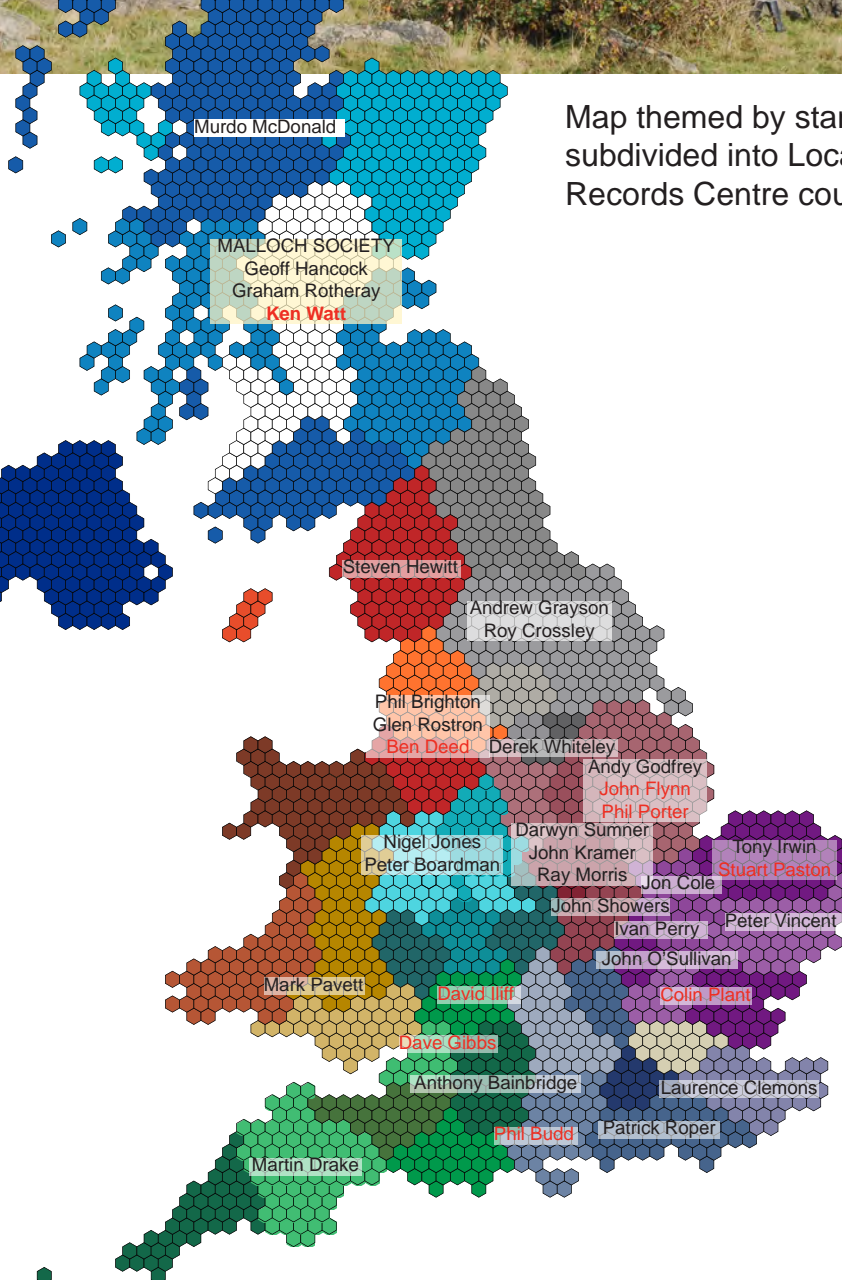
- North Wales
- Powys & Brecon Beacons
- South-East Wales
- West Wales BIC

## West Midlands

- Staffordshire Ecol. Record
- EcoRecord
- Herefordshire BRC
- Warwickshire BRC
- Worcestershire BRC
- Shropshire

## South West England

- Bristol ERC
- Cornwall & Isles Scilly ERC
- Devon BRC
- Dorset ERC
- Gloucestershire Centre ER
- Somerset ERC
- Wiltshire & Swindon BRC



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

## North East England

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

## East Midlands

- Leicestershire & Rutland
- Lincolnshire
- Northamptonshire
- Nottinghamshire
- Derbyshire

## East of England

- Norfolk BIS
- Bedfordshire & Luton
- Cambridgeshire, Peterboro
- Herefordshire ERC
- Essex (closed)
- Suffolk

## Gtr. London

- Greenspace Info. for G.L.

## South East England

- Hampshire BIC
- Thames Valley
- Kent & Medway BRC
- Surrey BIC
- Sussex BRC
- Buckinghamshire & Milton
- Isle of Wight

The Dipterists indicated have good local knowledge and work closely with their LERC. Red text = hoverflies only.



[www.alerc.org.uk](http://www.alerc.org.uk)



# Dipterists Forum Recording Schemes and Study Groups

**Craneflies**  
Cranefly Recording Scheme  
Tipuloidea & Ptychopteridae



Pete Boardman  
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**Chironomids**

Patrick Roper  
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**Dixidae & Thaumaleidae**


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**Fungus gnats**  
Mycetophilidae & allies



Peter Chandler  
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**Flat-footed flies**  
Platypezidae




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**Hoverflies**  
Hoverfly Recording Scheme



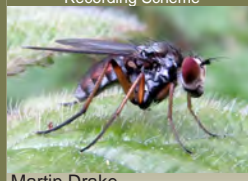
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**Soldierflies**  
Soldierflies & allies & Recording Scheme



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**Empid & Dolichopodid**  
Recording Scheme



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**Culicidae**  
Mosquitoes Recording Scheme

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**Pipunculidae**  
Study Group

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**Chloropids**  
Chloropidae Study Group

John & Barbara Ismay  
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## Dipterists Forum



**Anthomyiids**  
Anthomyiidae Recording Scheme



Phil Brighton  
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**Agromyzidae**  
Leaf-miner Recording Scheme



Barry Warrington  
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**Conopids**  
with Lonchopteridae, Ulidiidae, Pallopteridae & Platystomatidae



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**Tephritids**  
Tephritid flies Recording Scheme



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**Sciomyzids**  
Snail-killing flies Recording Scheme



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**Sepsids**  
Sepsidae Recording Scheme



Steve Crellin  
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**Micropezids & Tanypezids**  
Stilt & Stalk Fly Recording Scheme



Darwyn Sumner  
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**Tachinids**  
Tachinidae Recording Scheme



Chris Raper  
chris.raper@hartslock.org.uk  
Matthew Smith  
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**Iconography**

- Recorder 6 or earlier versions
- MapMate
- MS Excel
- iRecord
- MS Access
- GIS tools used by organisers to create maps and atlases (e.g. QGIS, DMap)
- Website available, faded icons = temporary sites
- NBN Atlas: Datasets are uploaded to publicly accessible site

**Scathophagids**  
Scathophagid Recording Scheme



Stuart Ball  
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**Oestrids**  
Oestridae Recording Scheme



Andrew Grayson  
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**Calliphorids**  
Calliphoridae Recording Scheme



Olga Retka  
aruma@wp.pl

**Other recording initiatives**

Recording initiatives ongoing or under consideration:

- Dipterists Forum Field Weeks. Currently available on NBN Atlas
- Non-recording scheme species/groups, non-native species, regional diptera groups

Download this guide as a pdf from  
[www.dipteristsforum.org](http://www.dipteristsforum.org)