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Please use the Booking Form downloadable from our website

Field Meetings

Now organised by several different contributors, contact the Secretary.

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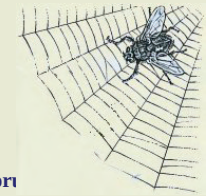
Recording Scheme Organisers

Pending DF website update, back page redesign is deferred. Add Agromyzidae (this issue) and Calliphoridae (Bulletin #81). Biological Records Centre lists all schemes at www.brc.ac.uk

Website

Web Manager

Chris Raper



Dipterists Forum Website www.dipteristsfor

Dipterists Forum Forum www.dipteristsforum.org.uk/index.php

Photographs: Front cover *Tachina grossa*, **John Bridges**, above, **Darwyn Sumner**
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

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Dipterists Forum Events

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

Booking form for meetings & Membership form: downloadable from Dipterists Forum website or contact the organiser.

Fly Sheets

The following Newsletters and other special items are incorporated into the package for the printers after completion of the Bulletin. They are not to be found in any pdf version of this Bulletin and they have their own pagination. Please contact the Newsletter editors for full colour pdfs, back issues may also be found on the DF website.

Hoverfly Newsletter #63
Empid & Dolichopodid Newsletter #22

Desktop publishing: Darwyn Sumner

Editorial

Networking Naturalists

Meeting people in the broader wildlife sector can be extremely valuable, not only allowing our efforts with Diptera to be placed into a national or even international context but also to allow us to pursue other side interests. We're all general naturalists after all and can't help having an interest in other topics, from photography and biogeography to beetles and bees.

There are plenty of opportunities to engage with these other groups, notable amongst these is the National Forum for Biological Recording, their website at www.nfbr.org.uk/ will take you to current stories on Twitter or Facebook (where you'll find frequent stories from Roger Morris) .... Their annual conference is the highlight of their activities for me. With speakers drawn from across the entire sector, here's a chance to pick up ideas from a wide range of naturalists as they present their current work. The Lancaster conference in 2016 saw Muppets Steve Garland and Derek Whiteley give their Waldo & Statler routine in the same excellent Lancaster University facilities we used on our Dipterists Forum field week. The 2017 conference on "***Think globally, record locally - effective biological recording at the scale needed***" was handy for me in central Nottingham so I volunteered a short presentation. There are always a few Dipterists milling around at these conferences; you cannot keep BRC away so there's usually Martin Harvey around somewhere, flying the Soldierfly flag, same with Chris Raper wearing his NHM, Tachinid and species dictionary hats. Do keep an eye open for the next one, an opportunity to meet people from FSC, BRC, NBN or LERCs and other recording schemes. Stopping over for their field meeting it's interesting to watch field techniques employed by other disciplines. It would be good to see you there.

Darwyn Sumner (ex NFBR Secretary)

NBN Conference: "Data - what is it good for?"

National Museum Cardiff, Thursday 16th and Friday 17th November 2017. Details on nbn.org.uk

Fly times

Regular visits to the NADS site to download their latest newsletter are a must. The **Diptera ARE Amazing!** regular feature frequently has some stunning images amd the **Books and Publications** section is something you should keep an eye upon for recent publications in your area of interest. The latest one features Pjotr Oosterbroek's Illustrated Catalogue of the Craneflies of the World and Mihály Földvári's Agromyzidae of Hungary

www.nadsdiptera.org/News/FlyTimes/Flyhome.htm

Happy medium

A century ago print was perhaps the only means of disseminating information to a wide audience. Nowadays there are many vehicles but veracity has declined sharply.

We are not immune from misinformation in our sector, despite science's tradition of peer review. Partially completed directories and databases on the internet are a case in point. Launching these might seem a good idea at the time but if they depend upon people and organisations adding their own entry then they are doomed to perpetual incompletion and may thus mislead. One such example is the NHM's catalogue of Natural History Societies: "*Nature Groups Near You*" and another which may mislead due to incompletion is the Encyclopedia of Life: "*The EOL is an "... ambitious project to organize and make available via the Internet virtually all information about life present on Earth ..." primarily through species pages."* (Dikow T. 2009. Diptera Synthesis Meeting. Fly Times. 41:7–9). The use of EoL as the definitive source of information has caused an outcry amongst NBN Atlas users citing examples of incorrect images to taxa and misleading text: compare their antipodean entry for Micropezidae, for example, to that in Stephen A. Marshall's "**Flies: The Natural History and Diversity of Diptera**".

Choose the source of your information carefully, it's hard to beat print because this represents a completed project. Without print we may be doomed to a world in which everything's researched by algorithmic robot reporters and compiled by automated article writers.

Identifications: iMatch and iSpot

In the absence of flies I've been snapping away at just about any invertebrate this year, consequently I've entered a world of profound ignorance. Tips from interested naturalists in the field are handy (many thanks to the man who told me I'd just shot the Silver-washed Fritillary).

Putting names to a collection of photographs is a worthwhile pursuit, I'm sure many of those posting questions on the identification section of the DF website are learning from the answers they get and the named collection they are building up.

Are you using every mechanism available to you to do this? Firstly there's a need for a good DAM (Digital Asset Management) system, Photools' iMatch is much favoured by naturalists, it adds its own database to the run-of-the-mill data found inside the image files (your default camera applications only use this) and adds a whole host of other useful functions. The Category system which allows you to build up a tree of species names is a particular favourite, just select the Cranefly branch and there are the thumbnail images of all the species you've ever snapped or borrowed. The newest version of iMatch now has an improved map system and a better ability to cope with large collections.

The places where you can get identifications on Diptera are pretty well known, start with the books and keys, trawl picture sites using educated guesses (Steve Falk's Flickr or Go ogle images) then get expert confirmation on our own DF identification forum or Diptera.info. Follow this up by adding the record to iRecord or Roger Morris' Hoverfly Recording Scheme Facebook group.

Where to go when you're almost completely clueless though? Try iSpot; the answers you get from posting something as vague as "Coleoptera" might turn up something of interest to other schemes. It's possible to get an answer within minutes.

If you want to experiment with non-Diptera photographs, you're almost certain to have Longhorn beetles in your collection. I met the scheme organisers Wil Heeney and Katy Potts this spring; they are really keen. Get close to an identification via Wil's Facebook pages, maybe followed by iSpot then post them on to iRecord, details at http://www.coleoptera.org.uk/cerambycidae/home

A few months ago I would have recommended using Fauna Europeae to provide additional information once you've homed in on a taxon name as it provided the following links:

1. Search Go ogle images
2. Search GBIF
3. Search Go ogle scholar
4. Search NCBI (for molecular researchers)
5. Go to IUCN red list
6. Search EoL

A very useful set of sources for further information. Those links are no longer there now though. FE cite problems with security issues but the site is still being developed and perhaps these links will return. In the meantime those sources can searched separately.

Darwyn Sumner

Notice board

Chairman's Round-up

Committee has been busy! On top of our usual business, we have decided over the next year or two to give priority to progressing three matters. The first of these is to have an up-to-date modern website and I am very pleased that the Biological Records Centre has offered to prepare such a site and is currently building it. Many thanks to Martin Harvey and Biren Rathod. Committee members and others, in particular Ken Merrifield, have agreed a structure for the new site and written much of the new content needed. We will be transferring across the great majority of the material that's on the existing website, so excellently set-up and maintained by Stuart Ball.

The second matter we wish to progress is increasing membership numbers. Building and broadening our membership base is important to our long-term future and success. Here, thanks to work done by John Showers, we have identified a number of key actions to take. John explains in his article.

The third is to facilitate the production of keys - accurate species identification underlies most of the society's objectives. There are currently many keys available as drafts or under development, but few are being finalised or published. Here I'm grateful to Martin Drake for taking a lead on identifying the blockages and how we can help people to overcome them. As a first step, we hope to stage a workshop on key production. Meanwhile, we have decided to offer grants to assist people produce keys: a list of criteria against which applications will be assessed published later in this Bulletin. Do please think about applying! In any case, if you wish to write or complete a key and would like any help, do please let us know.

These are not the only committee activities – there's "business as usual". Our very successful spring and summer field meetings require a lot of organisation and planning. Thanks to John Showers for arranging the former this year, and in particular to our Secretary Amanda Morgan for the long hours she spent on the Snowdonia meeting even though she was not able to join us. Thanks too to Victoria Burton, our Treasurer, for managing the finances for this summer meeting.

Meanwhile Erica McAlister's appearances both on celebrity University Challenge and on Springwatch have put flies in the living rooms of a great many people in the best possible way. And we must not forget the huge amount of effort that goes into the production of both the bulletin – thanks to Darwyn Sumner and Judy Webb together with the team that supports them with distribution – and the Digest, a journal of which we can be very proud thanks to Peter Chandler and those who help him.

The post of Conservation Officer remains vacant – anyone like to take this on, please? On a general note, do please let me know if you are interested in joining the committee – new faces and ideas are always very welcome.

Before closing, I would like to pay tribute to my predecessor as chairman, Howard Bentley. During his term, Howard particularly focussed on encouraging new generations of dipterists. He led, for example, on the introduction of the bursaries we now offer for participation in our spring workshops and summer field meetings. He also focussed on building our relationship with the British Entomological and Natural History Society to which we are affiliated. On top of this, he took the lead role in organising the successful summer field meeting based in Canterbury. I now benefit from Howard's support and advice in his role as vice-chairman.

I shall look forward to meeting many of you at the Dipterists Day and AGM at Liverpool University in November.

Robert Wolton

NBN Atlas

The NBN Atlas went live on 1st April this year, replacing the NBN Gateway. The essential reasons for this are that the Gateway, a uniquely UK system, was becoming unwieldy and there was a desire to adopt the worldwide standard of Darwin Core to facilitate the sharing of information internationally. Anything published on the NBN Atlas now finds itself included in the international GBIF - the place where our overseas colleagues publish their records.

Darwin Core is just a set of rules for a biodiversity database, the vehicle that the NBN adopted to run on this fuel was an Australian one and if you're canny you can still find antipodean elements that the NBN team haven't yet removed as they busy themselves with various fixes and improvements. They're a small team so it's quite amazing what they've managed to achieve so far.

If you wish to explore the Atlas then take a look at the videos at https://nbnatlas.org/help/how-to-video-tutorials/

If you have issues or problems in using it then head for the Forum which debates them all at https://forums.nbn.org.uk/ ; you'll find users from across the biodiversity sector discussing these and offering solutions & recipes.

Dipterists Forum has its own page on the Atlas under the heading of Data and Partners, the link at https://registry.nbnatlas.org/public/show/dp172 summarises who we are, what we do and 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 great detail. In the four months that this group of datasets (comprising 17,479 records) have been available on the Atlas, a total of 2,161 record downloads have occurred, the main bulk of which have been for research, planning and environmental assessment; around 400 of these were for education and citizen science.

One of the most exciting bits is the little blue box with a DOI in it; more about that in this Bulletin's "Review" section.

There are other Diptera datasets elsewhere that are uploaded by different people, notably BRC. On their page for example, you'll find Alan & John's 2007 **Cranefly** dataset (109,452 records, 12,739 downloads.)

Martin Harvey's **Soldierflies** scheme is worth looking out for too. The scheme is listed separately and lists one dataset together with details about how Martin is dealing with the iRecord material and other stuff he receives. There's another dataset too of course, the historical one up to 1990, look for "Brachycera ..." amongst BRC's list of resources.

I did tell NBN staff that it would be useful if the datasets could be linked in more than one place so that, for example, on visiting the Soldierflies page, both datasets would be visible. They reassured me that this should be feasible and they would look into it. They've a small team with more urgent priorities at the moment so that one may have to wait a while.

Encyclopedia of Life is used for many of the links (images and descriptions of taxa) that you come across as you are exploring the NBN Atlas. The EoL site (www.eol.org) is open to registration and contributions by individuals so I would encourage you to explore it for Diptera groups you are interested in - and amend if you happen to be an expert.

BRC Diptera projects

Dipterists Forum has a number of projects which the Biological Records Centre is helping us with. Each one is rather complex to investigate in any detail and involves numerous different staff members there so I asked Helen Roy of BRC (who you will know as organiser of the Ladybird Recording Scheme) if she would kindly ask around the BRC offices and let us have a summary of their current status; Martin Harvey kindly compiled the following summary:

A new website for Dipterists Forum

BRC is working with DF committee members to develop a new website. The website structure is taking place, and by the time this is published we will be adding the various materials and resources that the site will contain. Much of this material will be transferred over from the existing website, with the opportunity to update things where needed.

BRC will be able to demonstrate prototypes to the DF committee in the autumn and if all goes well the new site may be available in time for the AGM in November.

Data entry from Steven Falk's notebooks

This ongoing project to digitise Diptera records from Steven Falk's notebooks continues. The current round of work is nearly finished, covering the first four of about 12 volumes in all. Extracts from the data have already been supplied to the Tachinidae Recording Scheme, and data for the other schemes will be circulated. There is still a long way to go to complete this project, but progress is being made.

This project was initiated by me in 2014, see Bulletins #78 p6 & #79 p9 (ed)

Data flow to the NBN Atlas

The NBN Atlas is taking in new data, and BRC has recently supplied updated datasets from iRecord to the Atlas on behalf of the Craneflies, Soldierflies and allies, Sepsidae and Calliphoridae recording schemes, and other (non-iRecord) datasets have also been sent for Craneflies and for Dixidae. **Assistance can be provided with uploading recording scheme datasets where required**.

Plans for a Conopidae atlas

BRC met with David Clements earlier in the year to look at options for producing an atlas of Conopidae in the not too distant future. This is in the early stages at the moment, but now would be a good time to start sorting out your records to send to David!

Martin Harvey

A new Pollinator Monitoring Scheme

A new national Pollinator Monitoring Scheme (PoMS) has been launched to coordinate activities that can provide data on how pollinating insects are faring. The scheme aims to combine improved analyses of long-term records with new systematic survey activity to establish how insect pollinator populations are changing across Great Britain.

PoMS is part of the UK Pollinator Monitoring and Research Partnership, co-ordinated by the Centre for Ecology & Hydrology (CEH). It is jointly funded by Defra, the Welsh and Scottish Governments, JNCC and project partners, which include CEH, the Bumblebee Conservation Trust, Butterfly Conservation, British Trust for Ornithology, Hymettus, the University of Reading and University of Leeds. PoMS aims to provide much-needed data on the state of the UK's insect pollinators, especially wild bees and hoverflies, and the role they fulfil in supporting farming and wildlife. PoMS will include several different approaches to pollinator monitoring, including a "Flower-Insect Timed Count" activity that assesses numbers at broad species groups level, as well as a new systematic survey of pollinator species and floral resources on a network of stratified random sites across England, Scotland and Wales, initially funded for two years but aiming to continue beyond this to generate data on long-term trends. This new data will complement the existing information that is already being gathered by the national recording schemes.

Full details and supporting materials are available from the CEH website:

www.ceh.ac.uk/our-science/projects/pollinator-monitoring

Martin Harvey

Bees and pesticides latest

The travails of bees are significant indicators of the general status of other insect groups and since they attract much attention we keep a watchful eye upon them. Reports on the latest study on bees in the popular media have been confusing, disinterested reporting may be found in Nature which produced a detailed summary: read Daniel Cressey in Nature at https://www.nature.com/articles/d41586-017-00899-x *Largest-ever study of controversial pesticides finds harm to bees* in which there's a link to the actual paper by CEH's Ben Woodcock *et al*.

Darwyn Sumner

Newsletters from LERCs

The GIGL (Greenspace Information for Greater London) newsletter frequently contains something of interest to us. Amongst several items in the latest one (http://www.gigl.org.uk/gigler/) is an introductory article on **iRecord**. The piece includes a couple of excellent Excel spreadsheets which can be used as templates for the submission of records.

Other regional LERCs produce their own newsletters, track them down using the interactive map at http://www.alerc.org.uk/

Recording Schemes

Soldierflies Recording Scheme

Lots of interesting records are being made this year, with the usual mix of some species being found in new areas and others not doing so well. For instance, the Downland Villa, *Villa cingulata*, continues to spread out and is slowly moving north along the Chilterns, as well as infilling in other parts of its range.

The scheme promoted another "Bee-fly Watch" project in 2017, using a combination of Facebook, Twitter and iRecord to gather sightings of the two spring species of *Bombylius*. Over 1,100 records of the Dark-edged Bee-fly *Bombylius major* have been sent in this year (up from 736 in 2017), and the scarcer Dotted Bee-fly *Bombylius discolor* has also had a good year, with over 100 records submitted (not all of which have been checked yet), some from new 10km squares.

A fantastic new book on robberflies has been published: *Field guide to the robberflies of the Netherlands and Belgium*, by Reinoud van der Broeck and André Schulten. An English-language version is available, and the guide covers all the British species with excellent photos and illustrations at a very reasonable price. For more details see the publisher's website;

www.jeugdbondsuitgeverij.nl/product/field-guide-to-the-robberflies-of-the-netherlands-and-belgium

the guide is available from the UK entomological booksellers. There have been several additions to the recording scheme website recently, including:

A page of notes, illustrations and corrections for the keys in the Stubbs and Drake's book:
www.brc.ac.uk/soldierflies-and-allies/ID_notes

A set of distribution maps for the British robberflies:
www.brc.ac.uk/soldierflies-and-allies/node/57

(thanks to Malcom Smart for helping check the maps)

A scheme presentation and some resources from our training courses:
www.brc.ac.uk/soldierflies-and-allies/resources_other

I'm very pleased that Dipterists Forum have decided to feature soldierflies and allies as one of the focus groups at next year's Preston Montford weekend (Feb 2018). This will be a chance to work on identifying specimens and photos, get familiar with the keys, catch up with the latest news on species distributions and projects and of course to enjoy chatting about flies to your heart's content.

If you can't wait until next February to chat about soldierflies, get in touch with us via the "British Soldierflies and Allies" Facebook group, or find us on Twitter at @SoldierfliesRS.

The next recording newsletter will be put together over the winter, so please send any articles, news and exciting discoveries to Martin Harvey before the end of the year.

Martin Harvey

Stilt & Stalk Fly Recording Scheme

Species occurrence records from the scheme were transferred to the NBN Atlas on 1st April. Details are to be found at:

(2017). Dipterists Forum - Recording Scheme - Stilt & Stalk Flies. Dipterists Forum. Occurrence Dataset https://doi.org/10.15468/mwjnku accessed via GBIF.org on 2017-07-26.

The usage statistics on the NBN Atlas are of interest, a total of 781 downloads to date. The data was also used in an article on *Megamerina dolium* recently published in Dipterists Digest.

Darwyn Sumner

Hoverfly Recording Scheme

Newsletter #63 included in this Bulletin

David Iliff

Cranefly Recording Scheme

John reports that he only has a couple of items for a newsletter so these will be deferred until the next Bulletin. If you have something of interest then he will be glad to receive them.

John Kramer

Scathophagidae Recording Scheme

Just a reminder that Stuart Ball has set up a terrific website for these at http://scathophagidae.myspecies.info/ From there you can download the workshop key, get summaries of each species (some with images) and provisional distribution maps which intriguingly use Hill's Frescalo method that corrects for recording effort. (ed)

Stuart Ball

Anthomyiidae Study Group

Anthomyiidae Study Group (ASG) update

Michael Ackland's 2010 dataset can be found at https://registry.nbnatlas.org/public/showDataResource/dr1511

I mentioned to Phil the system that both Martin Harvey and Steve Crellin are using to top up records on the Atlas using iRecord, he's intrigued by the possibility so watch the group's Atlas space for developments. (ed)

Phil Brighton (helophilus@hotmail.co.uk)

Empid & Dolichopodid Recording Scheme

Newsletter #22 included in this Bulletin

Martin Drake

Notes from Recording Schemes

Contributors to recording schemes like to know of any progress that the scheme organisers have been making. Full-blown newsletters are a special treat but organisers are not compelled to go to all that trouble. Your news item can range from a sentence or two through progress reports like that by Martin Harvey to detailed accounts like that of Laurence Clemons in this edition. Please let the Bulletin editors know what you are getting up to, we'd particularly like to catch up with the schemes for Conopidae, Agromyzidae and Calliphoridae soon.

Darwyn Sumner

Tephritid Flies Recording Scheme

The last formal account of the rarer Tephritidae from Great Britain (England, Wales and Scotland) was by Steven Falk (Falk, S.J. 1991. A review of the scarce and threatened flies of Great Britain (Part 1). *Research and Survey in nature Conservation* **31:** 1-192) compiled during during a two year period appointment with the, then, Nature Conservancy Council, beginning in May 1985. Data for 32 species were given under the categories RDB1 (4 species), RDB2 (4 species), RBD3 (10 species), RDBK (1 species), Notable (12 species) and Extinct (1 species). For Notable the criterion was species known from 16 to 100 hectads.

As of the end of July 2017 the database contains 31784 records for 80 species from Great Britain plus 426 records of 35 species from the Channel Islands, Ireland and Isle of Man. The coverage is shown in the map.

While no attempt has been made to assign new statuses based in IUCN criteria the following list summarises the data held. For each species it shows the status in Steven Falk's review, number of known Watsonian vice-counties, total number of known hectads with numbers in brackets showing the number of hectads in the date classes pre 1920 or date unknown, 1920 - 1939, 1940 - 1959, 1960 - 1979, 1980 - 1999, 2000 - present. Additional comments are given where appropriate.

Dithryca guttularis (Meigen, 1826). Not listed. 52. 169 (21, 10, 2, 11, 94, 59).

Myopites eximius Séguy, 1932. RDB3. 11. 36 (3, 3, 1, 1, 19, 30). Known globally only from the coasts of France, including the Channel Islands, England and Wales. The post-2000 vice-counties are 1, 2, 9, 10, 11, 15, 16, 18, 19 and 41.

Myopites inulaedyssentericae Blot, 1827. RDB3. 22. 113 (5, 4, 3, 2, 60, 81). The records may need re-appraisal following the apparent discovery of *Myopites apicatus* Freidberg, 1980 in southern England.

Urophora cardui (Linnaeus, 1758). Not listed. 50. 377 (25, 15, 15, 24, 240, 254).

Urophora cuspidata (Meigen, 1826). Notable. 17. 35 (0, 2, 2, 3, 19, 14). The post-2000 vice-counties are 7, 8, 9, 13, 15, 17, 22 and 25.

Urophora jaceana (Hering, 1935). Not listed. 97. 607 (34, 22, 14, 42, 355, 302).

Urophora quadrifasciata (Meigen, 1826). Not listed. 47. 259 (12, 15, 13, 5, 114, 177).

Urophora solstitialis (Linnaeus, 1758). RDB3. 35. 84 (9, 5, 3, 4, 44, 25).

Urophora spoliata (Haliday, 1838). RDB3. 9. 13 (1, 1, 1, 2, 9, 3). Mainly confined to coastal areas of Cornwall and the Isle of Wight. The post-2000 vice-counties are 2, 9 and 10 and the last known record was in 2007.

Urophora stylata (Fabricius, 1775). Not listed. 70. 474 (33, 25, 24, 41, 300, 249).

Ensina sonchi (Linnaeus, 1767). Not listed. 36. 97 (37, 11, 7, 13, 23, 32).

Noeeta pupillata (Fallén, 1814). Not listed. 38. 101 (21, 13, 13, 8, 45, 29).

Acanthiophilus helianthi (Rossi, 1794). Notable. 38. 100 (7, 3, 5, 2, 27, 69).

Acinia corniculata (Zetterstedt, 1819). RBD1. 19. 46 (9, 0, 3, 0, 7, 30).

Campiglossa absinthii (Fabricius, 1805). Notable. 45. 124 (8, 7, 11, 5, 75, 38).

Campiglossa argyrocephala (Loew, 1844). RDB3. 10. 26 (3, 1, 1, 1, 19, 4). Apparently confined to Scotland. The post-2000 vice-counties are 92, 96 and 106.

Campiglossa grandinata (Rondani, 1870). RDB1. ?2. 3 (2, 0, 1, 0, 0, 0). Known from three sites in Sussex (Collin, J.E. 1937. *Trypeta vectensis* sp.n. and other new or little known British species of Trypetidae (Diptera). *Entomologist's Record and Journal of Variation* **49:** 1-7; Andrewes, C.H. 1955. *Campiglossa grandinata* Rond. and other Trypetidae (Dipt.) in Sussex. *Entomologist's Monthly Magazine* **91:** 42). The last known record was in September 1951.

Campiglossa loewiana (Hendel, 1927). Not listed. 28. 37 (5, 3, 3, 2, 14, 12).

Campiglossa malaris (Séguy, 1934). RDB1. 25. 73 (0, 0, 0, 1, 7, 71). First taken in 1974 from Sugarloaf Hill, Folkestone, Kent vice-county 15 (Stubbs, A.E. 1976. Channel Tunnel Survey: Insects. *Transactions of the Kent Field Club* **6(1):** 21). It remained confined to vice-county 15 until 2000 when found in vice-county 16 and was first recorded outside Kent in 2001 from vice-county 18.

Campiglossa misella (Loew, 1869). Not listed. 41. 135 (10, 3, 6, 16, 91, 62).

Campiglossa plantaginis (Haliday, 1833). Not listed. 45. 150 (11, 14, 8, 16, 110, 88).

Campiglossa producta (Loew, 1844). Notable. 16. 35 (7, 3, 0, 1, 8, 17). The post-2000 vice-counties are 3, 9, 10, 11, 15, 17

and 26.

Campiglossa solidaginis (White, 1986). Notable. 10. 17 (2, 2, 3, 1, 9, 1). The post-2000 vice-county is 16.

Dioxyna bidentis (Robineau-Desvoidy, 1830). Notable. 50. 160 (8, 4, 8, 8, 72, 90).

Merzomyia westermanni (Meigen, 1826). Notable. 32. 152 (10, 6, 8, 14, 81, 80).

Oxyna flavipennis (Loew, 1844). Notable. 15. 42 (10, 2, 3, 2, 17, 18). The post-2000 vice-counties are 1, 9, 17, 26, 28, 29, 32 and 69.

Oxyna nebulosa (Wiedemann, 1817). RDB3. 17. 31 (5, 4, 1, 1, 15, 8). The post-2000 vice-counties are 6, 9, 17 and 33.

Oxyna parietina (Linnaeus, 1758). Not listed. 40. 112 (14, 1, 7, 5, 64, 44).

Sphenella marginata (Fallén, 1814). Not listed. 61. 328 (39, 18, 14, 14, 108, 239).

Tephritis bardanae (Schrank, 1803). Not listed. 77. 387 (39, 22, 29, 36, 216, 177).

Tephritis cometa (Loew, 1840). Not listed. 41. 159 (9, 2, 4, 14, 88, 105).

Tephritis conura (Loew, 1844). Not listed. 52. 145 (12, 8, 3, 14, 66, 70). Abundant in upland areas of Wales and Scotland many purported records from southern England may refer to *Tephritis matricariae* (Loew, 1844). It is one of the largest British Tephritidae.

Tephritis divisa Rondani, 1871. Not listed. 14. 56 (0, 0, 0, 0, 0, 56). Officially recorded as new to Britain in 2006 (Hodge, P.J. 2006. 2005 Annual Exhibition. *British Journal of Entomology and Natural History* **19:** 182, Pl. 4 Fig. 17) it was first taken in 2003 at Gosport vice-county 11. Its chronological discovery in other vice-counties is 6 (2016), 9 (2008), 10 (2005), 13 (2004), 14 (2005), 15 (2007), 16 (2007), 17 (2008), 18 (2007), 19 (2010), 20 (2008), 21 (2013) and 24 (2010).

Tephritis formosa (Loew, 1844). Not listed. 51. 383 (9, 6, 1, 9, 179, 288).

Tephritis hyoscyami (Linnaeus, 1758). Not listed. 46. 209 (16, 12, 4, 18, 140, 80).

Tephritis leontodontis (De Geer. 1776). Not listed. 48. 123 (19, 11, 2, 2, 46, 57).

Tephritis matricariae (Loew, 1844). Not listed. 25. 90 (0, 0, 0, 0, 0, 90). First identified from Sandwich Bay, Kent vice-county 15, in 2000 (Clemons, L. 2000. *Tephritis matricariae* (Loew, 1844) (Dip.: Tephritidae) new to Britain and breeding in East Kent. *Entomologist's Record and Journal of Variation* **112:** 225-230). In 2001 it was found in vice-counties 16 and 18 and in 2003 in vice-county 19.

Tephritis neesii (Meigen, 1830). Not listed. 74. 374 (34, 29, 15, 21, 165, 249).

Tephritis praecox (Loew, 1844). RDB1. 8. 13 (1, 0, 0, 0, 0, 12). The post-2000 vice-counties are 14, 15, 16, 17, 19, 21 and 29.

Tephritis ruralis (Loew, 1844). Not listed. 32. 61 (9, 4, 5, 3, 30, 22).

Tephritis separata Rondani, 1871. RDBK. ?3. 3 (0, 1, 1, 0, 0, 1). Added to British list by James Edward Collin (Collin, J.E., 1943. *Tephritis separata*, Rdi., an additional British species allied to *T. conjuncta*, Lw. (Diptera, Trypetidae). *Entomologist's Record and Journal of Variation* **55:** 85-88) on the basis of two pairs taken at Barton Mills, vice-county 26, in September 1937 and 1938. The record by Harry Britten Jnr. (Britten, H., 1954. Records of some of the rarer Trypetidae. *Entomologist's Record and Journal of Variation* **66:** 156-157) from Old Coulsdon, vice-county 17, is most probably erroneous and a record from South Essex, vice-county 18, in 2010 by Peter Harvey requires confirmation. The wing pattern figured in much of the literature is unreliable as a means of identification.

Tephritis vespertina (Loew, 1844). Not listed. 84. 518 (69, 40, 30, 37, 279, 309).

Trupanea amoena (von Frauenfeld, 1857). RDB2. 7. 8 (2, 0, 1, 0, 0, 5). The post-2000 vice-counties are 9, 10, 14 and 41.

Trupanea stellata (Fuessly, 1775). Not listed. 47. 155 (20, 12, 9, 9, 74, 67).

Chaetorellia jaceae (Robineau-Desvoidy, 1830). Not listed. 35. 172 (2, 3, 3, 7, 88, 112).

Chaetorellia loricata (Rondani, 1870). RDB2. 4. 15 (2, 2, 3, 0, 7, 9). Mainly confined to the Salisbury Plain area of Wiltshire. The post-2000 vice-county is 8.

Chaetostomella cylindrica (Robineau-Desvoidy, 1830). Not listed. 98. 537 (57, 41, 41, 33, 286, 240).

Orellia falcata (Scopoli, 1763). Notable. 37. 100 (9, 8, 12, 5, 38, 49).

Terellia ceratocera (Hendel, 1913). Not listed. 21. 41 (16, 5, 11, 8, 8, 3). The post-2000 vice-counties are 10, 15 and 38.

Terellia plagiata (Dahlbom, 1850). Not listed. 8. 13 (5, 3, 2, 1, 3, 3). The post-2000 vice-counties are 28 and 41.

Terellia tussilaginis (Fabricius, 1775). Not listed. 62. 434 (36, 34, 35, 33, 205, 252).

Terellia colon (Meigen, 1826). Not listed. 35. 126 (19, 15, 12, 6, 70, 56).

Terellia fuscicornis (Loew, 1844). Not listed. 1. 1 (0, 0, 0, 0, 0, 1). Known only from Dunglass Estate, East Lothian, vice-county 82 (Whittington, A.E., 2002. *Terellia fuscicornis* (Loew, 1844) (Dipt., Tephritidae) new to Britain. *Entomologist's Monthly Magazine* **138:** 119-120).

Terellia longicauda (Meigen, 1838). Not listed. 24. 59 (5, 9, 6, 2, 34, 23).

Terellia ruficauda (Fabricius, 1794). Not listed. 66. 448 (46, 27, 34, 19, 280, 239).

Terellia serratulae (Linnaeus, 1758). Not listed. 59. 296 (21, 17, 20, 21, 168, 152).

Terellia vectensis (Collin, 1937). RDB3. 10. 26 (1, 5, 3, 3, 11, 14). The post-2000 vice-counties are 2, 8, 9, 10, 11 and 13.

Terellia winthemi (Meigen, 1826). RDB3. 15. 36 (8, 6, 3, 1, 13, 17). The post-2000 vice-counties are 10, 11, 12, 14, 15, 16, 17, 20 and 22.

Xyphosia miliaria (Schrank, 1781). Not listed. 103. 746 (47, 39, 36, 60, 465, 401).

Euphranta toxoneura (Loew, 1846). Notable. 25. 47 (7, 2, 1, 4, 26, 14).

Goniglossum wiedemanni (Meigen, 1826). Notable. 26. 55 (6, 2, 4, 4, 28, 18).

Rhagoletis alternata (Fallén, 1814). Not listed. 55. 120 (14, 9, 9, 12, 47, 44).

Rhagoletis cerasi (Linnaeus, 1758). Not listed. 1. 1 (1, 0, 0, 0, 0, 0). A record from Bristol in 1912 by H.J. Charbonier requires verification. An imported species.

Rhagoletis cingulata (Loew, 1862). Not listed. 1. 1 (0, 0, 0, 0, 0, 1). Known from a single female taken at Portland, vice-county 9, in 2016 (Bowyer, P. 2016. *Rhagoletis cingulata* (Loew) (Diptera, Tephritidae) in Britain. *Dipterists Digest* (*Second series*) **23:** 97-98).

Rhagoletis meigenii (Loew, 1844). Extinct. 9. 10 (2, 0, 0, 0, 0, 8). The post-2000 vice-counties are 17, 18, 20, 25, 27, 28 and 39.

Bactrocera cucurbitae (Coquillett, 1899). Not listed. 1. 1 (0, 0, 0, 0, 1, 0). Known from a specimen collected on 20 June 1998 by A.A. Allen in his garden at 49 Montcalm Road, Charlton, vice-county 16 (Allen, A.A. 1999. *Bactrocera cucurbitae* Co-

quillett (Dip: Tephritidae): first known British capture at large. *Entomologist's Record and Journal of Variation* **111:** 36). An imported species.

Ceratitis capitata (Wiedemann, 1824). Not listed. 14. 17 (1, 2, 2, 0, 4, 8). An occasional import.

Acidia cognata (Wiedemann, 1817). Not listed. 77. 224 (32, 22, 29, 22, 97, 58).

Anomoia purmunda (Harris, 1780). Not listed. 62. 360 (27, 11, 11, 27, 181, 246).

Chetostoma curvinerve Rondani, 1856. RDB2. 30. 53 (1, 0, 0, 4, 13, 35).

Cornutrypeta spinifrons (Schroeder, 1913). RDB3. 8. 8 (3, 0, 2, 1, 1, 1). The post-2000 vice-county is 96

Cryptaciura rotundiventris (Fallén, 1814). Notable. 19. 24 (5, 1, 1, 1, 10, 6).

Euleia heraclei (Linnaeus, 1758). Not listed. 76. 373 (34, 23, 29, 25, 201, 182).

Philophylla caesio (Harris, 1780). Not listed. 70. 270 (19, 7, 14, 31, 133, 119).

Platyparea discoidea (Fabricius, 1787). RDB2. 9. 26 (3, 7, 3, 3, 14, 1). Mainly confined to upland areas of Yorkshire. The post-2000 vice-county is 69 and the last known record was in 2007.

Stemonocera cornuta (Scopoli, 1772). RDB3. 11. 14 (4, 2, 0, 2, 4, 3).

Trypeta artemisiae (Fabricius, 1794). Not listed. 43. 83 (8, 2, 3, 4, 37, 34).

Trypeta immaculata (Macquart, 1835). Not listed. 24. 47 (2, 1, 0, 4, 18, 25). Widespread in Scotland with sporadic records from England and Wales.

Trypeta zoe Meigen, 1826. Not listed. 58. 193 (39, 25, 18, 18, 81, 63).

Plioreocepta poeciloptera (Schrank, 1776). Not listed. 1. 1 (0, 1, 0, 0, 0, 0). Known from outbreaks in gardens in Hertford, vice-county 20, in 1936 (Andrews, H.W. 1937. The Asparagus Fly (*Platyparea poeciloptera*, Schr.) in England. *Entomologist's Record and Journal of Variation* **49:** 34; Buckhurst, A.S. 1937. The Asparagus Fly, *Platyparea poeciloptera* Schr. (Dipt., Trypetidae) in England. *Entomologist's Monthly Magazine* **73:** 187-190). A purported record from Hampshire in 2011 has yet to be confirmed.

Laurence Clemons

Field week records

2016 Canterbury

By the beginning of July 2017 the number of species ascertained from *Dipterists Forum* members and others was 1100 thus: Tipulidae (19); Pediciidae (4); Limoniidae (52); Bibionidae (1); Bolitophilidae (3); Diadocidiidae (1); Ditomyiidae (1); Keroplatidae (17); Mycetophilidae (95); Sciaridae (10); Cecidomyiidae (19); Psychodidae (5); Anisopodidae (2); Scatopsidae (4); Ptychopteridae (3); Dixidae (4); Culicidae (1); Ceratopogonidae (4); Rhagionidae (4); Tabanidae (11); Stratiomyidae (25); Therevidae (3); Asilidae (12); Hybotidae (25); Empididae (30); Brachystomatidae (3); Dolichopodidae (122); Opetiidae (1); Platypezidae (1); Phoridae (2); Lonchopteridae (3); Syrphidae (91); Pipunculidae (3); Micropezidae (2); Psilidae (2); Conopidae (3); Pallopteridae (3); Ulidiidae (8); Platystomatidae (1); Tephritidae (26); Lauxaniidae (22); Chamaemyiidae (4); Dryomyzidae (1); Heterocheilidae (1); Sciomyzidae (27); Sepsidae (17); Clusiidae (3); Agromyzidae (29); Opomyzidae (9); Anthomyzidae (4); Asteiidae (2); Milichiidae (1); Canacidae (2); Chloropidae (72); Heleomyzidae (9); Trixoscelididae (1); Sphaeroceridae (15); Drosophilidae (11); Campichoetidae (2); Diastatidae (3); Camillidae (1); Ephydridae (58); Scathophagidae (12); Anthomyiidae (36); Fanniidae (9); Muscidae (61); Calliphoridae (15); Rhinophoridae (4); Sarcophagidae (20) and Tachinidae (23). This exceeded the target of 1039 species set at the beginning of the week.

The recorder data, with number of dates, grid references and species, were Howard Bentley (6, 23, 202), Jann Billker (2, 2, 2), Victoria Burton (3, 6, 11), Peter Chandler (7, 29, 398), Laurence Clemons (5, 14, 254), Steve Crellin (6, 44, 169), Andrew Cunningham (6, 40, 298), Tony Davis (2, 2, 3), Martin Drake (6, 47, 334), Michael Fray (3, 3, 5), Andrew Halstead (8, 37, 248), Roger Hawkins (4, 9, 6), Grant Hazlehurst (4, 5, 18), Barbara Ismay (5, 23, 76), John Ismay (5, 21, 82), Malcolm Jennings (5, 6, 5), John Kramer (5, 17, 72), Ken Merrifield (6, 18, 38), Daphne Mills (1, 1, 2), Dawn Painter (2, 5, 13), Tony Russell-Smith (1, 1, 6), Alan Stubbs (7, 33, 81), Richard Underwood (6, 19, 151) and Robert Wolton (6, 39, 395).

Of the sites, Conyer (monads TQ9565, TQ9664, TQ9665) and Graveney Marshes (TR0563, TR0564, TR0664) were investigated by 10 participants, East Blean Wood (TR1864, TR1964) and Elmley Marshes (TQ9367, TQ9368, TQ9369, TQ9467, TQ9469) by 9 with Ashden Springs (TR0934, TR0935), Church Wood, Blean (TR1159, TR1160, TR1259), Denge Wood (TR1052, TR1152), Dungeness (TR0718, TR0816, TR0817, TR0818), Hothfield Common (TQ9645, TQ9745) and King's Wood, Challock (TR0250, TR0350) by 8.

The ten best sites, with number of species and recorders, were Church Wood, Blean (199, 8), Hothfield Common (193, 8), Ashden Springs (193, 8), Ham Street Woods NNR (188, 4), Seabrook (180, 7), Dungeness (163, 8), Elmley Marshes (158, 9), Ham Fen (155, 5), Conyer (140, 10) and King's Wood, Challock (136, 8).

The number of species per date was 2 July (43), 3 July (423), 4 July (508), 5 July (452), 6 July (437), 7 July (444), 8 July (385) and 9 July (68).

Records were from 115 monads in 31 hectads and the most frequently identified species, with number of monads, were *Melanostoma mellinum* (74), *Lonchoptera lutea* (73), *Chrysotus gramineus* (65), *Poecilobothrus nobilitatus* (63), *Leptogaster cylindrica* (60), *Sciapus platypterus* (56), *Oscinella frit* (54), *Dolichopus festivus* (53), *Chloromyia formosa* (52) and *Episyrphus balteatus* (50). Four hundred and four species were recorded from single monads.

Laurence Clemons (laurenceclemons56@gmail.com**)**

Work on the uploading of these has been delayed due to changes in the systems when the NBN converted from Gateway to Atlas. The methodology only became available in recent months (see https://forums.nbn.org.uk/viewtopic.php?id=6915) so the uploads to our pages at (https://registry.nbnatlas.org/public/show/dp172) will take place later this year.

Darwyn Sumner (darwyn.sumner@ntlworld.com**)**

2017 Snowdonia

Fortunately we had two people attending our Snowdonia meeting who have a good track record for publishing the records on the NBN. I began to make my usual offer when Mike Howe chipped in with the same. Mike represents Natural Resources Wales of course and he'd helped out with permits and guidance this time so naturally he's got the job.

View across Ffestiniog Vale from Plas Tan y Bwlch [Darwyn Sumner]

So send your records directly to Mike Howe who is doing the compiling but copy me in - just so that I can monitor what's going on and let members know via the Bulletin.

As regards timing, Mike hasn't specified but the broad idea of getting the main bulk of the records in by the end of March seems to be a good guide. No "deadlines" and no pressure at all, it was your holiday and we hope you had a good time with us all.

The dataset will appear on the NBN Atlas on our Dipterists Forum page at https://registry.nbnatlas.org/public/show/dp172 in due course.

Either of us would be happy to hear from you about records from previous unpublished Welsh expeditions too.

Mike Howe (Michael.Howe@cyfoethnaturiolcymru.gov.uk**)**
Darwyn Sumner (darwyn.sumner@ytygydacoedencnauffrengigynyrarddsy'nwynebu'rysgol.com **or** darwyn.sumner@ntlworld.com**)**

Regional

The Day of the Tephritids

The sand-dunes of South Lancashire, also known as the Sefton coast, are renowned nationally as a haven of rare species such as the natterjack toad, the sand lizard, the red squirrel and the northern dune tiger beetle. It is also one of the best-recorded areas of Lancashire and Cheshire for diptera, as a result of a number of surveys by Liverpool Museum and by the National Trust. A review of data from the NBN Gateway at the end of 2015 showed a species list of 511 for hectad SD20 containing Formby and 695 for hectad SD21, which is largely sea but includes the bulk of the Ainsdale National Nature Reserve. The only hectad in the region with more species listed was SD47 containing the Silverdale area with 854 species: this was covered by the Dipterists Forum summer field meeting of 1999. (Data from the 2013 meeting have yet to be published.) The next best-recorded square was SJ57 containing the Delamere Forest with 309, while SD40 on the Lancashire plain languished at the bottom of the list with just 19 species

To counter this imbalance at least somewhat, I have largely been concentrating on recording from the inland areas. But the experience of visiting the Merioneth dunes on the this June's DF field meeting was so interesting that I joined a recording day on Birkdale local nature reserve on 4 July, being run as part of Lancashire Wildlife Trust's Biodiverse Society project.

On the map the Birkdale "Green Beach" looks rather unpromising, stretching for about 3km but squeezed between vast sand-flats and a coast road separating it from the Royal Birkdale golf course, one of the Open Championship venues. Nevertheless, the going was pretty tough crossing the 300m or so over the outer dunes through the well-vegetated slacks with dense belts of willow and alder and higher dunes beyond.

The cloudy and damp conditions were not very promising and a heavy shower of rain almost terminated proceedings at lunch-time. My standard procedure is to use an aspirator with interchangeable Falcon-type 50ml tubes with numbered lids, selecting flies I think I can identify from the sweep-net. I take 12 of these tubes on a day's trip and the numbered lids link each to a 6-figure grid reference. I also use up to 20 wide 50ml pots for taking individual specimens off flowers of fences. It is a measure of the poor conditions that I used only 8 of the former and 6 of the pots for individual specimens, resulting in a total of 95 diptera records and also 13 heteroptera records. Nevertheless a very interesting range of species was found, comprising 69 diptera species. I made a particular effort to get up in to the further reaches of the reserve area lying in hectad SD31, much less well recorded than squares SD20 and SD21 with only 134 diptera species listed on NBN.

There was a mix of ubiquitous generalist species, less common species not particularly linked to coastal dune habitats, and also a good number of specialists of the latter. The weather conditions must account for the exceptionally poor number of hoverflies, just 3 very common species. They may also explain the predominance of the calyptrates. *Delia albula*, *D. penicillosa* and *D. setigera* are dune specialists from the Anthomyiidae, whose larvae attack various plants or fungi. I had previously met all three of these in Wales. From the Muscidae, *Coenosia pygmaea*, *Lispocephala rubricornis*, *Spilogona aerea* and *S. marina* are also purely coastal. It appears that of all these only *D. albula* and *C. pygmaea* have been recorded previously on the Sefton coast. I suspect that this is because there has been less past interest in recording these families than any recent expansion of range.

The cranefly list was short but also unusual. *Gonomyia tenella* and *Dicranomyia autumnalis* are infrequent locally, but have no particular association with the coast. However, the star finds were several specimens of *Nephrotoma quadristriata* (one by Gary Hedges of Liverpool Museum) – this is a nationally rare sand-dune species and a highlight of the Welsh field meeting. In Kidd and Brindle's 1959 *Diptera of Lancashire and Cheshire*, the single record of this species was from Birkdale by Harry Britten on 29 July 1923. NBN has half-a-dozen or so records from 1973 and 2000, but the national total is only 75.

I had high hopes of Dolichopodidae in view of the specific wetland habitat associations of many species. Their abundance of these was surprisingly low on the dune slacks, but there was a good range of scarce and not-so-scarce coastal species: *Dolichopus acuticornis*, *D. longicornis*, *D. notatus*, *D. nubilus*, *D. sabinus*, *Hercostomus nigripennis* and *Tachytrechus insignis*. All but *D. sabinus* show up on the NBN as previously recorded on the Sefton coast.

The Sefton Coast is also noted for the occurrence of several rare dune specialists amongst the solderflies and allies, particularly robber-flies and stiletto-flies. I found none of these, but coleopterist Clive Washington caught a female *Acrosathe annulata*, with its pointed abdomen clothed in silvery fur.

Acrosathe annulata [Steve Falk]

The other species from this group which I did find are all widespread locally, but the soldierflies *Oplodontha viridula* and *Oxycera trilineata* with their vivid green and black colours may be particularly associated with the dune slacks.

Perhaps the most surprising feature of the results was the variety of picture-wing flies in the broad sense. Tephritidae, Lauxaniidae, Pallopteridae and Ulidiidae were all represented in the sample. I initially mistook *Homoneura notata* for one of the rarer Opomyzidae but managed to recover from this blunder on noticing the presence of post-vertical bristles.

Homoneura notata [photo Ben Hamers with permission]

There has been some taxonomic confusion with this species in the past, with an alternative name, *H. subnotata*, appearing in the literature and then disappearing. NBN has records under both names for Ainsdale in 1959 and 1989 but the species is otherwise unrecorded there north of South Wales or East Anglia. *Campiglossa plantaginis* is scarce nationally and associated with sea aster, and *Melieria omissa* is another coastal species I have found at other local sites. *Rhagoletis alternata* is not uncommon nationally but this seems to be only the second record for South Lancashire. Its larvae attack rose hips so I am sure it has been attracted to the dunes by the alien and invasive *Rosa rugosa. Terellia serratulae* was also new to me: it is an unusual Tephrid in lacking wing-markings: this may accocunt for the relative infrequency of records even though it attacks a range of common thistle species. The common species *Sphenella marginata*, *Tephritis vespertina* and *Xyphosia miliaria* brought the number of Tephritids up to 6, just about justifying the title of this article.

Finally, Gary Hedges spotted and photographed (see below) some brown-red pustules on some sow-thistles which he identified as the galls of the Cecidomyiid *Cystiphora sonchi*.

Galls of the Cecidomyiid *Cystiphora sonchi* on Sow-thistle [Gary Hedges]

Interestingly Kidd and Brindle (1959) have an extensive section of the Cecidomyiidae recording 193 species in Lancashire and Cheshire. Perusal of their list shows a lot of records from the Sefton coast attributed to the work of R.S. Bagnall and J.W.H. Harrison in the 1910s and 20s. There is a detailed biography of Richard Siddaway Bagnall on the NHM website – together with the botanist Harrison they seem to have been amongst the founders of British cecidology, or the study of galls. Another example of the great amateur tradition as he ran a family industrial business in north-east England. In 1928 Durham University honoured him with the Honorary Degree of Doctor of Science. The University Newsletter referred to him as the best entomological field worker in the country, although his habit of describing new species with the aid of a hand lens also earned him the reputation of being an eccentric.

My thanks are due to Julia Simons of Lancashire Wildlife Trust for organising the day, particularly the provision of refreshments and shelter in the Ainsdale Discovery Centre to recover from the late-morning drenching.

Phil Brighton

Equipment

Just can't quite reach

For anyone who is frustrated by the fact that standard soft-touch storkbill forceps are just too short to reach the bottom of a 50 x 12 mm sample vial.

Use a pair of heavy-duty tin snips to remove some of the broad portion of the forceps. Clean up rough edges with a file and emery paper. Now, have fun removing even the most reluctant specimens with ease!

Trimmed forceps (on left) easily reaching bottom of tube. Untrimmed (on right) denied full access, leading to frustration and despair.

Tony Irwin (dr.tony.irwin@gmail.com)

Illumination

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.

http://www.ebay.co.uk/itm/2-White-1-UV-LED-Dual-Gooseneck-LED-Ring-Lights-Illuminator-Digital-Microscope-/311826473224?hash=item489a4e6108:g:xM0AAOSwdGFYzNrd

Ken Merrifield

Desktop tidies

There are a number of inexpensive clear plastic desktop tidies and even a small set of clear plastic drawers currently available in the makeup sections of Poundland and Wilko. Useful for both your entomological desktop and in the workshop or shed.

Lancashire Hot Pots

For the purposes of carrying home live specimens and keeping them fresh and undamaged it's worth always having one or two Bug Pots in your bag:

https://www.tamarackoutdoors.co.uk/PBSCProduct.asp?ItmID=22333023

The lid is a push-in lens, quite firm though not as secure as a threaded stopper. Replace the lid with taut cling film and you can photograph through it. Push a 49mm diameter circle of plastazote into it and you've got the ideal container for exhibiting a single specimen. £11.40 + postage for 10 from Tamarack Outdoors in Garstang.

Darwyn Sumner

Photography

Live focus stacking

Get as close as you can to a fly using a digital camera with a decent macro lens, add any techniques you can to freeze the movement (macro flash, steady camera), provide a good depth of field and you've pretty much reached the limits of what can be achieved in the field on a live specimen.

The challenges come about when you try to do better than this. Focus stacking relies upon being able to take a series of images using the best part of the lens (most of the glass, not just the tiny bit in the middle when you've stopped down to f40 or so). Each image has a shallow depth of field but is taken at a slightly different distance/focus through the specimen like a series of slices through a wax-embedded organ on a microtome (an analogy for traditional histologists). After this you use software which picks out the best bits and combines them into a single image.

We've seen focus stacking before, Cardiff Museum demonstrated it on some fancy equipment many years ago and Stuart Ball has demonstrated it for us on equipment of his own.

The following example by John Bridges shows a successful use of this technique on a set specimen:

Fig. 1. *Gymnocheta viridis* - set specimen (note the pin) [John Bridges]

There are recent signs of an increase in interest and popularity. Ken Merrifield provided two examples at our Snowdonia meeting, firstly by bringing along a copy of Julian Cremona's book "Extreme Close-Up Photography and Focus Stacking" (see "Reviews") and secondly by demonstrating the built-in focus stacking in his Olympus TG4 Tough camera. Add to this the stunning images that John Bridges has been posting on the Hoverfly Facebook site (see the front cover of this Bulletin for another example of his work) and recent interest in the popular photographic magasines and this technique is worthy of some experimentation.

The live specimen riddle

This is the most challenging aspect of focus stacking. If anything moves whilst taking the sequence of images then it won't work. The nearest I've seen to achieving this in the field was the example Ken Merrifield sent me of a *Myopa* taken on his Olympus TG4:

Fig. 2. The right foreleg moved during the automatic stacking process and became duplicated. [Ken Merrifield]

Assemble the shots ...

This kind of field technique depends upon a particular function built in to the camera called **Focus Bracketing**, a by-product of the autofocus system most commonly encountered in mirrorless cameras but increasingly found in modern DSLRs. Press the shutter when this is enabled and an automatic sequence of shots will be taken at different focal distances. A few camera manufacturers have developed this feature; Panasonic (Lumix) and Fuji have it, Olympus introduced the function in their E-M10 II whilst Nikon features it in their latest D850. In cameras without this feature, to take automatic sequences like this you will have to "tether" the camera to a computer with appropriate software installed. This means taking a laptop out with you, a rather cumbersome method, as demonstrated by Julian Cremona in his book; a method not really suited to active subjects.

... then stitch them together

After this sequence of frames has been produced they can be stacked together to produce a single image which is sharply in-focus throughout, a process known as **Focus Stacking**. In certain Olympus cameras Focus Stacking can be performed in the camera (TG4, TG5), for others third party software must be used.

In "tethered" mode one can either move the camera forward slightly between each shot (manually using a focussing rail or automatically using a motorised rail) or change the focus slightly. The free Helicon Focus will do this latter automatically by taking control of your camera's autofocussing system.

Comatose specimens

If you've not got the equipment to focus bracket in the field then perhaps the answer is to work on comatose subjects. Docile subjects such as spiders, barnacles and early morning subjects that are too cold to move can be done in the field using regular gear. The dew-soaked dragonfly has become a macro cliche in popular magasines. To focus stack unusual or active Diptera we're left with the option of catching what we want to photograph, bringing it back home to a studio setup and rendering it comatose.

Better than dead because there's some chance of capturing a life-like pose. The two options are to chill it or to narcotise it with CO_2. There aren't really any definitive solutions or methodologies in this area of work. In both cases there is a short time period to work on the specimen as it revives from the treatment. Chill chambers have been attempted by users prepared to build their own mini-refrigeration chambers but they report problems with condensation.

The CO_2 experiment

We attempted a CO_2 method on our Snowdonia field trip using Martin Drake's Sparklets Corkmaster (a wine bottle cork remover which dispenses CO_2 from a cartridge, now no longer manufactured.) A specimen of *Loxocera aristata* (caught by Martin at Morfa Harlech) was anaesthetised using CO_2, transferred into a "Bug Pot" (from *Tamarack Outdoors*) and cling film stretched taut over the lid.

It was then first photographed as a single image under Nigel Jones' microscope (Fig. 3) followed by a sequence of 40 images using a macro stand comprising a tripod and Manfrotto 454 Micropositioning plate (see Bulletin #76) with just an LED torch as a light source (Fig.4.) and finally by Ken Merrifield with his Olympus TG4 in its focus stacking mode with just one press of the shutter (Fig. 5.). At this point it began to revive and became too active for further work.

Our experiment shows that the CO_2 treatment has some value in rendering a specimen sufficiently motionless for such photography. A life-like pose returned as the insect recovered. Even small amounts of movement in live specimens will spoil the final image. Automatic **rapid** sequences (Fig. 5.) via cameras with the focus bracketing function result in less movement artefacts than slow hand-operated sequences (Fig. 4.).

Specimens are easily damaged if transported live.

Fig. 3. At the limits of the low magnification capabilities of a microscope. A single photograph with shallow depth of field. A little outside the comfort zone of equipment which is designed for other scales. The specimen was starting to revive. [Nigel Jones]

Fig. 4. Stack of 8 images which clearly show the problems associated with slight subject movement. The lighting is also inadequate. [Darwyn Sumner]

Fig. 5. *Loxocera aristata* Olympus TG4 "Tough" hand-held using the in-camera focus stacking mode (8 images), lighting augmented by the camera's ringlight. [Ken Merrifield]

Immediately post-mortem

Colours are preserved, there is little shrinkage and confining it in a restricted chamber is no longer a problem so one can choose suitable backgrounds. The pose may be unappealing but some manipulation is possible. Beware of the tendency of the limbs to move slightly as it contracts.

Pinned specimens

The method of focus stacking excels here, many of the amazing examples you will see are of pinned specimens

Further reading

Aside from the many excellent blogs, galleries and other sites where you will find focus stacked images of Diptera, the following sources are well worth exploring:

The Quekett Microscopical Club

A useful starting point for general interest in Microscopy with many links to other local societies and events. The community of microscopists have a great deal of interest in macro and micro photography. Their Bulletin is "membership-only" so you'll have to join to access them.
www.quekett.org/

Julian Cremona: "Extreme Close-Up Photography and Focus Stacking"

Stuart Ball has given demonstrations of focus stacking at various DF events in the past and has blogs on the topic of focus stacking, e.g.
http://macrocam.blogspot.co.uk/2013/09/using-hugin-for-focus-stacking.html

Photomicrography.net is a busy international online forum. In addition to contributor's galleries, there are many useful discussions on a wide range of topics here:
www.photomacrography.net/forum/

Johan Ingles-Le Nobel is the author of a fascinating site at www.extreme-macro.co.uk and recently wrote an article on the topic of focus stacking in Amateur Photographer (15/7/2017). His closing statement in that article neatly summarises the problems of using the focus stacking technique in the field:

"*Until technology advances enough to give us better options to shoot a rapid stack, single-shot macro at a high aperture is still the unavoidable norm for many an outdoor situation.*"

Darwyn Sumner & Ken Merrifield
(with the kind assistance of Nigel Jones and John Bridges)

A colour version of this article is available on the Dipterists Forum website

Conservation

News from the Conservation officer

Where have all the insects gone?

An article in Science in May reports that the Krefeld Entomological Society has found that the total mass of insects caught in Malaise traps across more than a dozen nature reserves in northwest Germany has fallen by 78% in 24 years. As an example of the impact on pollinators, the article says that in 1989 the group's traps in one reserve collected 17,291 hoverflies from 143 species. In 2014, at the same locations, they found only 2,737 individuals from 104 species. In seems highly probable that the same dramatic decline has occurred in the UK, at least in the south, although it may have started earlier reflecting rapid post war changes in agriculture and land-use. In the southern half of Britain, the Rothamsted Insect Survey, found that the number of larger moths declined by 40% between 1968 and 2007. Analysis of records made between about 1980 and 2010 within the Hoverfly Recording Scheme suggest that 33% of species declined significantly during that period, with just 9% increasing. How great would these declines have been had we had data from 1945?

http://www.sciencemag.org/news/2017/05/where-have-all-insects-gone

So we now have further evidence that we live in a world greatly impoverished in terms of numbers of insects, including flies. As the Science article says, rather few species have as yet been lost from regions or countries because small numbers are able to hang on in a few remaining spots. But even here we have no reason for complacency. The Krefeld Entomological Society found that numbers of insects have fallen sharply even in reserves where the plant diversity and abundance have improved. It seems to me as if a tipping point may have been reached across the landscapes of north western Europe (including the British Isles), particularly those dominated by intensive agriculture, where they can no longer support either high species richness or great insect biomass (pest species excepting).

We need to talk about nitrogen.

In January this year Plantlife and Plant Link UK released a report with this title. It addresses the impact of atmospheric nitrogen deposition on the UK's wild flora and fungi. The findings are alarming. Many of our most highly-valued habitats are vulnerable to the damaging effects of increased nitrogen, as nitrogen oxides and ammonia, which acts as a fertilizer benefiting some plants (like nettles, goosegrass, brambles and some abundant grasses) to the detriment of many others. Overall, 63% of the UK's most sensitive wildlife habitats, such as bogs, heaths, sand dunes and acid grasslands have levels of atmospheric deposition which exceed critical levels, that is those beyond which substantial changes in plants and fungi may be expected, including loss of diversity. In England the figure is a staggering 96%, in Wales and Northern Ireland 90% and in Scotland 41%. Over much of England, Wales and Northern Ireland, the annual deposition load is between three and five times that which would be expected if it were not for man-made emissions. Nitrogen oxides come from burning fossil fuels, while ammonia comes mainly from agriculture, in particular from livestock manures. Further nitrogen is supplied from the drift and run-off of agricultural fertilizers and accounts for the dominance of nettles and goosegrass, and perhaps bracken, along the margins of many of our hedgerows, to the exclusion of most other plants. Clearly invertebrate communities will change alongside changes in flora and fungi. Although levels of UK emissions have fallen substantially over recent decades, levels of deposition have only fallen slightly because of changes in atmospheric processing and because worldwide emissions continue to increase rapidly. As the report concludes, further action to reduce nitrogen emissions must be a priority, at both international and country levels. Until such action becomes effective, we have little chance to reverse the decline in number and diversity of Diptera referred to above.

What can we do?

The recording work that many of us do as members of the society is vital both for revealing trends and determining species status, but also for making the case to politicians for the need for change – and radical change at that. Even better, we can help directly with site protection and especially with habitat management, following the splendid examples set by Judy Webb, Ian Andrews and Iain MacGowan has his colleagues in Scotland (see below). So many of our rarer flies now depend on tiny habitat patches that are highly vulnerable to external human activities, to inappropriate land management, or to neglect, that our direct involvement with sites may often be critical. And, of course, we should support conservation organisations like Buglife, the Wildlife Trusts and the RSPB, if only because the more members they have, the greater their political clout.

Recording schemes and the NBN

In my last news, I stressed the importance of ensuring that records are readily available to those who advise, influence, or make decisions on future land use or management. With that in mind, with the backing of committee, I have contacted the organisers of all 20 Diptera recording schemes to ask if they already submit their data to the National Biodiversity Network (NBN) and if not to urge them to do so. I am pleased to say that ten of the schemes already upload their data to the NBN and a further five intend to do so (no response was received from two of the schemes). I hope that in due course the remaining recording schemes, and the three or four study groups, will be able to place their data on the NBN Atlas too or make them otherwise readily accessible.

Pollinator monitoring

Following the development of strategies or action plans for pollinators in England, Wales and Scotland, and for Northern Ireland and the Republic of Ireland, methods have been developed by Centre for Ecology and Hydrology to monitor long-term changes in pollinator numbers in Great Britain. Two new surveys have been introduced to form a new Pollinator Monitoring Scheme. The first is an intensive systematic survey of pollinators and floral resources within a core set of 75 monitoring sites across England, Wales and Scotland. This is being run by CEH staff, and will phase in opportunities for volunteer involvement and mentoring. The second is a Flower-insect Timed Count (FIT Count), suitable for volunteers including those with only basic insect identification skills. This involves counting the numbers of bees and hoverflies visiting patches of flowers over 10 minutes. You can find details on the CEH website by searching under Pollinator Monitoring Scheme. I would encourage members to participate in this important work.

Robert Wolton
Acting Conservation Officer

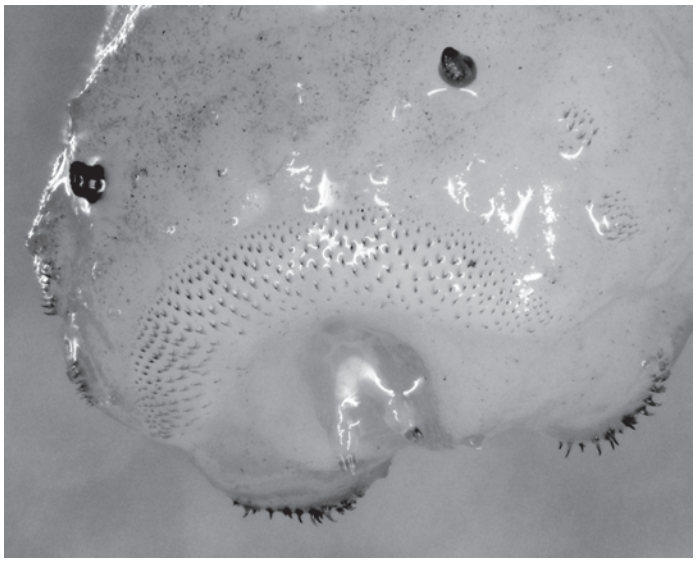
UK BAP & **Adopt a species**

Species news from fly guardians (adopters) and BAP species contacts

Blera fallax, Pine Hoverfly, by Iain MacGowan

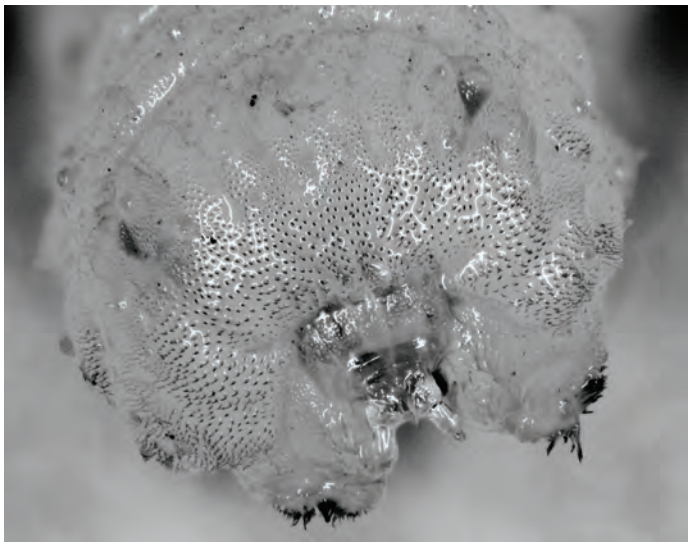
There was some consternation earlier in the year when an area of mature pine was clear- felled within the key site in Strathspey. As is so often the case a lack of clear communication between the various parties involved seems to have been the issue. However we hope that no long term damage has been done and as a result the awareness of the need for sensitive management of this important site has been further highlighted to all involved.

On the more positive side the Cairngorms National Park has provided further funding for the cutting of new stump holes and improving the quality of existing ones, at the site. 34 new holes were cut in July 2017. One long term issue we have had is the problem of distinguishing between the very similar larvae of *Myathropa florea* and *Blera* - both of which occur in the cut holes. This is a particular problem for our volunteers who don't have any previous experience with identifying Diptera larvae. With the help of Ashleigh Whiffin from the National Museums of Scotland, who has taken high quality photographs of the larvae in the museum collections, we have now produced an improved field guide which clearly shows the difference between the species. The two photographs show the front view of the heads of both species, *Blera* has a clearly defined "moustache" of spicules across the head whilst in *Myathropa* these are more widely scattered. This should greatly help with future survey work.



Blera fallax larva head [Ashleigh Whiffin]

Another development has been the establishment of the Rare Invertebrates in the Cairngorms project: https://en-gb.facebook.com/RareInvertebrates/ which is employing a field officer for 3 years. *Blera* is one of the six species which are within the project remit and we hope that this funding will allow further work on survey, site management and interpretation / publicity.



Myathropa florea larva head [Ashleigh Whiffin]

As in previous seasons we now wait anxiously until the larval surveys in the autumn to see what effect all our efforts have had. The weather during the adult flight period has been as changeable as ever but we continue to hope for a good breeding season.

Botanophila fonsecai, by Craig Macadam, Buglife.

The coalition of NGOs opposing the proposed golf course at Coul Links held two public information meetings in Dornoch in May. These were very well attended. The discussion was at times quite heated with a large golfing contingent in the audience but was no means one sided with plenty of interest from the local community in maintain the integrity of the site for its wildlife. We've pulled together historical records for the site and the more important Diptera interest is as follows: *Botanophila fonsecai*, *Thereva inornata*, *Phthiria pulicaria* and *Helina intermedia*. We now expect the application to be submitted in the autumn - until then we won't know what else the ecological surveys have turned up.

Chrysotoxum octomaculatum, broken-banded wasp-hoverfly, from Chris Spilling.

In 2015 an individual of this very rare species was found at Studland in Dorset, the first for several years. In 2016 a *C. vernale*, which is almost as rare, was found at the same site. 2016 seems to have been a good year for the genus in Dorset, with good numbers of *C. elegans*, *C. festivum*, *C. cautum* and *C. bicinctum* seen.

Eristalis cryptarum , the bog hoverfly, by Catherine Mitson

University of Exeter, Geoffrey Pope Building, Exeter, EX4 4QD. Email: c.mitson@exeter.ac.uk

Mapping the distribution of the bog hoverfly *Eristalis cryptarum* on Dartmoor: development of an environmental DNA methodology.

Eristalis cryptarum, the bog hoverfly, is critically endangered and listed as a priority species in the UK Biodiversity Action Plan. Once found across the majority of the South West (albeit never in high abundance), *E. cryptarum* is now known only from Dartmoor National Park. Here, not having been seen since 1978, it was rediscovered in 1993 by Roger Morris and Stuart Ball. Its undescribed larval stage is widely presumed to be aquatic and of the 'rat-tailed' variety, similar to its *Eristalis* relatives. Given its very wet habitat, namely valley mires within Rhôs pastures, such larval habitat and form seem highly likely.

With the use of molecular techniques, the University of Exeter has teamed up with Dartmoor National Park Authority and Whitley

Wildlife Trust to develop a tool to detect environmental or 'free' DNA from *E. cryptarum,* to determine the presence or absence of larvae in water samples collected from habitat sites. Using environmental DNA allows the potential identification of *E cryptarum* without the need to locate adults or larvae, a very useful technique for a famously elusive and flighty species. Together with field observations, this will allow the distribution of the bog hoverfly to be mapped and to help target conservation efforts effectively to breeding sites. The technique will also allow the potential discovery of new breeding sites and will further our understanding of this species.

Ball, S.G. & Morris R.K.A. 2000. *Provisional atlas of British hoverflies (Diptera: Syrphidae).* Huntingdon: Biological Records Centre.

Ball, S.G. & Morris, R.K.A. 2014. A review of the scarce and threatened flies of Great Britain. Part 6: Syrphidae. *Species Status* **9**: 1-130 Joint Nature Conservation Committee, Peterborough.

Drake, M. & Baldock, N. 2005. The Bog hoverfly on Dartmoor. *British Wildlife.* **17:**102-106.

Hammerschmidtia ferruginea, Aspen Hoverfly, by Iain MacGowan

Most of the survey work in the spring of 2017 centred on the satellite population near Loch Ness. 30+ larvae were found in April with several adults being seen and photographed by John Parrot of Coille Alba in early June. Forestry Commission Scotland is considering further management works at this site to promote aspen.

Milichia ludens (Milichiidae), by Judy Webb

Observation on the Jet Ant *Lasius fuliginosus* host ash tree in Cothill fen NNR this year revealed freshly emerged adult flies of *Milichia ludens* sitting on the bark on 22nd April. This very early sighting may well be due to the hot and dry spring advancing development and hatching. The tree and a nearby young oak covered in ivy are to be left in the next tranch of ash tree removal on the fen margin to bring back some flowery grassland. The Jet Ants farm aphids on the tender shoot tips of the ivy and their trails across the soil and litter surface clearly show which trees are important to the colony for honeydew harvesting.

Myolepta potens, Western Wood-vase Hoverfly, by David Heaver

On 16th June I visited Moccas Park with a view to checking on the *Myolepta potens* trees using GPS coordinates given in the report on occupied trees. I did not manage to get around them all as the bracken and heat made the going rather tough, but at least the horse chestnuts are easier to spot at this time of year. I re-found three tagged trees and have a fairly strong feeling on another but could not find a tag (but it sat next to a sweet chestnut with the next in line tag number and was bang on for the location, was indeed a horse chestnut, and looked like it should hold flies), and searched and failed to locate two others. The latter two areas presented tree tags in the number sequences but not the specific number, something we have encountered for similar work on Bredon Hill NNR.

For each tree I now have a set of photos, and a modified tree condition form we have been using for violet click beetle, so can say all the trees are still standing and are in good condition. As far as I know this is the first systematic return to all the trees where Andy Godfrey found the fly. I hope soon to return with a tree tag map to enhance the GPS readings, hopefully to find the two missing trees, and to visit the two I did not get to.

Odontomyia angulata, Orange-horned Green Colonel Soldierfly, by Judy Webb

This species has just finished flight period for the year (21.07.2017) after a much reduced abundance of adults from June (first swept 16th June) in Cothill fen. The drought year and the heat wave may have a lot to do with the scarcity. Parsonage Moor pools dried right down to mere wet mud with a crust of white, dead, bleached *Chara* stonewort algae. Decomposing algae gave the site a 'rotting seaweed' smell, similar to that one encounters on a beach. Some animal (birds ? badgers?) had been extensively rooting up the easily accessible mats of *Chara* and moss and this resulted in the death of some of the scarce mosses that need water. Presumably this activity was to search for larvae of Odonata and soldierflies to be found under the damp mats. This presumed predation has been observed only in such really dry years. Recent rain has of course resulted in a beneficial increase in water levels. Measures to re-wet this fen are hopefully to be carried out this next year.

My larval rearing observations including feeding and other behaviour will be written up this winter.

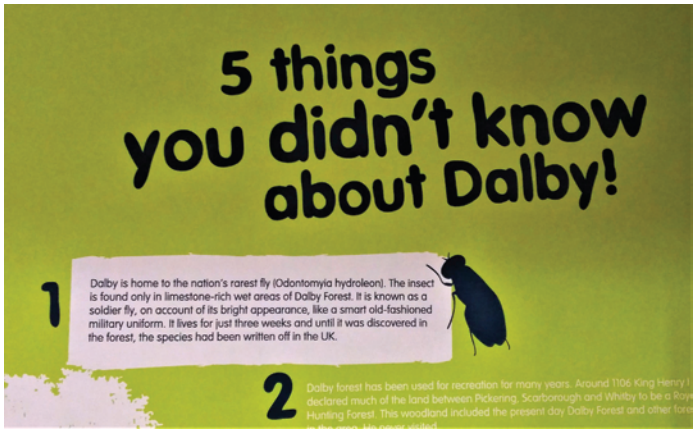
Odontomyia argentata, Silver Colonel, by Judy Webb

Visits to the known site of Parsonage Moor, part of Cothill Fen SAC, were carried out in the likely emergence period of April-May. A lot of no-show, but finally one female fly was seen sitting on leaves near the central shallow stream on 22nd April; unfortunately it escaped my net so I have yet to photograph a live individual. I searched nearby wet runnels for larvae but was unsuccessful. It is desirable to rear this species in the future to narrow down the exact larval habitat requirements. Adults have been seen by others only in this one area with a lot of shallow calcareous runnels between black bog rush tussocks.

Odontomyia hydroleon, Barred Green Colonel, by Ian Andrews

The good news is that this fly continues to be found at Seivedale Fen.

A single male was swept on June 25th and a single female on 6th July. Three visits were made across the usual flight period, each in good conditions with warm temperatures and low wind at midday...a bit disappointing that more were not seen, then, but it remains hard to predict the exact emergence period.



Following the work done to clear around the northern seepages at Seivedale last autumn, the general condition there looked to be improved, as the shading thick rushes were reduced. These seepages were found to be very dry, though, as the season went on and they look to need more poaching by cattle over the coming winter. Cattle were on the site last winter, but their presence on the seepage slopes was limited, as they have access to lush grass above the slopes, where they seem to stay. A way needs to be found to keep them on the seepages for longer, this winter. The continued clearing of rushes this autumn, around the main seepage area, will

hopefully draw the cattle onto the slopes more this winter.

A strong positive is that the FC continue to take pride in having the fly on their land, witnessed by it taking top place in their '5 things you didn't know about Dalby', emblazoned (very) large on the walls of their visitor centre café (see photo). There cannot be many places where a fly features so prominently!

Thanks are extended to Cash Bashforth, FC ecologist, who takes a strong interest in the fly.

Stratiomys chamaeleon, Clubbed General Soldierfly, by Judy Webb

As I write (21.07.2017) this fly is still on the wing in Cothill fen SSSI/SAC and emergences from puparia are still being observed from larvae kept in aquaria on my windowsills in shallow water with marly mud and Chara stonewort algae (the preferred medium). The only thing to report at this stage is that the hot and dry spring and summer caused the advancement of emergence in the fens with really early first sightings and rearings in very early June. Lack of rich nectar sources like hogweed on fen marginal areas mean it is very difficult to record the adult flies, which are extremely sparse on site near the breeding pools. They must leave the site to search for such flowers soon after emergence. Parsley water dropwort *Oenanthe lachenalii* is now in flower in the wettest areas and this is used a little. The specific *Stratiomys* hymenopteran chalcid parasite Red-legged Big-thigh *Chalcis sispes* has been swept more frequently than any *Stratiomys* sp. on site (*S. chamaeleon, S. potamida, S. singularior* all present). I'm hoping this frequency of the parasite is a positive indicator of a strong host population (or do the high numbers mean bad news for host numbers?). Whether the parasite affects all species equally or is more partial to some than others would be very interesting to find out. All puparia from rearings are kept (even if a *Chalcis sispes* emerged). Perhaps one day when DNA analysis of them and identification of the host fly possible, there will perhaps be an answer to this question.

Triogma trisulcata, Dimple-cheeked Damsel, a cranefly (Cylindrotomatidae), by Judy Webb

This year my focus has been on field craft to find the brown or green frilly larvae living in water logged moss. Their camouflage in fen mosses is very good and difficult to find in the field although removing a few handfuls of moss in early April and searching through it at home is often successful. Adults were on the wing in late April as recorded in previous years in Lye Valley fen and Cothill fen.

The common name is Judy's suggestion (ed)

Habitat management for pollinators and B-Lines

Buglife has recently published a short series of guidance sheets on managing and enhancing habitats for pollinating insects. The guidance sheets currently cover farmland, woodland, urban areas, and transport corridors. These are all available to download from the B-Lines hub on the Buglife website: https://www.buglife.org.uk/b-lines-hub

Also available on the B-Lines web page is Buglife's latest B-Lines update. This includes information on our projects and partnerships in England, Scotland and Wales where we are mapping opportunities to create, restore and reconnect wildflower-rich habitats, and delivering this work on the ground.

Andrew Whitehouse, Buglife

News from the regional groups

Northants & Peterborough Diptera Group

Group members have met each Sunday since the end of April. This year we have been targeting county wildlife sites that have few records, although we have visited a few of our old favourites too. We have been particularly keen to get more records from the south-west of the county as it is very under-recorded. So far few records from visits have got back to me but there have been one or two unusual records for the county. In early May *Cheilosia nebulosa* was found at Bucknell Wood near Silverstone. All previous records for this species have been in the North-east of the county. In July Tony White found *Chorisops nagatomii* in a damp meadow near Daventry. Also at this site a male *Spaerophoria ruppellii* was swept. In Northants any Sphaerophoria other the *S. scripta* is a good find! On the same day we visited Borough Hill in Daventry. This high hill used to be the site of a major communications station but is now extensive grassland bordered by scrub and woodland. The morning was notable for the number of *Syrphus* and *Epistrophe grossulariae* feeding on the hogweed around the margins.

Group members also took part in the Dipterists Forum Spring Field Meeting, reported elsewhere in the Bulletin; in a bioblitz held in meadows and woodlands between Yardley Chase and Salcey Forest and in the Wildlife Trust's Hoverwatch project. The most notable species from the four Hoverwatch meetings were *Cheilosia soror, Myolepta dubia, Volucella inflata and Xylota xanthecnema.*

In Spring the Northants Biodiversity Records Centre launched the WILDside project aimed at encouraging more biological recording and recruiting future county recorders. Some members of the group have been supporting some of the activities that have so far taken place. We are planning field meetings and workshops over the next 18 months to encourage more fly recording in the county.

John Showers

Members

Membership Matters

By end of July 2017 we had 334 paid-up members of Dipterists Forum and 293 subscribers to Dipterists Digest. These are down 32 and 30 subscribers respectively on the end of last year. So far in 2017, 20 new members have joined. This means that about 50 of last year's subscribers have yet to rejoin and will not receive any further publications until up to date. Late payments (after the end of March) do cause us problems as we have to chase up payments and distribute publications separately. As this is all done by voluntary effort it is something we could do without.

I do urge all members to pay by bankers order or send in payments before the end of March. I am happy to answer any email queries about subscriptions if you are not sure you have paid. Our policy is to stop distributing the Bulletin and Digest after the Spring Bulletin to anyone who is not up to date with subscriptions.

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

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

Membership & Subscription Rates for 2017

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.

Cheques should be made payable to "Dipterists Forum".

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.

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.

John Showers

Increasing the Membership of Dipterists Forum

As Rob mentioned in his Chairman's Round-up, we are trying to build up and broaden our membership base. The Committee has approved an outline action plan, which will be developed further over the next few months. We feel we need to increase the numbers and diversity of membership for the long term future of the Forum. It will also enable us to:

- publish more keys
- generate more records through more active recording
- support the protection of endangered Diptera
- improve public understanding of the importance of diptera.

Our membership is generally around 350 by the end of the year, with about the same number of leavers as joiners each year. This is a bit below our peak of 400 before we changed bank accounts and subscription rates. Quite a lot of people never rejoined after that, despite efforts to contact them. It would be great if we could get the membership back above 400.

When people join DF we ask them where they heard of us and by far the two most important sources are Diptera training workshops and word of mouth from existing members. If we can improve the coverage of these, we believe we can increase the active membership of the Forum.

Our approach will be to develop tools and support to encourage existing members to help with this through:

- Engaging social media and the people who regularly use it to publicise DF. This cannot be just one person. We need to encourage all members to engage more with social media to raise the profile of DF both on the DF Facebook group but on other related groups.
- Develop a photo archive and talk notes for any member to make use of to speak to local organisations.
- Develop further trainers and support tools for them. The Natural History Museum is happy to support this.
- Engage with regional members to develop local groups and provide support resources for them.

We realise that not everybody will want to give talks or run local groups or even use social media but if there are members who feel they would like to contribute in some way, however small, we would love to hear from you. You would not be alone. Those of us already active in training, local groups or social media are more than willing to lend a hand, give advice and provide supporting materials. We are particularly conscious that our membership is heavily weighted towards South and South-east England and hope that members in the other parts of the UK, or overseas, will also get involved.

If you would like to know more please let me know how the Committee can help.

John Showers

Accounts 2016

Income & Expenditure Account to 31st December 2016

	2015		2016	
Income	£		£	
Subscriptions		7,557.71		6,334.06
Back issues	3.00		150.00	
Donation	-		50.00	
FSC Workshop	-		244.50	
Training courses	290.50		597.96	
Pooters	59.80		40.60	
Summer Field Meeting 2015	5,724.80		26.00	
Summer Field Meeting 2016	120.00		6,003.36	
Summer Field Meeting 2017	-		50.00	
WildGuide royalities	-		313.56	
WildGuide sales	30.00		-	
OIC Creditor payout	300.00		-	
Hoverfly atlas sales	6.00		-	
		6,534.10		7,475.98
Total Income		**14,091.81**		**13,810.04**
Expenditure				
Dipterists Digest 21.2	- 1,529.90		-	
Dipterists Digest 21.sup			- 2,221.80	
Dipterists Digest 22.1			- 1,635.80	
Dipterists Digest 22.2			- 1,637.20	
Dipterists Digest 23.1			- 1,622.27	
		- 1,529.90		- 7,117.07
Bulletin 79	- 558.00		-	
Bulletin 80	- 575.00		-	
Bulletin 81			- 730.00	
Bulletin 82			- 824.00	
		- 1,133.00		- 1,554.00
Training courses	- 724.06		- 472.99	
AGM refreshments	- 270.00		-	
Buglife subscription	- 10.00		- 10.00	
Publicity	- 42.00		- 38.00	
Exhibit prize	- 30.00		- 30.00	
Digest postage etc.	- 1,197.23		- 1,121.72	
Commitee expenses	- 119.79		- 78.11	
Insurance	- 183.83		- 189.64	
Envelopes for Digest	-		- 432.00	
Nottingham meeting	- 5,712.00		-	
Canterbury meeting	- 685.60		- 6,266.60	
Snowdonia meeting	-		- 250.00	
Microscope boxes	- 403.00		-	
Flowers	- 30.00		-	
Dipterists Forum video	-		- 1,105.00	
Workshop bursaries	-		- 326.00	
Back issue postage	-		- 96.51	
Subscription refund	-		- 5.00	
		- 9,407.51		- 10,421.57
Total Expenditure		**- 12,070.41**		**- 19,092.64**
INCOME OVER EXPENDITURE		**2,021.40**		**- 5,282.60**

DIPTERISTS FORUM

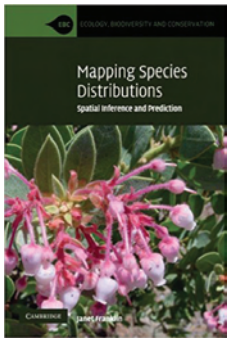
Balance Sheet as at 31st December 2016

	2015 £	2016 £
CASH DEPOSITS		
NatWest current account	29,944.49	24,460.39
Total	29,944.49	24,460.39
GENERAL FUND		
Balance at 1st January	29,944.49	24,460.39
Surplus/deficit for the year	2,021.40	- 5,282.60
Total	31,965.89	19,177.79

Review

Books

Biogeography

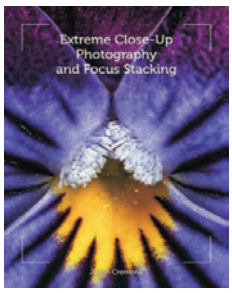


Janet Franklin. 2009.
Mapping Species Distributions: Spatial Inference and Prediction
Cambridge University Press
ISBN 978-0-521-70002-3
~£40 (paperback)

Record the location of any specimen you've seen or look at any form of distribution map and you're a biogeographer. Interpretation of such maps is a fascinating area not only for just sheer interest but also as an essential tool for environmental research, resource management and conservation planning.

This is the classic text on the topic, packed with insights into how our records may be used. From atlas projects to museum collections and complex modelling, Professor Franklin's excellent writing style provides insight into many aspects of species distribution ranging from dispersal behaviour to environmental and habitat factors. Dip into this thought-provoking book a few times and you'll never look at a standard UK distribution map with the same eyes again.

Photography



Julian Cremona. 2014.
Extreme Close-Up Photography and Focus Stacking
Crowood Press, Marlborough, UK.
ISBN 978 184797 719 9.
176 pp.
~£16

Based at the Field Studies Centre at Dale Fort one can readily visualise the range of wildlife material available to the author for his experiments with photography. This book is not only packed with a large number of the most amazing images but also delves into techniques ranging from simple tips to the acquisition and use of optics of all sorts.

Diptera: Asilidae

Reinoud van der Broeck and André Schulten. 2017.
Field guide to the robberflies of the Netherlands and Belgium
Stichting Jeugdbondsuitgeverij (Dutch Youth for Nature publishing House)
ISBN 978-90-5107-054-5
~£14 (paperback)

With its combination of clear diagrams, excellent photographs and field characteristics in a well laid out format, this book sets a high standard for identification keys.

Darwyn Sumner

Citizen Science

There's a grumble about the use of this term in a recent British Wildlife magazine. Whilst the following editorial in Nature doesn't go as far as to explicitly acknowledge the UK's two century naturalist tradition it does provide a rationale to the development of the term.

https://www.nature.com/nclimate/journal/v7/n9/full/nclimate3388.html

Online Publishing

Open Access

Almost half the papers accessed online are now free to read according to Nature:

https://www.nature.com/news/half-of-papers-searched-for-online-are-free-to-read-1.22418

Whilst some of our important Diptera papers remain paywalled inside subscription journals, this is an encouraging trend. If you've not yet begun to collect articles in your subject area then now may be a good time to have a go. Organising anything you download is straightforward using the free Mendeley application and a bit of sensible tidying of the folders where you keep your pdfs.

Signing up to ResearchGate may be worthwhile too, especially if you have a few published papers yourself. Two could hardly be considered a trend but it was very welcome to see Phil Withers joining up and adding his numerous Diptera papers, particularly since he and I joint authored one. If you sign up to ResearchGate then you are encouraged to upload the full text of your article. Good exposure for your work, the status of Dipterists Digest, a higher chance that your work will be cited in other publications and invaluable free access to your articles. Imagine how much more useful this would be if more of us dipterists did this.

If someone wants your paper then the chances are that they will have already found it via internet searches, if not, just tell them it's on ResearchGate where you uploaded it.

Citations & DOIs

If you write an article for publication in a formal journal such as the Dipterists Digest it is customary to add a number of references or citations at the end.

In recent years it has also been customary to publish and cite any data used in such articles. Many articles will be found in which the raw data is published in the actual article, though more often these will be in the form of summaries. Providing large amounts of raw data can be problematic, best to provide a link to the repository where this data is stored. This is where Data DOIs are invaluable. DOIs are links to items on the internet, these are special links because they are permanent stores. You'll happen upon them in journals such as Nature (New Scientist frequently provides DOI links to full articles.) Normally they would cost the hosting journal money to get a DOI for a specific article but in the case of Data DOIs there are a couple of methods of getting it for free. One is via Mendeley as previously discussed in this Bulletin, the other is via the NBN Atlas (once they've uploaded it to GBIF). Any dataset uploaded there now has its own Data DOI, click on the blue DOI box against a dataset in the NBN Atlas and you are taken to a formal page on GBIF which describes the data and provides the necessary links to actually obtain it.

So for example, were you to write some kind of article on Craneflies for the Dipterists Digest, you could add the following reference to the data you had used in your article:

(2017). Cranefly (Diptera; Tipuloidea) records for Britain to 2007. Biological Records Centre. Occurrence Dataset https://doi.org/10.15468/wggm3t accessed via GBIF.org on 2017-07-06.

Darwyn Sumner

Meetings
Reports

2017

Diptera Workshops 2017

Snail-killing flies (Sciomyzidae) and Fruit flies (Drosophilidae)

Running two courses in parallel has become the norm at our annual Preston Montford training course. Although the initial idea was to have a beginners' group and an advanced group, in 2017 the set-up was more like two advanced courses with Stuart Ball taking the sciomyzids and Peter Chandler in charge of drosophilids. Over 30 people attended, split comfortably between two classrooms. Both Peter and Stuart introduced their families while we were digesting dinner on the first evening. There was too much to take in all in one go but I did think that I wouldn't want to be a large water snail sharing my pond with some sciomyzid larvae which are really quite nasty murderers. Drosophilids are rather more benign, and have the edge on sciomyzids in their more diverse larval ecologies, not just being 'fruit flies' but also living in fungi, dead wood, leaf mines or bee-burrows, or eating whitefly.

We had new keys, amply illustrated and bound. The drosophilid key was based on a draft by Paul Beuk and Brian Pitkin which they unfortunately abandoned late in the day as Fauna Entomologica Scandinavica (Bächli et al.) just beat them to publication and effectively making their key superfluous. But Peter updated it and added illustrations from published sources, together with species accounts covering ecology, flight period and distribution – always a good back-up when you discovered that you've identified the second British specimen, and are jogged into taking a closer look. Stuart's key was also thorough, based mainly on the Fauna Entomologica Scandinavica volume by Chvála, with additions from other sources.Stuart had added his own wing and body-part photographs. The text gave brief descriptions to supplement characters used in key, and notes on biology. And, as we have come to expect from Stuart, there were distribution maps and flight period histograms, based on as many records has he could lay his hands on. Some of you may remember his first atlas that was *Sciomyzidae Recording Scheme Newsletter* No 2 (1986), and quick comparison shows a considerable advance in coverage since then.

Saturday morning opened with Stuart diving into the identification of adults, going through each genus to illustrate the important characters. As so often now, excellent photographs of the beasts helps enormously when first faced with a moderately large family (about 70 species in each of the groups), and short-cuts a lot of slogging though keys when there are obvious unique characters. Inevitably there were 'difficult' genera that Stuart led us through, notably the tiddlers in *Pteromicra* and *Colobaea*, but also the commonly encountered *Tetanocera*.

Drosophilid enthusiasts had to wait until after lunch, when Peter gave a similar guided tour of the drosophilid genera, straying into some of the more bizarre non-European oddities with heads out of science fiction films. And then down to work. The general feeling after the rest of the weekend looking at the flies is that most sciomyzids are relatively easy and most drosophilids are relatively difficult. But that's what these classes are about - getting us to look at groups that we may shy away from without a helping hand.

There was no excuse for not taking a look at almost every British species for which we thank Liverpool Museum (and Richard Underwood for bringing them), the Natural History Museum for their drosophilid drawers, and Peter for bringing his own full collection.

There's a good reason why we keep returning to Preston Montford after more than 20 years – the accommodation keeps getting better, the food is good, the bar is convenient and the staff very welcoming. And so, for 2018, we will be returning for another double-billing including larvae and methods, and a look at the difficult 'larger Brachycera'.

Martin Drake

Bursaries

The Benefits of the DF Bursaries.

The Dipterists Forum generously provides bursaries to assist newcomers to the study of diptera in attending workshops and field meetings. This scheme has allowed me to participate in a few summer field meetings which would have been out of my reach at the full cost.

Being at these field weeks has helped me along greatly in many respects. Thanks to the recently formed Devon Fly Group, I do not study diptera alone as we get together at least once a month in the field season and once for a winter workshop, but there is nothing that can compare to eating, breathing and living diptera for a week with other like-minded enthusiasts.

Days out in the field outside of my usual locations and with various people have improved my understanding of habitats and the ability to read maps and landscapes for potential hotspots and inspires me to seek out similar locations in Devon.

The assemblage of dipterists present have a wide range of interests so that there is always someone to seek advice from on various families and being in a communal lab during the evenings provides insight and discussion on other peoples' techniques. There are also none of the constraints that you may get at home and so you are totally free to concentrate on diptera as much or little as you wish. The camaraderie is excellent during these weeks with lots of banter and conversations on absolutely any subject.

These bursaries work to the benefit of both the recipient and the Dipterists Forum. Emerging dipterists are few and far between, this nurtures anyone showing an interest, therefore ensuring a future cohort of people studying and recording flies. I strongly encourage anyone considering applying for such a bursary and I would like to express my gratitude to the society as a whole for setting up this scheme.

Andrew Cunningham

In February last year I was lucky to be able to attend the Dipterists Forum course on identifying Calypterate flies (Calliphoridae, Sarcophagidae, and Rhinophoridae) as a result of being awarded a bursary by the Forum to cover the costs. I am currently working towards my PhD in forensic entomology, and as part of this I have been working hard to try and improve my identification skills particularly of forensically relevant (carrion-associated) species. As such, this three day course was a huge help to me, both with improving my identification skills for species I'm likely to come into contact with during the course of my work, and with improving my confidence with identifying species I'm already a bit more familiar with. Since becoming a member of the Dipterists Forum I have been able to make use of the excellent resources offered online, but I have also found that I have been able to learn a lot from more experienced members who have been very welcoming and always happy to help out and share their knowledge. Overall the course was a great experience both in terms of the social and learning opportunities, and something that I would not have been able to benefit from without the bursary.

Helen Ody

I was fortunate enough to be awarded one of the Dipterists Forum's bursaries to attend the February course on Sciomyzidae and Drosophilidae, at FSC Preston Montford. Still being fairly new to the identification of Diptera, as well as new to the forum, this course was an excellent opportunity for me not only get to grips with unfamiliar territories within the order (thanks to the meticulously assembled and infinitely useful test keys created by Stuart Ball and Peter Chandler for the Sciomyzids and Drosopholids, respectively) but to also get a chance to interact with other members of the forum, who are every bit as welcoming and enthusiastic as you could ever hope – qualities not found in every society. I have since used the keys to identify a few flies – including a *Limnia* – and have several more I hope to work through. The bursary gave me a chance to attend this course, get access to new test keys and meet Dipterists from across the country whom I would otherwise not have met, and I look forward to seeing them and the rest of the forum at future events. There was also cake provided by FSC, so, plenty to enjoy all around.

Alex Dye

Spring 2017 Field Meeting

South Northamptonshire

We held the Spring Field Meeting from Thursday 25th to Sunday 28th May. Our aim was to cover the woodlands and meadows of Yardley Chase and Salcey Forest and to also visit the Nene Wetlands, a nature reserve in the River Nene valley. The weather throughout the weekend was warm and sunny and a small but very enthusiastic group of members attended all or some of the sites. I have not received all records yet but several attendees have sent me their results to date and this report picks out some of the highlights.

On the Thursday morning we visited Sane Copse, a part of Yardley Chase owned by Compton Estates and strictly private. This area was requisitioned at the start of the Second World War as a munitions storage area. As a result parts of the oak woodland were cleared and concrete storage bunkers installed. Each bunker was surrounded by an earth bank to prevent an explosion causing a chain reaction. The surrounding bank left a series of hollows around it which have filled with water and are now rich in invertebrates, including Northants' only population of Downy Emerald dragonflies. The site is now a rich mixture of deciduous woodland, ponds and grassy glades and rides. So far the diptera records from this site have been of fairly widespread species, although *Brachyopa scutellaris* (HB) is not recorded very often in Northants. Non-diptera insects of note were the dragonflies *Cordulia aenea* and *Brachytron pratense*. Alan Stubbs found lesser cockroach *Ectobius panzeri*, a really good record for Northants.

In the afternoon we had planned to visit another wood in Yardley Chase but forestry operations prevented us going. However, the Compton Estate kindly gave us permission to take our cars up to the adjacent deer park and survey the grasslands, old trees and ditch there. Unfortunately the field track to the park was rather rutted and at one point we had to tow a member (who shall remain nameless) off the central hump after becoming grounded. Despite this, we had an enjoyable foray in this still active deer enclosure.

On Friday we met up at the western end of the Nene Wetlands nature reserve in the Ditchford Meadows area. The Nene Wetlands were recently featured on BBC TV's Countryfile as part of the reserve was acquired by the Wildlife Trust for Beds, Cambs and Northants as part of a planning agreement to develop a major shopping and leisure complex. This acquistion connected the already existing Ditchford NR to three other reserves downstream to form one reserve of about a square mile in area. The Ditchford end consists of flooded gravel pits adjacent to two large meadows, one of which has a wet flush running across it. The first meadow was a sea of buttercups whilst the second had extensive sedge and rush beds. Probably the best find reported so far from here was the soldierfly *Stratiomys longicornis* (HB). This species is usually found on the coast or the Fens so was unexpected so far inland. However the Nene Valley does turn up a number of fenland diptera and other insects regularly. Several observers found the stilt fly *Neria commutata* on tall vegetation alongside the gravel pits. The hoverfly *Chalcosyrphus nemorum* (RM) is not often recorded in Northants and was a new site record. I noted my first Emperor Dragonfly *Anax imperator* and Scarce Chaser *Libellula fulva* of the season here (JS).

At lunchtime we moved onto the middle part of the site next to the leisure complex construction site. Unfortunately in the heavy traffic we lost three members, one of whom managed to find his way back but the others decided to visit some other sites in the county. This area has what is normally a very wet woodland but the preceding dry period meant that the pools in the wood were dry and not very productive. The flies reported so far from here have all been fairly common species, although records of the Scathophagids *Trichopalpus fraternus, and Spaziphora hydromyzina* and the Dolichopodid *Campsicnemus picticornis* are probably new for the site (all RW). We ended the day at the eastern end of the site in a large meadow with a wide ditch and a few pools. This produced a few Dolichopodids and craneflies but so far the only notable fly has been *Sciomyza dryomyzina* (RW).

Yardley Chase MoD. Rob Wolton, Roger Morris, Alan Stubbs, Jeff Blincow and Graham Warnes. [John Showers]

On Saturday we spent the whole day exploring various parts of the MoD's site on Yardley Chase. We had originally planned to visit on the Thursday and Friday but at late notice we were informed that the army had decided to carry out exercises with war dogs (don't ask!). Fortunately they had finished on Friday so we had access over the weekend. Like Sane Copse the site has a number of ex-munitions storage bunkers with their earth banks and ponds but it is much more varied. There are the remnants of the old deer park with very large ancient oaks and ashes and extensive meadows as well as woodland in various states of growth and decay. We started with the old deer park area and soon found many *Chrysotoxum cautum* in the meadow. RM also swept *Xanthogramma citrofasciatum* and *Criorhina berberina* there. RW checked a number of the ancient trees and found the comb-horned craneflies *Ctenophora pectinicornis* and *Dictenidia bimaculata* on the trunks. He also found a very active sap run on a horse chestnut which yielded the muscid *Phaonia cincta* and the Aulacigastrid *Aulacigaster leucopeza*. RW noted the hoverfly *Brachypalpoides lentus* and the large Pipunculid *Nephrocerus flavicornis* in this area. HB was pleased to find the scarce Chloropid *Chlorops strigulus* here. Amongst the non-diptera RW found dusky cockroach *Ectobius lapponicus*, another very unusual find for the county. Everyone agreed that this area was very special.

We moved on to an area of neglected birch woodland. This has not been managed since the 1930's and has a large amount of standing and fallen dead wood. AS set about collecting fungus gnats from a ditch through the wood and soon had a pooter full of a black mass. Alan thought it was one of the best hauls he'd had in 20 years. Peter Chandler will have fun sorting these out! *Dictenidia bimaculata* was again recorded here together with the Limoniids *Lipsothrix remota* and *Paradelphomyia senilis* (JS).

Ampedus ?pomonae adjacent to the birch woodland (ID Keith Alexander) [Darwyn Sumner]

From here we moved to another part of the site where two large flower-rich meadows run alongside the oak/ash woodland. Another *Dictenidia bimaculata* (RV) was found on a much-decayed willow stump but no other records from the area have been received as yet.

Chrysotoxum cautum at Yardley Chase MoD [John Showers]

On the Sunday we met at Salcey Forest, a large area of ancient woodland lying about halfway between Northampton and Milton Keynes. When I booked our visit through the Forestry Commission, I had not realised it was a bank holiday weekend and when we arrived the car park was already quite full. Part of the forest has a number of leisure activity areas and riding trails, attracting large numbers of people. However, as we set off into the wood we soon lost the vast majority of people. RM found the hoverflies *Brachyopa scutellaris* and *Pipiza austriaca* and KR found *Criorhina berberina* in another part of the wood. HB was pleased to find a number of species he does not see in Kent, such as the fanniid *Fannia lepida*, the psilid *Chamaespila bicolor*, the drosophilid *Hirtodrosophila cameraria*. At lunchtime some members of the group needed to set off for home and the rest of us decided to return to the MoD site. RM and AS popped into Pitsford Water Nature Reserve on their return journey home and were pleased to find *Volucella inflata* in what seemed an unlikely area.

A recently emerged *Ctenophora pectinicornis* at Yardley Chase MoD [John Showers]

Despite a few hiccups with changed plans and traffic problems, the weekend went well and there was general agreement that a return visit to the MoD site would be well worthwhile. I thank all the people who have sent me records so far and ask that others do send them to me when available. (I have yet to identify quite a lot of my own so understand that it takes time). All the records will go to the various land owners, the Northants Biodiversity Records Centre, the appropriate national recording schemes and the NBN Atlas. I'd also like to thank Jeff Blincow and the MoD for organising the MoD visit, Compton Estates for Sane Copse, The Forestry Commission for Salcey Forest and the Wildlife Trust for Nene Wetlands and Pitsford.

AS – Alan Stubbs
HB – Howard Bentley
KR – Kev Rowley
RM – Roger Morris
RV – Richard Vandersteen
RW – Rob Wolton

John Showers (JS)

Summer 2017 Field Meeting

Snowdonia National Park

10 - 16 June 2017

Our base was Plas Tan y Bwlch, the Snowdonia National Park Study Centre, at Maentwrog, inland from the north-east corner of Cardigan Bay. In 1976 it was the venue of the third dipterists summer field meeting (run by the Cranefly Recording Scheme), at the time very economic. High price has been a deterrent in subsequent years, which is a shame, for this is a magnificent base as regards accommodation, with many site options on the door step and being at a strategic hub of a radiating road system.

The Maentwrog district has a considerable amount of Atlantic sessile oak woods (rain forest, and yes we had some rain on a few days). Many woods are named Coed (wood in Welsh): ordnance maps were peppered incongruous duck symbols to indicate nature reserves, which became known as Coed Ducks, though a fly symbol would have been more appropriate. Seepages, streams and lake margins created a mosaic of fly habitats. Day one revealed the presence of 'hope to see' species such as the robberfly *Dioctria oelandica* (black legs and wings, legs bright yellow. We had expected that it would be easy to find evidence of the hoverfly *Cheilosia semifasciata* but eventually the mined out leaves of wall pennywort were located at Plas Tan y Bwlch. In fact our home woods turned up a number of goodies, including the tachinid *Billaea irrorata* and the anthomyiid *Chirosia cinerosa*. One of the commonest woodland hoverflies in Snowdonia was *Sphegina siberica* and in some districts the cranefly *Tipula yerburyi* replaced the more widespread *T. variicornis*.

Some interesting upland woodlands are of other character. This includes Coed y Brenin, on maps shown as huge area of conifer plantation north of Dolgellau, accessed by slow narrow lanes through surprisingly scenic country. The woodlands contain bits of deciduous woodland, on volcanic soils and have plenty of potential. Our attention had been drawn to the known presence of the hoverfly *Microdon devius*, more usually associated with chalk grassland. Its host is the yellow meadow ant *Lasius flavus*, here in a surprisingly damp (almost wet) meadow. We could have done with more time investigating the ecological limitations since it does not occupy all ant hill locations.

The most impressive open uplands were on the western and southern sided of Migneint (east of Festiniog) where mosaics of boggy moorland support the hoverfly *Platycheirus ramsarensis*. Unfortunately wind was a limitation during the visits and somehow

the calm warm days were devoted to other itineraries; an area well deserving further attention. The cranefly *Idioptera linnei* was refound at a known location.

One of the prime lures on the coast were Morfa Harlech NNR and Morfa Dyfryn NNR (morfa = dunes).

Howard, Martin, Nigel and Malcolm take a break at Morfa Dyffryn [Darwyn Sumner]

For some reason robberflies were not as plentiful as usual but the great speciality *Pamponerus germanicus* was seen. The western dune therevid *Dialineura anilis* was easier to find, plus *Acrosanthe annulata*, and the tiny bee fly *Phthiria pulicaria* was on low growing yellow composites just like the book says. It was pleasing that the dune anthomyiid *Delia albula* was found. Extensive dune slacks (winter or permanent wet areas) are a notable feature of these dunes. Slacks with wet sand were found to have the doli *Tachytrechus insignis* and the hybotine empid *Crossopalpus*. Useful ecological clarification: these species occupied areas with only sparse earliest phase colonisation by plants through to only about 20% bare sand: mature slack tending to have dense cover of creeping willow. It would also appear to be the breeding habitat of the cranefly *Nephrotoma quadristriata*: we tried looking for pupal exuviae projecting from the sand but numbers were insufficient to detect at the start of the emergence period. Some associated saltmarsh at Mortha Dyffryn yielded the dolis *Orthoceratium lacustre*, *Dolichopus strigipes* and *Thinophilus flavipalpis*. To the north, there is a lesser piece of dune, Morfa Bychan west of Porthmadog, which has *Tetanops myopina* and *Acrosanthe annulata*, the associated coast with strandline deposits of washed up seaweed (wrack) supporting the giant sepsid *Orygma luctuosum*, and the bay at Borth y Gest has nice patch of saltmarsh with the doli *Machaerium maritimae* grading back landwards to freshwater seepages with the doli *Tachytrechus notatus*.

Nigel Jones, Richard Underwood & Howard Bentley at Gwaith Powdwr [Darwyn Sumner]

The Llyn Peninsula (to the west) is noted for its wetlands, especially the extensive valley fens of Cors Geirch NNR. It was an opportunity to see the habitat of *Idiocera sexguttata*, a small globally threatened cranefly with prettily marked wings (only known at a few sites in Britain and Denmark). It is extremely localised within poor fen seepages, where just a few diminutive sprigs of reed occur among stunted rushes and a tiny bladderwort is almost invisible just below the surface of a soup of organic sediment; the presence of some black bog-rush does not appear to be essential. The same situation had the cranefly *Erioptera nielseni*, a species found elsewhere at mildly base rich influence poor fen, and at one seepage also a strong population of *Tipula marginella*. Cors Geirch also had the craneflies *Pilaria nigropunctata*, *Helius pallirostris*, *Dicranomyia ventralis*, a male of the soldierfly *Oxycera pygmaea* (1st record for 20+ years) and the chamaemyid with a wedge-shaped face *Acrometopia wahlbergi*. Cors Gyfelog also proved successful with the craneflies *Pilaria meridiana*, *Phalacrocera replicata*, the sciomyzid *Tetanocera freyi* as well as *Acrometopia wahlbergi*. Overall, a substantial list of flies will be the outcome of our visits.

The Llyn has a range of other sites. At Cors Graianog, an acid valley bog had the hoverfly *Anasimyia lunulata*. A wildlife trust meadow listed butterfly orchids, and indeed there was a veritably plague of them (but no orchid-dependent flies!) and delight of delight some unexpected cranefly wetland scrub. The cranefly *Symplecta chosenensis* was reported and the robberfly *Leptarthrus brevirostris* was found here. The peninsula is sparse in woodland, but we had some successes, such as 20 species of hoverflies at hemlock water-dropwort flowers (in a week, indeed in a season when hoverflies have been below par). To the east of Snowdonia, we reached to the Bala district where Cors Y Sarnau NR valley fen has largely turned to sallow carr.

This proved to be the richest site for craneflies (33 species) and the only reported site for the saproxylic hoverfly *Chalcosyrphus nemorum* and a sedge-dependent scathophagid of fenland, *Cordilura ciliata*.

Cordilura ciliata at Cors y Sarnau 11/6/17 (twin macro flash, f32) [Darwyn Sumner]

To the south (near Dolgellau) exposed riverine sediment (ERS) has some interesting species, including the therevid *Spiriverpa lunulata*. Some recording reached the Borth/Dovey Estuary area (north of Aberystwyth) where the cranefly *Nephrotoma quadristriata* was found on dunes: a new location for this speciality) and *Tipula pierrei* was located in a wet field (new to district).

With a mix of good to poor weather, there seemed to plenty of material to keep everyone happy. We are now used to 'atypical' years, with swings from hot to cold causing havoc with phenology. Wales, as many other parts of Britain has had many months of below average rainfall. Hoverflies were for the most part sparse, as already said, robberflies were well below par. Dolis ought to have been far more abundant by mid June. Fungus gnats were low, probably a combination of drought and cool conditions (heat and sun encourages then to congregate in dark crannies). But Wales did not disappoint. The cranefly and dolichopodid totals for instance are totting up fine. Overall results should be impressive.

Alan Stubbs

Sawflies

Once again, dipterists attending the Summer Field Meeting were persuaded to venture into Hymenoptera territory and collect sawflies for me to identify. A jar of honey goes to the person who brings me the greatest number of sawflies from the various sites they have visited. This communal effort usually doubles the number of species recorded. During the 2017 week in Snowdonia 69 species were recorded. This compares favourably with Canterbury 2016 (75) and Nottingham 2015 (71) because the 2017 week was one day shorter; also rain on the first day limited collecting. My personal tally for the week was 36 species.

Thirteen people participated in the Honeypot Challenge. The winner, with 41 points, was Alan Stubbs, who also found the ''best'' sawfly of the week, *Tenthredo velox*, at Pont Rhyd y fen. Rob Wolton was second with 21 points and Andrew Cunningham third with 20 points. The most frequently recorded species was *Stromboceros delicatulus*, a woodland species associated with ferns.

Andrew Halstead

Forthcoming

Annual Meeting 2017

Saturday 25 & Sunday 26 November 2017

Liverpool World Museum

William Brown Street, Liverpool

We are holding our annual meeting at Liverpool World Museum over the weekend, with talks, exhibits, **Pemberley Books** and chat on Saturday, and a workshop and access to the museum's Diptera collection for those who would like to do some serious work on Sunday. The workshop is being given by one of our careful and prolific Dipterists Digest authors, with assistance from an insect illustrator who exhibited at last year's annual meeting; we hope that their course will inspire more authors to illustrate their own papers.

The day is open to all, is free and you don't need to be a Dipterists Forum member.

Do bring an exhibit - you may win the prize!

Here's the *draft* programme. The final one will appear on the DF website later in summer. All talks, the AGM and the Sunday workshop will be in **Treasure House Theatre** (THT) on Level 1, and refreshments in either the Treasure House Theatre Foyer or Community Base (to be confirmed).

Saturday

10.00 Meet, coffee at café on ground floor.

10.30 **Tony Hunter** *Introduction to the museum*;

Gary Hedges *Introduction to the Tanyptera insect conservation charity*.

10.45 **Nigel Jones** *Discovering flies at Haughmond Hill in Shropshire*.

11.15 **Mike Howe** *Invertebrate Conservation in Natural Resources Wales, with a particular focus on Diptera*.

11.45 break for refreshment in THT foyer or Community Base (tbc).

12.15 **Graham Rotheray** *Saprophagous, phytophagous and zoophagous Cyclorrhaphan larvae: are they really different?*

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

1.15 Lunch at Café, THT Foyer or Community Base (tbc).

2.30 Annual General Meeting

?? possible 5th talk
3.30 Prize for exhibit in Treasure House Theatre on level 1.
5.30 End
Pub until dinner time
7.00 **Dipterists' Supper** at a local restaurant

Sunday

10.00 Access to Diptera collections for study
11.00 **Martin Ebejer & Dawn Painter** - workshop on ***Illustration for publications***

On Saturday evening we will hold the Dipterists Supper at a local restaurant. If you would like to attend, please contact Martin Drake (martindrake2@gmail.com) before the meeting. I will be investigating the many venues in Bold Street, less than 1km from the museum.

Travelling to Liverpool World Museum

The World Museum, with its front entrance in William Brown Street, is about 400m from Liverpool Lime Street station which most visitors will use. There are a number of smallish car parks not far from the museum, at about £6-7 for whole day's stay, the three nearest ones are: 4 Queen Square, Liverpool L1 1RH; Vernon St, Liverpool L2 2HJ; Moorfields/ Vernon St, Merseyside, Liverpool L2 2AY.

Accommodation

A website for local hotels is:

https://www.google.co.uk/maps/search/hotels/@53.4099746,-2.9860164,16z/data=!3m1!4b1

The Holiday Inn has been recommended, by the entrance to Liverpool Lime Street station, but is not the cheapest.

Martin Drake

[***Bulletin note**: The editors are keen to obtain some form of summary of each of the above presentations so that they may be written up in the Bulletin. If you have a particular interest in one of the topics and would be prepared to make a contribution to these pages then please contact a member of the DF committee. (ed)*]

Annual General Meeting

Saturday 25 November 2017

Liverpool World Museum, William Brown Street, Liverpool

The Chairman will open the AGM at 14:30

Agenda

1 Apologies
2 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)
3 Secretary's Report
4 Treasurer's Report
5 Dipterists Digest Editor's Report
6 A.O.B.
7 Chairman's Vote of Thanks to retiring members
8 Election of Officers: See details below

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, 2017, are as follows:

Office	Officer
Chair	Rob Wolton
Vice Chair	Howard Bentley (Proposed)
Secretary	Amanda Morgan (Proposed)
Treasurer	Phil Brighton (proposed)
Membership Secretary	John Showers (Proposed)
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
Committee	
Members elected 2016	Stuart Ball
	Malcolm Smart
	Peter Boardman
	Victoria Burton
Members proposed 2017	
	Tony Irwin
	Martin Harvey
Ex Officio (Editor: Dipterists Digest)	Peter Chandler

9. Chairman's thanks to hosts and formal closing of the Annual General Meeting.

Amanda Morgan (Secretary)

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)

Our two courses in 2018 cover the more tricky species of 'larger' Brachycera and the long-overlooked Anthomyiidae (flower flies). While many of the soldierflies and allies can be identified correctly with few problems using Stubbs & Drake (*British soldierflies and their allies*), there are still some awkward families that are not easy to identify correctly and consequently generate dubious records. Prime offenders are horseflies and stiletto-flies, but even apparently 'easy' families sometimes need more care, for example, some robberflies and bee-flies. Martin Harvey, national recorder for the Soldierflies and Allies Recording Scheme and an experienced tutor, will lead this course, and Judy Webb will provide a session on larvae of a few families.

At the other end of the popularity spectrum are anthomyiids. It is a moderately large calyptrate family of about 240 species of mainly black bristly flies. They have been ignored as too difficult, despite including some of the commonest and abundant large flies, but recently are experiencing a rise in interest as Michael Ackland has produced keys, detailed notes on identification, biology and, best of all, a full set of superb illustrations that make anthomyiids as easy as moths. The analogy with moths is apt since the quickest way to reach an identification is to look through the drawings for a match, since keys become cumbersome as the taxonomic characters don't lend themselves to obvious key dichotomies. Leaf-mining larvae predominate but the remainder have a wide range of ecologies with larvae in decaying vegetable material, fungi and dung, while one genus is a kleptoparasite of solitary bees. The adults often live up to their name of flower flies, making them easy to target in the field. For those who have dabbled with this family, a new approach to identification will give an additional boost, under the guidance of Howard Bentley and Phil Brighton.

As usual, handouts will be provided. For both courses, information will be provided on species distributions and habitats, and suggestions made for some targeted recording to improve our knowledge of these groups.

Arrive on Friday evening in time for dinner, and leave on Sunday afternoon. More precise information will be put on the website.

The Dipterists Forum is offering bursaries for up to two places at half price on the Preston Montford course. If you would like to take up this offer please apply by e-mail to the chairman, Rob Wolton, robertwolton@yahoo.co.uk, giving your reasons for applying and saying why you wish to attend the meeting. Applicants must be members of the Forum. Applications should reach Rob not later than mid December.

If you would like to attend, check the FSC website or contact Preston Montford directly. Bookings usually open in October. The cost of the course will be £290 for a single room, £265 for a shared room and £210 for non-residents. Dipterists Forum members get a £95 discount on these prices (which are then respectively £195, £170 and £115). If you do not bring your own microscope, one can be provided by the field centre but do please book with Preston Montford if you need one.

Spring 2018 Field Meeting

To be announced

Summer 2018 Field Meeting

Staffordshire

July 2018

The University of Stoke-on-Trent is to be our base, offering accommodation at a competitive price compared with many other options.

Those who came to the Nottingham meeting in 2016 will recall that the Midlands has plenty of good habitat and well worth exploring, so good in fact that only one small party ventured into the Peak District National Park. This time we shall be on a different flank of this scenic National Park.

So what is on offer. Well, it may be only 50 miles away but the contrast is substantial. In particular, Stoke is on the edge of the Cheshire Plain, kettle hole country with hollows in glacial drift containing meres and basin mires of high conservation quality (a major landscape unit special to this part of Britain). A Triassic sandstone outcrop supports heathland with valley bog, and sandy exposed riverine sediment. Coal Measures shales and sandstones give further options. As regards the Peak District uplands, we will be much closer to high quality parts on both the Carboniferous Limestone and non-limestone outcrops.

Some species of flies are only known from this part of Britain, the horsefly *Atylotus plebejus* in basin mire bog for instance. Only a few years ago, Martin Drake found the hoverfly *Orthonevra intermedia* in poor fen and the micropezid *Neria femorata* on a sandy riverbank, both new to Britain, so think what a party of us might achieve!

As with Nottinghamshire, Staffordshire has been off the radar though some very good entomological sites are available. As a fairly thin county, Stoke is close to parts of Cheshire, Derbyshire and Derbyshire. It is many decades since the Manchester dipterists of old highlighted the potential of Cheshire and there is now new momentum from the Lancashire and Cheshire Entomological Society (including Phil Brighton). In very recent years a thriving Shropshire recording group has emerged (including Peter Boardman and Nigel Jones). The Sorby Society embraces the Peak District and beyond (including Derek Whiteley). We have the advantage of awareness of numerous worthwhile sites, including the reserves of 4 wildlife trusts (plus a good number of NNRS etc) and the opportunity of giving a major boost to limited local recording capacity.

Alan Stubbs

Autumn 2018 Field Meeting

To be announced

And now ...

Dead Donkey Day

There seem to be so many themes that have had their day. Of course it does not have to be a day, or even a week. If bold, make it a year, so a sequence could dovetail into a perpetual campaign – an age, epoch or period of geological scale? That seems more honest than claiming 18 months as a year, as with some scientific 'years', as if confirming that academia lives in a universe where time is an optional concept.

Let us claim Dead Donkey Day before anyone else does. I have long advocated a conservation strategy of littering the countryside with dead donkeys, though an urban program would be just as acceptable. Our route to Britex provides a wonderful opportunity to tailor farm payments so as to provide real conservation benefits, free of the constraints of sensitivities of the rest of the EU. The only practical limitation is that donkeys live for donkeys years, but we can overcome that by becoming the most welcoming country in the world for unwanted donkeys, dead or alive.

Why renewal of this initiative? Recent observations in Spain indicate that we have been looking for the piophilid *Centrophlebomyia furcata* at the wrong time of year. This a large bone skipper of large carcasses. Though inconspicuously drab, in life the eyes are bright red. The last British record was donkeys years ago when dead donkeys *et al* were a feature of the landscape on the "leave them where they fall" principle. According to some reports the larvae eat marrow, providing a scavenging vertebrate has broken some bones. It is perhaps not too surprising that the cool early months of the years should best provide breeding conditions rather than the hottest and driest season.

The other Spanish requirement is the presence of scavenging vultures. That, I admit, is just a tad of a limitation. However, Britain proudly has *Centrophlebomyia* as a former resident so let's quietly overlook the vulture bit. Indeed, perhaps dead donkeys are redundant now that deer have multiplied to plague numbers in various parts of Britain, and the hygenic disposal of all dead deer is largely unenforcible in law. The message is get out hunting dead donkeys, and their surrogate deer, when it is too cold and wet for most flies in the earliest months of the year. Who knows, you might yet have a day named after you in celebration of re-finding *Centrophlebomyia*.

Alan Stubbs

Mei M, Whitmore D, Giudice G Lo, Cerretti P. 2013. A neotype designation for the bone-skipper Centrophlebomyia anthropophaga (Diptera , Piophilidae , Thyreophorina), with a review of the Palaearctic species of Centrophlebomyia. Zookeys. 310:7–28

Contributing Bulletin items

Text

1. Articles submitted should be in the form of a word-processed file either on disk (3.5", 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) 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 unformattable in DTP if it has a hyperlink attached), documents containing hyperlinks will be sent back to you 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 pdf (older Bulletins may be viewed in colour on our website) or on the covers.
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) or add the appropriate metadata to your picture. All group pictures should identify all the individuals portrayed.
11. **Powerpoint** files may be submitted, they are a useful means of showing your layout and pictures are easily extracted.
12. Pictures contained within Word files are of too low quality and cannot be extracted for use in the Bulletin.
13. Line artworks are also encouraged - especially cartoons
14. Colour pictures and illustrations will be printed in black and white (uncorrected) and so it would be wise to see what a B&W photocopy looks like first, although the print quality from Autumn 2009 onwards gave excellent B&W results.
15. 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.
16. 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

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

When to send (deadlines)

Spring bulletin

19. 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

20. 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

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

Hoverfly Newsletter
Number 63
Autumn 2017
ISSN 1358-5029

In **Hoverfly Newsletter No. 61** I wrote (in August 2016) of the exceptional scarcity of hoverflies (and other insects) last year. 2017 seems to be if anything even worse, though there was a hint of a resurgence in July. If however hoverflies may be declining in numbers, the same is emphatically not true for hoverfly recorders, as the recording scheme update (below) eloquently testifies - undoubtedly a success story.

Copy for **Hoverfly Newsletter No. 64** (which is expected to be issued with the Spring 2018 Dipterists Forum Bulletin) should be sent to me: David Iliff, **Green Willows, Station Road, Woodmancote, Cheltenham, Glos, GL52 9HN, (telephone 01242 674398), email:davidiliff@talk21.com**, to reach me by 20 November 2017.

The hoverfly illustrated at the top right of this page is a female *Volucella pellucens*.

Hoverfly Recording Scheme Update July 2017

Stuart Ball, Roger Morris, Ian Andrews, Joan Childs, Ellie Rotheray and Geoff Wilkinson
c/o 241 Commonside East, Mitcham, Surrey
syrphid58@gmail.com

HRS approaches 1 million records

All of the data extracted and received for 2016 have now been uploaded into the HRS database. Almost 52,000 records have been added, mostly covering records from 2016, but also a few dating as far back as 2005. This upload included MapMate syncs but not data from iRecord; we have yet to decide what to do with the likely ~12,000 additional records that we don't have from iRecord.

The headline should therefore read HRS reaches 1 million records! As it stands, the database currently holds 994,838 records. There is about 10% duplication within the dataset so the true number of 'unique' records is probably about 900,000. That leaves us a bit short of the million in strict terms but at the current rate 1 million 'unique' records should be achieved within the next two years, and 1 million records in total will be reached very soon.

The most obvious feature of the data is the dramatic rise in the number of records received since 2013. The top four peaks for the most records received fall into the years 2016 (53,669); 2015 (48,708); 2014 (41,917); 1987 (39,442) respectively. We know the 1987 peak was stimulated by a 'call for records' in advance of atlas production that took a further 13 years to materialise! The chart below hopefully explains the evolution of the dataset.

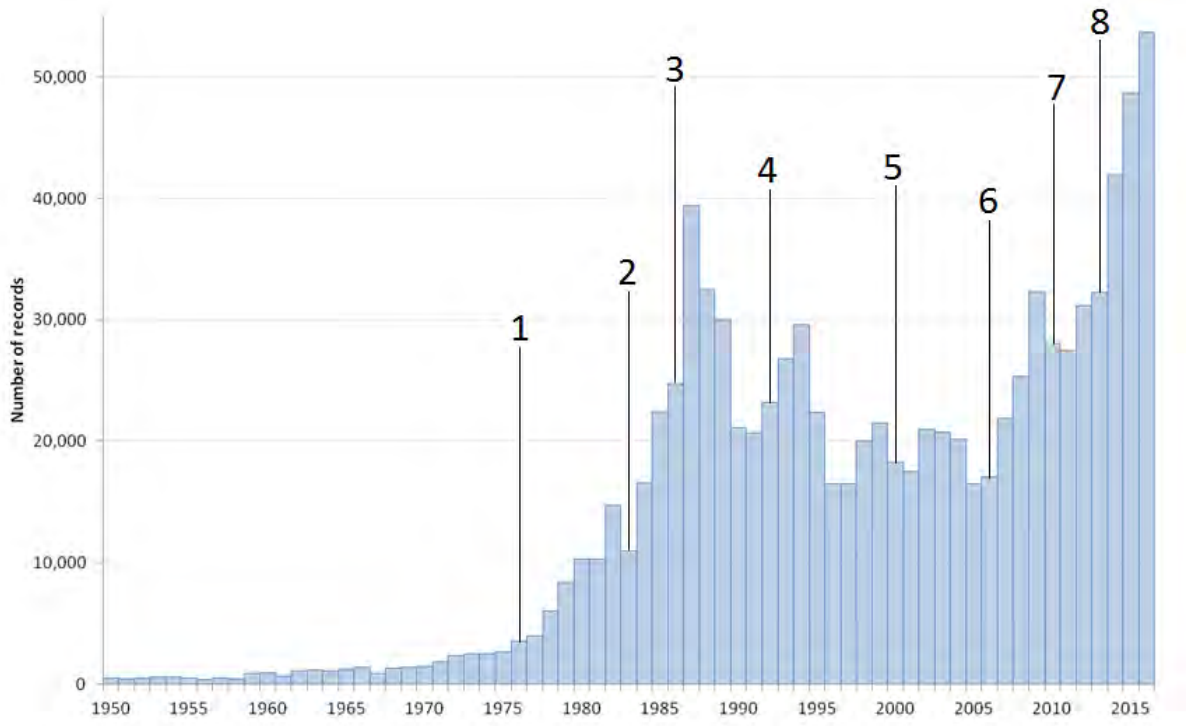


Figure 1. Key points in the evolution of the HRS dataset

1. The HRS was established in 1976 with Dr John Ismay (now specialist in Chloropidae) as its organiser. Dr Philip Entwistle replaced John some while later and ran the scheme until he retired from the Institute of Virology in 1987. When the scheme was launched, the only key was the RES key by Ralph Coe, which was very difficult to use, and highly out of date. Any serious student of the family had to use this in conjunction with numerous papers describing additional species.
2. British Hoverflies: an illustrated identification guide by Alan Stubbs & Steven Falk was published in 1983. It resolved many of the critical problems with the literature and set the scene for a new approach to keys including thumbnail sketches for critical features. It was a game-changer in many ways and has become the model for most modern keys. In doing so, it opened up hoverflies to a much wider audience and interest in them grew substantially. The original print run was 1,000 copies: that rapidly sold out and a second print run was produced that incorporated a supplement detailing new species and new information.
3. Around 1986 there was a 'call for records' in anticipation of production of a 'provisional atlas'. This led to a major push to improve coverage and resulted in a big spike in recording in 1987. However, Philip Entwistle retired and also stopped running the scheme at around the same time. Graham Rotheray took over as Newsletter editor but there was nobody at the helm of the scheme and interest rapidly waned.
4. In 1991 Alan Stubbs persuaded Stuart Ball (SB) and Roger Morris (RM) to take on the scheme. The task was daunting because some 2 cubic metres of record cards had been amassed but there was no chance of their being computerised in the foreseeable future by BRC Monks Wood - they simply did not have the resources and there was ongoing austerity in funding for natural sciences. SB & RM therefore took the job on knowing that they would have to do the computerisation themselves. It took 5 years. Some renewal of interest in hoverflies was stimulated but many of the most capable dipterists had become interested in other families and there was only a small blossoming of effort.
5. By 1997 the data were in order and it was possible to draft a 'provisional atlas'. Once drafted it took two years to get to the printers and was finally published in 2000. Between 1998 and about 2005, SB and RM were not terribly active in promoting the HRS but did completely revise Stubbs & Falk into the 2002 version that is available today.
6. Around 2005, SB and RM realised that there was a need to reinvigorate the scheme and, to give it impetus. Early indications of a proposed revised provisional atlas were circulated amongst scheme

members. At this time, nearly all communication with recorders was via the Hoverfly Newsletter that was issued twice-yearly. Around the same time, it was also realised that the 'old guard' of recorders was becoming aged and a new generation was needed. More emphasis on training was therefore part of the initiative. At this point we did not have the capacity to provide microscopes so courses could only be run at venues where they were available. Around 2008-2009 the OPAL project was launched. It provided small grants to assist schemes and the HRS applied for funds to buy microscopes and to print teaching material. In two tranches, 13 teaching microscopes and a camera microscope were purchased. This package has been the key to SB and RM running courses the length and breadth of the country. No count has been kept of courses or students, so the absolute numbers are uncertain.

7. The second 'provisional atlas' was published in 2011. Originally planned for 2010 it finally emerged in conjunction with the 7th International Conference on the Syrphidae held in Glasgow. Work on this atlas stimulated some additional effort, but the big improvement in data arose when Kenn Watt's Scottish data was incorporated into the dataset and Kenn became a joint author of the atlas. Since 2011 the HRS has been comparatively more active. Apart from training courses, SB and RM have spent a fair amount of time 'square bashing' in remote places. We started doing this from around 2004, with a major expedition to Harris and Lewis in 2006. RM has also done a significant number of trips alone.
8. In 2013, two events completely changed the way hoverflies were perceived amongst natural historians. Firstly, SB and RM produced a new introductory guide in the WILDGuides series. The UK Hoverflies Facebook group launched a few months later. Membership of the FB group has grown exponentially and now stands at around 3,150. This initiative has seen the numbers of records entering the scheme grow substantially, but only because RM has made a serious effort to ensure that data are extracted from the FB page. This growth in interest and effort has also led to changes in the organisation of the HRS. The scheme is now run by a group of eight: Ian Andrews, Stuart Ball, Joan Childs, David Iliff (Newsletter editor), Judy McKay (FB group manager), Roger Morris, Ellie Rotheray and Geoff Wilkinson. We anticipate that the suite of organisers will have to grow yet more because there is so much to do.

Coverage in 2016

Coverage in 2016 shows that there is much more to do, with most recording concentrated in England. To a great extent this reflects the inevitable concentration of recording effort around centres of population. A lot of Central Wales is both sparsely populated and difficult to work because easily accessible sites are more scattered and the geology is unhelpful (with very poor acid conditions that limit species diversity). The same holds for much of Scotland, but it is surprising just how few records we get, comparatively speaking; there is a lot of scope for new additions if anybody feels inclined to take a look at poorly recorded areas.

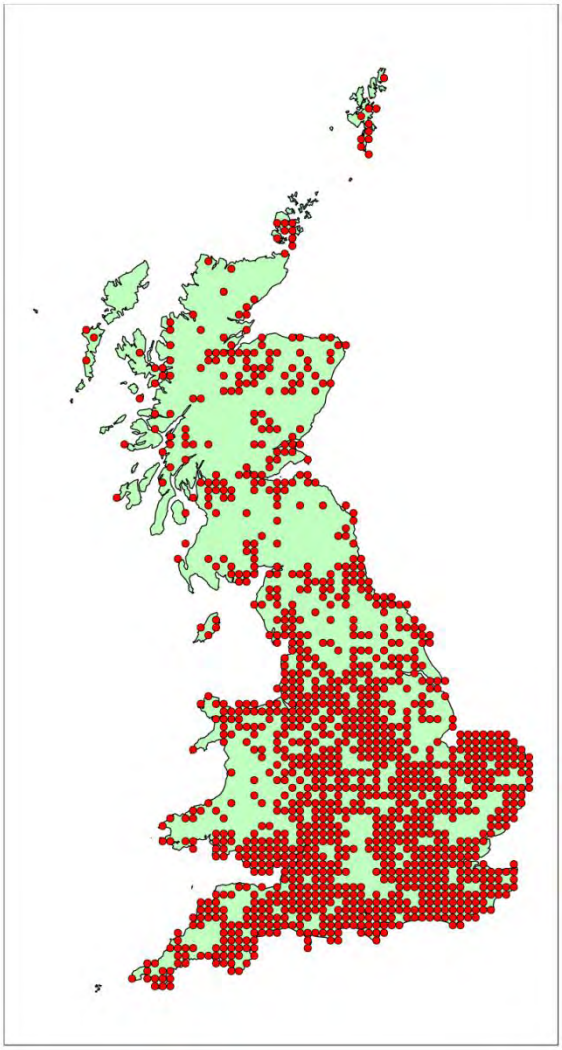


Figure 2. Coverage in 2016 at 10km resolution.

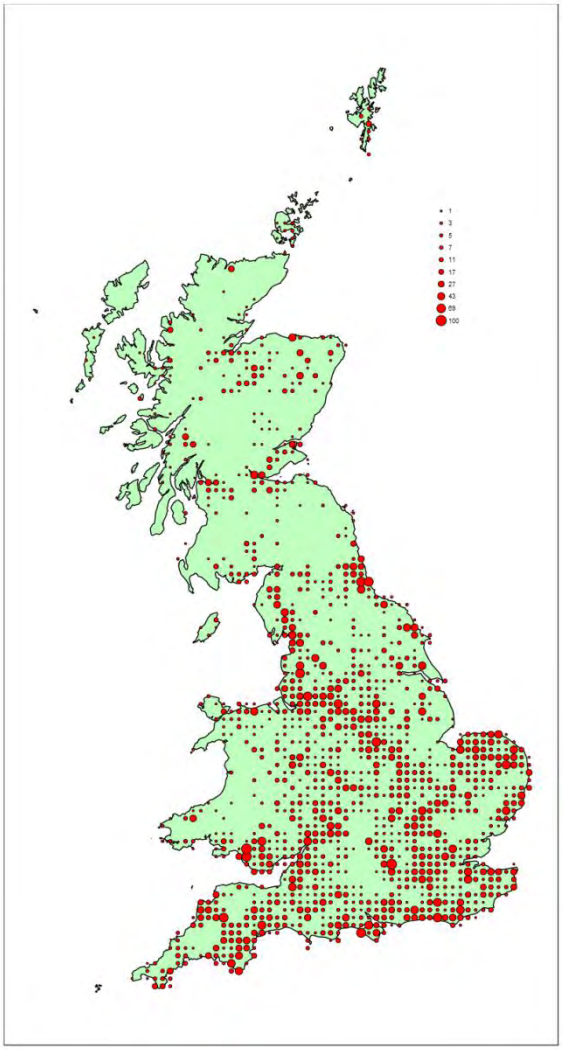


Figure 3. Number of species recorded in each 10km square in 2016.

The coverage maps are, however, simply a snap-shot of one year's effort and over a series of years the gaps do get filled in to a large extent. Nevertheless, there will be parts of the country where there will always be a shortfall in coverage without deliberate 'square-bashing'. Are you located in a place where more coverage is needed? If so, maybe a few forays into uncharted territory would yield interesting results?

Do you have records?

We are pretty sure there are some substantial datasets that we have not received in recent years. If you have records, we would be very pleased to receive them. Stuart is in the process of developing a new website to replace the existing one that no longer works properly. A full set of revised maps will be available through this new site which we will hopefully have on-line by Christmas.

Basking behaviour of *Melangyna lasiophthalma*

Joan Childs
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On 28 April 2017, I ventured into the wood on the east-facing side of Oliver's Mount in Scarborough, North Yorkshire, grid reference TA0486. The woodland is open mixed broadleaved, dominated by sycamore, with some mature beech, and a mix of holly, horse chestnut, whitebeam, rowan and silver birch. It was a warm, sunny day, and there was quite a lot of hoverfly activity particularly around patches of ramsons. I noticed a number of hoverflies basking on the trunks of trees. I have seen this behaviour in species such as *Cheilosia pagana* and *Orthonevra geniculata** but on inspection, I realised these were *Melangyna lasiophthalma*. Most of the pale, smooth-barked trees had one or two of these hoverflies on, which must have reflected a sizeable population. The flies stood out obviously on these trees; I searched on the rougher barked tree trunks, and there did not seem to be any, though it is possible that I missed them as they would have been more cryptic in this setting. All those low down enough on the trees for me to see clearly were males. I know that both males and females had already emerged as my garden backs onto this woodland, and I had been recording both sexes visiting flowers there since 24 March 2017. The sex of the hoverflies, and the apparent preference of pale, smooth trees, led me to wonder if there was also a lekking aspect to this behaviour. One male was observed engaging in repeated wing-flicking.

Melangyna lasiophthalma, Oliver's Mount Woodland

Melangyna lasiophthalma basking on the sunny side of a tree

Typical pale, smooth-barked tree used by basking *Melangyna lasiophthalma* (two on this particularly tree) (Photos: Joan Childs)

* Basking and mating habits of *Orthonevra geniculata* at Wicken Fen, Bulletin of the Dipterists Forum Hoverfly Newsletter **61**, Autumn 2016

Hovering behaviour of male *Leucozona lucorum*

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Foremost among the reasons why we find hoverflies interesting are the attractive coloured patterns of many of them and their remarkable hovering abilities. Not all species employ their hovering power in the same way and it is fascinating to observe the differences of hovering behaviour between species. Perhaps the best known of these is the courtship flight of *Eristalis nemorum*, the subject of an article by John Bridges in the last newsletter, where the male hovers above a perched female. *Eristalis tenax* does a similar thing except that the male hovers alongside, at the same altitude, as the female, while *Anasimyia lineata* acts like *E. nemorum* but with the hovering male also periodically rotating its body in a manner graphically described by R C Bradley, quoted by Verrall, as "shaking like a dog just out of water". Males of *Epistrophe eligans* and *Eristalis pertinax* hover at about a metre above the ground well away from vegetation while those of *Volucella pellucens* and *Eristalis intricaria* often hover overhead (more than 2 metres above ground level). Several members of the Syrphinae hover for sustained periods in dappled light under trees and both sexes of *Epistrophe grossulariae* take nectar from flowers while hovering, in the manner of the Hummingbird Hawkmoth.

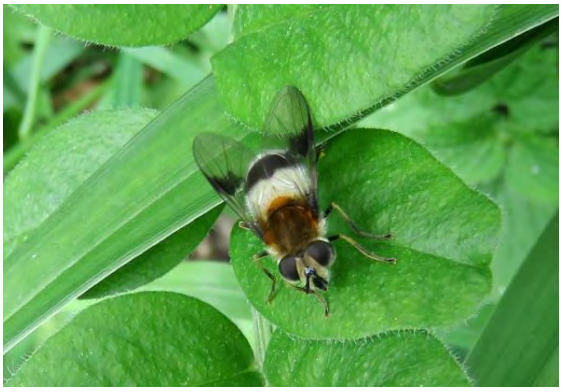
Leucozona lucorum is a bright and conspicuous hoverfly - "colourful" is probably the wrong description as it is predominantly black and white. Although common it is usually seen singly. Its chief characteristics are its "typical fly" body shape (i.e. more like, for example, that of a Muscid than most other hoverflies, especially the other two British members of its genus) and its striking resemblance in both its abdominal colour pattern and its wing cloud to another hoverfly, *Volucella pellucens* (see illustration at the top of this newsletter), which is not closely related: (do they both mimic some long-extinct Hymenoptera species?). I cannot recall before this year having noticed anything especially unusual about the hovering behaviour of *L. lucorum*, but during a four-day period in May of this year I was able to witness an extensive display of this in my garden. The activity all took place in an approximately 4 cubic meter space on and near a rose bush and a hornbeam hedge. On 4th May I noticed a male *L.lucorum* hovering about 1.3 meters above ground level then resting on the rose bush (at the same approximate height); after resting it resumed hovering and periodically returned to rest on the rose bush (usually on the same leaf). I made several visits to the area during the course of the day and as far as I could tell this alternate hovering and resting continued throughout most of the daylight period. A female of the species was occasionally present on the hornbeam hedge, but I observed no interaction between the male and the female. This activity continued during the sunny periods of the following three days.

Initially I assumed that this hovering behaviour by the male was probably territorial, but as I continued to watch this activity it became apparent that, intriguingly, at least two males were involved - one of them was a typical male with characteristic broad white markings on tergite 2 and the other was the dark form of the male, in which these markings are all but absent. Both hovered in the same space and perched on the same bush, but until the fourth day I did not see them present simultaneously. On that occasion while the dark male was performing its usual hover and rest routine, the typical male was perched on the hedge close by as if awaiting its turn to take over.

The typical male

The dark form

The typical male hovering



The female

The *Dramatis Personae*: *Leucozona lucorum* photographed between 4th and 7th May (Photos: David Iliff)

A possible flower association of *Ferdinandea cuprea*

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On 19 August 2017 I visited a large woodland site in the Cotswolds. The weather was cool and there had been rain during the night; the grass was still wet in the lower and more shaded rides. As there was very little insect activity I decided that I would spend some time photographing the Naked Ladies which were a conspicuous and colourful feature of the scenery. By Naked Ladies, of course, I mean the flowers of *Colchicum autumnale*, also known as Meadow Saffron.

My eye was soon caught by an unusually downward facing flower within which there seemed to be some activity going on. I found that there was a female *Ferdinandea cuprea* moving around inside the base of the inverted flower. The hoverfly may have been foraging for nectar or pollen but as the surroundings were devoid of flying insects, and because of the hesitant way it began to emerge from the flower on my approach, I formed the impression that it might have been sheltering under the tent of petals for some time.

The day warmed up later, but not very much, and the few flowering plants in the woodland continued to attract almost no hoverflies. I had walked some distance from my first sighting of *F. cuprea* when I spotted a particularly shapely group of Naked Ladies and decided to take their photograph. While I was getting into position I became aware that a fly of some kind was coming into view and was clearly moving towards the same flowers. I quickly took my shot, hoping that the fly might add some interest to the image. Fortunately, the fly came out almost as well-focused as the flowers, and is clearly again a female *F. cuprea*. On this

occasion the hoverfly did not land on the flower; it apparently detected my presence, changed course and flew away.

These two separate sightings of *F. cuprea* with *C. autumnale* may be a random coincidence. However, as I am not aware of any reported association between this flower and any species of hoverfly, the observation may be of some interest. In Hoverflies of Surrey (Surrey Wildlife Trust, 1998) Roger Morris does not include *C. autumnale* either in the extensive list of flowers visited by hoverflies (Appendix 2) or among those mentioned in his account of *F. cuprea*,.

F. cuprea emerging from a hanging flower of *C, autumnale.*
(Photos: Martin Matthews)

F. cuprea flying towards one of a group of *C. autumnale* flowers.

Newsletter No. 22
Autumn 2017

Goodbye!

Adrian Plant

It is now about 25 years since I took over the Empidid and Dolichopodid Recording scheme. In those days, it was a 'Study Group' initiated by Roy Crossley and Anthony Bainbridge and by the time I came on the scene they had amassed a few thousand records on the old recording cards. These I digitised and set about adding new records from my own field notebooks, and from anyone I could cajole into submitting records. Back then, the majority of data came from a very small band of E&D enthusiasts but as the years have passed an increasing (but still rather small) number of recorders has emerged and the dataset now boasts about 85,000 records for empids and not far off that number for dolichopodids. My interest has focussed mostly on Empididae and Hybotidae and I rather let Dolichopodidae take the back seat in my efforts to cajole, collect and collate records. This inevitably resulted in the dolis getting left behind in the records league table but fortunately in recent years Martin Drake has stepped into the breach and his concentration on dolis means that the gap is now closing fast.

For much of the last dozen years, it has been fortunate that my employers at National Museum of Wales were sympathetic to me spending at least a little of my time on E&DRS matters. Sadly, such enlightened times are long gone – as has my job at the Museum. I will soon be setting off for a new life in Thailand where I have accepted a position at Mahasarakham University. Many years back, I worked in New Zealand and it was there that my dipterological interests crystallised with empidoids; the fauna was large, fascinatingly bizarre and very poorly known. There is a pleasing symmetry in relocating to Thailand where the fly fauna is, if anything, even less well known than that of New Zealand (I have ~500 undescribed species from a study site I already work on over there!). I look forward to exciting fly-times!

The E&DRS is very fortunate in that Steve Hewitt has agreed to step in as co-organiser with Martin Drake. Steve will champion Empididae and Hybotidae while Martin will continue with Dolichopodidae, although all empidoid records can be sent to either of them (contact details appear elsewhere in the Bulletin). I will continue to maintain an interest in British empidoids; they are a fascinating group and we still have so much to learn about them I particularly hope that we will soon initiate an Atlas Project to summarise what we know of empidoids in the UK. The data is of sufficient quantity and quality to make meaningful analysis of distributions, habitat, phenology etc. for many species and I hope to have some part in that project.

I think the E&DRS will have a rosy future. Empidoidea are very abundant, have fascinating life-histories and behaviours, and are very speciose; even in the UK, there are likely to be at least 30 undescribed species awaiting discovery, or so the statistics say. We are fortunate in having good keys and descriptions of most species and, with a few exceptions, identifications are not too difficult. They surely deserve a wider following than they currently have.

Adrian Plant's publications using E&D Scheme data

Plant, A.R. 2003. Phenology of Empididae and Hybotidae (Diptera) in Great Britain. *Dipterists Digest (Second Series)* **10**, 13-20.

Plant, A.R. 2004. *Hilara* Meigen (Diptera: Empididae) in Britain: a provisional synopsis of distribution, habitat preferences and behaviour. *Acta Universitatis Carolinae Biologica* **48**, 165-196.

Plant, A.R. 2005. Climatic change and insect populations: correlation of the North Atlantic Oscillation with abundance of Empididae and Hybotidae (Insecta: Diptera: Empidoidea) in Great Britain. *International Journal of Dipterological Research* **16**, 227-231.

Plant, A.R. 2014. Current patterns and historical origins of endemicity in British Empididae (Diptera). *Dipterists Digest (Second Series)* **21**, 89-101.

Plant, A.R., Jonassen, T., Grootaert, P., Meyer, H., Pollet, M. and Drake, M. 2017. The arrow points north - endemic areas and post-Devensian assembly of the British Empidoidea fauna (Insecta: Diptera). *Biological Journal of the Linnean Society* **20**, 1-17.

Hello!

Stephen Hewitt

Taking over as scheme organiser for Empididae and Hybotidae in place of Adrian Plant is obviously a tough act to follow. Adrian has set the bar very high with his provision of keys to aid recording the British fauna and through his analysis of the Scheme data to generate fascinating insights on the status and distribution of species and communities. Thankfully he has promised to stay in touch with help and advice. My own knowledge is much more limited, although

my interest goes back over several years of collecting in northern England and Scotland. I have taken particular interest in the Hybotidae initially stemming from my studies on flies on exposed riverine sediments, but have also looked at both families in woodland and upland habitats. I look forward to getting to grips with the database and working with Martin on the Scheme. And of course I hope that you will send in any records that you have – past or present.

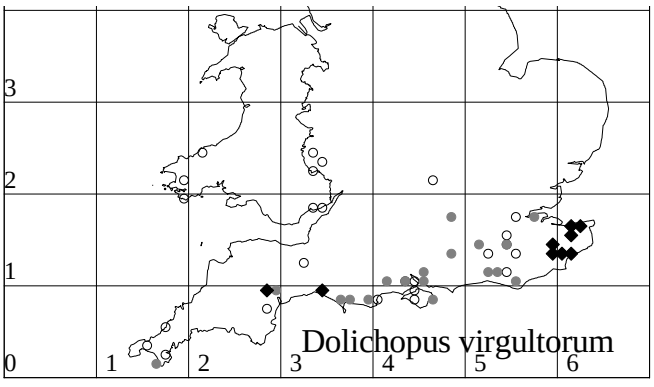
2016 was the year of *Dolichopus virgultorum*

Martin Drake

This *Dolichopus* appears to be genuinely on the northern edge of its range in Britain and the infrequency of records pointed unambiguously to a nationally scarce species (in the old pragmatic sense of Nationally Scarce, not the latest rigid interpretation by Natural England). However, during 2016 in Kent, Devon and nearby areas in Dorset I recorded it at 12 sites compared to just six sites in the previous 30 years of collecting. At one Dorset site it was the commonest *Dolichopus*. I also received several records from other contributors to the E&D scheme in 2016 compared to the dribble of records from across southern England in previous years (compare black diamonds for 2016 with grey dots for 1990-2015 on map). The sudden explosion of this species across the breadth of its range may be a manifestation of warming climate, although it was clearly found further north before 1990 (open circles on map) when global warming was less frequently invoked to explain range changes. Its habitat appears to be anywhere shaded, with or without streams, but with more records from moderately dry deciduous woodlands; just a few are from more open places such as scrubby grassland and even acid mire and a brackish lagoon. Haliday, who described *virgultorum* from Ireland in the mid 19th century, clearly thought that it lived in shrubby places since the epithet means bush, thicket or shrubbery. Verrall (1904) had a similar understanding, saying "they also seem to me to avoid marshy districts and occur on shrubs growing on the dry banks at the sides of country lanes." Verrall's country lanes are now our green lanes and tracks, which does not quite equate to the habitat where we find *virgultorum* today. Anyway, 2016 is the year of the bush fly.

References

Verrall, G.H. 1904. List of British Dolichopodidae, with tables and notes. *Entomologists monthly Magazine* **40,** 164-173, 194-199, 223-228, 241-245.



Thinophilus and *Aphrosylus* problems

Martin Drake

Females of our two *Thinophilus* are sometimes misidentified. They are like chalk and cheese when side-by-side, and do not even seem to belong to the same genus. The problem lies in d'Assis-Fonseca (1978) using as his first character the number of humeral (postpronotal) setae. Not only are these difficult to see but the numbers one is asked to count appear to be wrong. This character originated in Becker's (1917) monograph, and was repeated by Parent (1938) and d'Assis-Fonseca. It was not used by Negrobov (1979) in *Die Fleigen der palaearktischen Region*, and I do not use it in my new key presented at the end of the newsletter. There is a faint but unrealistic explanation that this is actually the wrong character, and that Becker meant the pronotal setae below the humerus, which are stout long pale and conspicuous in *flavipalpis*, and rather sparser in *ruficornis*, but the descriptions in these works do not point to such a simple mistake.

I gave a poor map of *T. ruficornis* in *E&D Newsletter* **18** (2013); here are better maps for both species. Any inland records will almost certainly be errors for these obligatory saltmarsh species.

Aphrosylus is another obligate halophile; all our four species live on coasts, usually rocky shores, but *A. mitis* is found more often in more muddy sheltered places. There are two pairs of species, one big, the other very small. But the big pair, *celtiber* and *raptor*, can be easily misidentified using available keys, even as males which show few sexual differences. Species of the small pair are easily separated. Both sexes of all four species are easily accommodated in a single key, and I provide a belt-and-bracers version at the end of the newsletter; it has more characters than needed but at least is will work for the most battered of specimens.

Here are maps for *A. celtiber* and *A. raptor*. The former is the more common species, even in south-west Britain where they occur together. The sparse records for *A. raptor* away from the south-west (Kent, Aberdeenshire, Hebrides, Orkney) suggest errors to me - I may be wrong, but it would be good to establish whether both species are truly found around all the British coast. *Aprosylus celtiber* larvae feed on the common barnacle *Chthamalus montagui* Southward (Poulding, 1998), but whether other barnacles are attacked, or even whether other species of *Aphrosylus* feed on them is unknown - see, for instance, Roy Crossley's suggestion that *A. ferox* may develop on completely different prey (*E&D Newsletter* **20**, p6, 2015). It is bizarre enough that a fly should feed on barnacles, so it is probably too speculative to suggest that *A. raptor*, whose apparently south-west distribution coincidentally matches that of another common barnacle, *Perforatus perforatus* (Bruguière), may be limited by feeding on just this species out of the six common and more widespread barnacles on British coasts.

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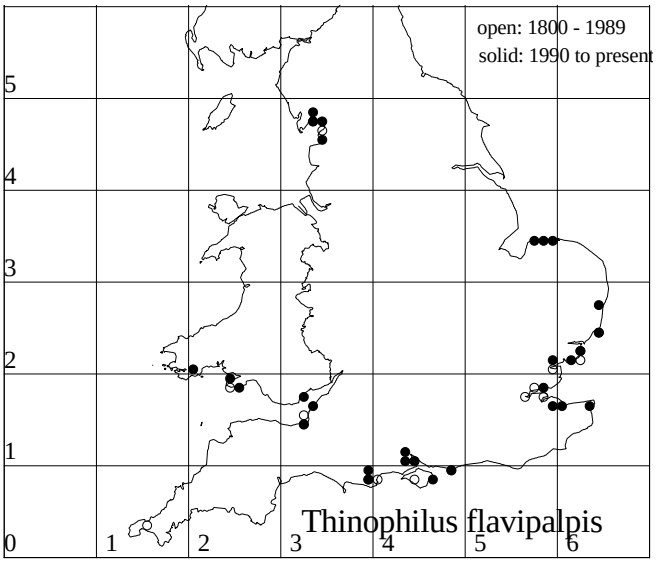
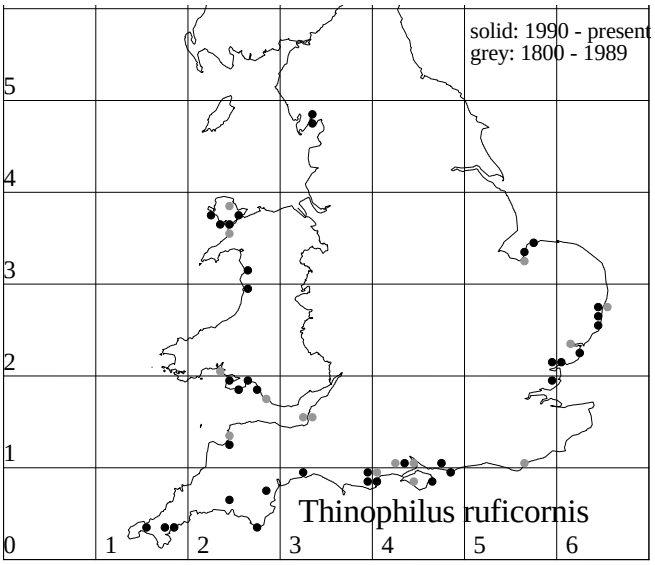
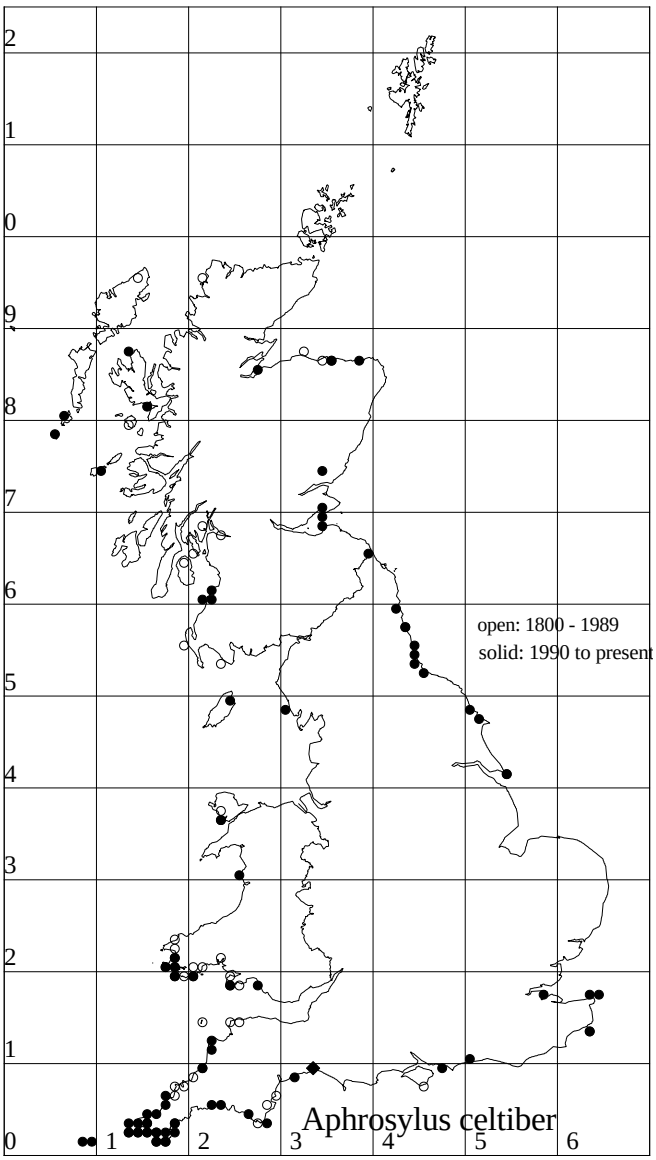
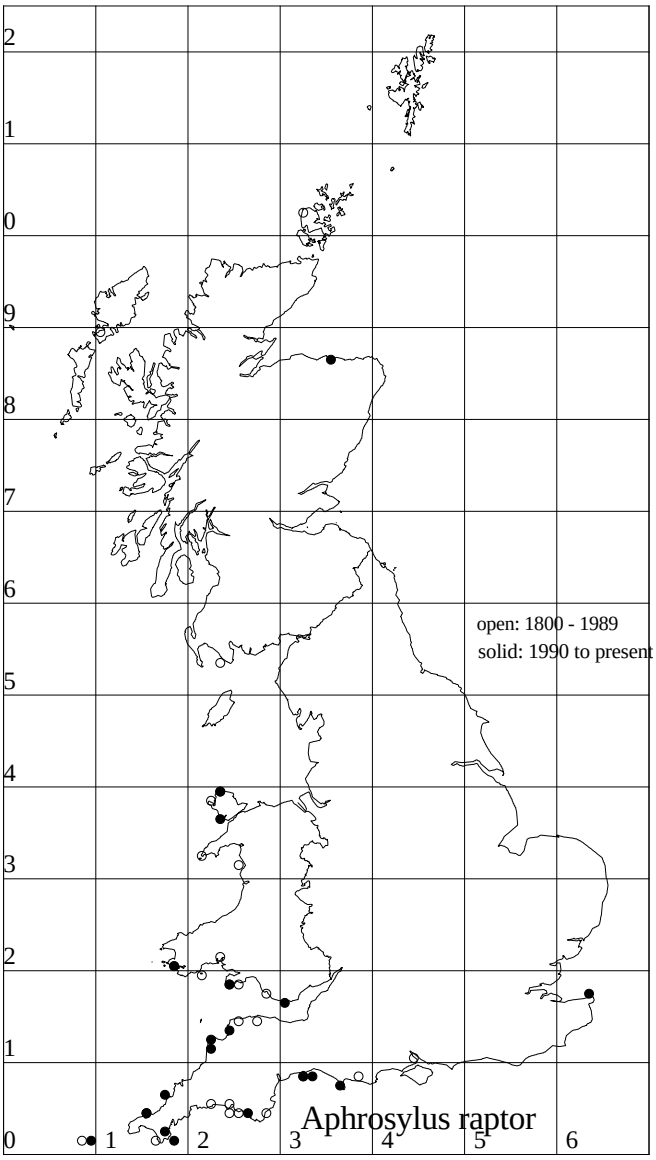
Negrobov O.P. 1979. Dolichopodidae. In: Lindner, E. (Ed.) 1979. *Die Fleigen der palaearktischen Region* **29**, 475-530. Schweizerbart, Stuttgart.
Parent, O. 1938. Diptères Dolichopodidae. *Faune de France* **35**. Lechevalier, Paris.









Difficult females

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In an old store-box where I deposit dolichopodids that have me baffled, is a section headed 'difficult females'. These belong to species-pairs which I find hard to distinguish and I have now reached the conclusion that some of them cannot be reliably separated using the Fonseca (1978) 'Handbook'.

The following are those which have given me most anguish in the past, and which I have now re-examined:

Dolichopus latilimbatus / nubilus; *Gymnopternus brevicornis / celer*; *Rhaphium appendiculatum / caliginosum*; *Chrysotus femoratus / neglectus.*

Martin Drake has reminded me that two of the pairs (*D. latilimbatus / nubilus* and *C. femoratus / neglectus*) were included in a more extensive review of difficult species by Jon Cole in an early issue of this Newsletter (No. 3, March 1987 – edited by me), and which I had quite forgotten about when preparing the first draft of this note.

Dolichopus latilimbatus / nubilus

I have 10 specimens in my collection standing under *D. latilimbatus* and 7 standing under *D. nubilus* and after measuring overall body lengths I looked at three characters listed in the Fonseca key (couplet 21, p.28): 1 – extent and intensity of colouring towards the apex of the hind tibia; 2 – position of bristles on mid-tibiae; 3 – costal length between radial and cubital veins.

Of the 10 I had previously named '*latilimbatus*' only 6 clearly possessed all three characters, and of the 7 named '*nubilus*' only 2 possessed all three characters. The remaining 9 specimens did not possess all three characters of either species and thus they cannot be reliably assigned to either. All the '*nubilus*' specimens were from brackish coastal or estuarine sites along the Humber bank where the species is often abundant. Only one of the '*latilimbatus*' was from such a site, the remainder being from a variety of inland localities.

In his 1987 note, Jon commented that he does not think that isolated females of these two can be separated with certainty, and I think that remains the case.

Gymnopternus brevicornis / celer

In Yorkshire *G. celer* is found more often than *G. brevicornis* and the separation of males is simple. However, I find females impossible to separate; unless, of course, I am only ever looking at the same species! The two distinguishing characters used by Fonseca are the comparative length of the aristal hairs and the colour and length of the facial hairs. In all the specimens I have examined I have had difficulty in seeing any, or very few, facial hairs, and then I have not been able to tell if they are dark or light – maybe it's my eyes, my microscope or the angle of light! As to the aristal hairs, all seem to be the same length on every specimen – perhaps I truly do see only one species. The problem is that the ones I have looked at recently all run to *brevicornis*, yet the only (numerous) males from the same site are *celer*! Pollet (1990) ignores the antennal hair lengths in his key, but uses the facial (epistoma) hairs as the principle character, with further characters relating to the colouration of the legs. I am not at all sure how consistent is this latter character. Again, all the specimens I have examined seem to lean towards *brevicornis* from dominantly *celer* sites.

Rhaphium appendiculatumn / caliginosum

The single character used by Fonseca to separate these two is the shape of the cubital vein as it approaches the wing margin. Many years ago Neville Birkett told me that separation was easy because of size difference between the two species. I have recently re-examined the (provisionally) named specimens in my collection and the body-lengths range as follows: *appendiculatum* 3.3mm-3.7mm (9 specimens): *caliginosum*: 2.8mm -3.6mm (17 specimens). As to the curvature of the cubital vein, I have specimens where this vein runs straight to the wing margin, but there is a downward curvature of the discal vein which makes the gap between the two wider than if they were parallel. In addition, I have seen a specimen where there is a slight curvature of the cubital vein on one wing, but not on the other. Also in some cases it seems as if the presence of the curvature appears to be clearer, or less so, depending on the angle at which the wing is viewed. It might be my microscope or my age-related diminishing eyesight, but I am not convinced that these two can be reliably separated on this single character.

Chrysotus femoratus / neglectus

Fonseca separates these two on the single character of the shape of the hind margin before the tip of the postical vein. I have in my collection of 13 specimens (none of which I attribute with certainty to either species), only one example in which this character is clear. Again, there are some which might or might not show a slight bulge depending on the angle of view, but I consider this to be an unreliable character. Jon Cole regarded the hind marginal contour as a 'doubtful character'.

Finally I would add that I have doubts about the separation of some female specimens of *Argyra perplexa / argentina* – size might be a help with these two.

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Pollet, M. 1990. Phenetic and ecological relationships between species of the subgenus *Hercostomus* (*Gymnopternus*) in western Europe with the description of two new species (Diptera: Dolichopodidae). *Systematic Entomology* **15**:359-382.

[editor's note: I concur with Roy and Jon. If recorders noted the sex of their specimens, I can one day eliminate dubious records based on females from maps. MD]

Dolichopodids from the Dipterists Forum summer meeting at Kent, 2016

Martin Drake

This was a most productive meeting. Our total was 121 species among about 4,900 specimens, in 19 hectads, so that made a difference to the distribution dots in VC15. Most of the widespread species were that you might expect to find but the exception was *Dolichopus virgultorum*, as discussed in another article in this newsletter. It ranked 13th in terms

of the number of records, beating another 23 species of *Dolichopus*. Among other uncommon species was *Dolichopus calinotus*, new to Britain (see *Dipterists Digest* **23**, 231-236) and *D. excisus* which must remain 'data deficient' in terms of allocating a rarity status, although it is now known from seven hectads from Dorset to Suffolk. Among other species which will be given an IUCN threat status in the forthcoming status review are *Argyra grata*, *Campsicnemus magius*, whose discovery at Graveney and Rushenden Marshes was much appreciated, *Dolichopus arbustorum* (a *virgultorum* look-alike), *Poecilobothrus ducalis* at Shellness and *Thrypticus smaragdinus*. Kent is the best recorded area for three of these, since two of them (*C. magius*, *P. ducalis*) are saltmarsh species and the Thames estuary marshes include among the best of this habitat in Britain – see my article on *C. magius* in E&D Newsletter **20** (2015). *Argyra grata* is also better recorded in Kent than elsewhere in Britain, and during this field meeting we found it at four sites (Bysing Wood, Denge Wood, Larkey Valley Wood and Stodmarsh). Most people dislike *Thrypticus* because they are difficult to identify but *T. smaragdinus* is not only the largest species in the genus but has unmistakable genitalia. Its record from Graveney Marshes spans the gap between well known populations in the Norfolk fens and an isolated population in Poole Harbour, Dorset. Three more species are nationally scarce: the coastal species *Aphrosylus mitis* (second Kentish record), *Chrysotus collini*, apparently confined to Sheppey and just across the water at Chetney Marshes, and *Sciapus laetus* which is also known from the Thames marshes but on the Kentish side only.

Perhaps the most interesting habitat was, inevitably, coast marshes where many saltmarsh specialists were found. Among those not mentioned above were *Dolichopus sabinus*, *D. signifer*, *D. strigipes*, *Poecilobothrus principalis* and *Thinophilus flavipalpis*, along with commoner saltmarsh species.

Tachytrechus insignis habitat

Martin Drake

In E&D Newsletter No. 18 (2013), I suggested, with a query by it, that *Tachytrechus insignis* may be coastal in Britain. Peter Kirby wrote soon afterward to say that all his records were inland and overwhelmingly from sand and gravel pits with bare sand or sandy silt with low organic content. During this summer's (2017) Dipterists Forum field meeting based at Snowdownia, some of us visited an extraordinary pioneer dune slack at Morfa Dyffryn. After trekking across a desert (so it seemed) of completely bare sand, we came to a circle about 80m across of damp sand with about 10% vegetation cover. Here the commonest fly was *T. insignis*, running around and cavorting with each other – males displaying, females rejecting amorous advances. A very approximate density was 'several per square metre' although obviously rather difficult to estimate accurately. So this confirms Peter's observation about this species liking bare sandy sites at a very early stage in succession. Thanks to Mike Howe for showing us this extraordinary site and Rob Wolton for the photographs.

'The Naturalist'

Roy Crossley
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In recent years I have published short notes on dolichopodids in *The Naturalist*, the journal of the Yorkshire Naturalists' Union, which is perhaps not so well known beyond northern England as it deserves to be. However, I am delighted to report that the complete run of the journal, from 1864, is now available to view online (http://www.ynu.org.uk/naturalist). There is a two year embargo on making volumes publicly available, so the 2016 articles cannot yet be viewed online; however, I do have pdf's of these and will provide them on request.

These recent contributions are:-

Notes on the distribution and habitat associations of dolichopodid flies in Yorkshire. *Nat*. Aug. 2014 vol.139 No.1086 pp.108-112

The dolichopodid flies of North Cave Wetlands, a former sand and gravel quarry. *Nat*. Dec. 2014 vol.139 No.1087 pp.172-179

Notes on the dolichopodid flies of two contrasting Yorkshire bogs. *Nat*. Aug. 2015 vol.140 No.1089 pp.128-131

Notes on the Diptera of a Yorkshire lowland heath. *Nat*. April 2016 vol.141 No.1091 pp.20-24

The genus *Campiscnemus* in Yorkshire. *Nat.* Aug. 2016 vol.141 No.1092 pp.99-100

I would add that there is a vast wealth of dipterological material contained in the pages of *The Naturalist* over the past 150 years or so, mostly of course to do with the north of England generally, and Yorkshire in particular.

Sympycnus 'desoutteri' again

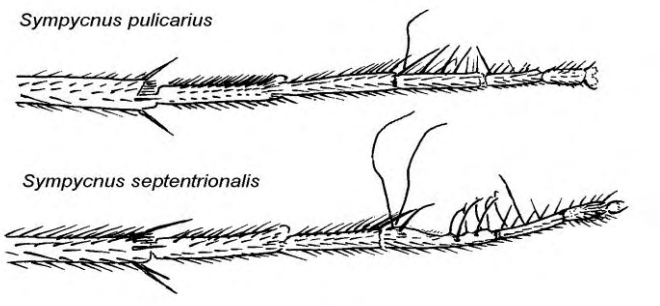
Martin Drake

In *Dipterists Forum Bulletin* No.81, p7, Roy Crossley drew attention to the demise of the name *S. desoutteri* Parent which is now a synonym of *pulicarius* (Fallén) (Pollet *et al*. 2015). The complication is a very similar new species, *septentrionalis* Pollet, recorded rarely in Britain. I'm still receiving records for '*desoutteri*' which I'm interpreting as *pulicarius*, but we should all check those tediously abundant specimens for the new species. I've yet to find it. Here is my key version of the characters used to separate them, together with the drawing I presented in the Bulletin based on the photographs in the paper. The authors recognise that females are probably impossible to separate reliably but I give the characters they suggest may differentiate the two species.

Males

1 Mid tibia with postero-ventral seta at apical third (rarely absent); hind tarsal segments 2 and 3 equal in length; third segment even in width viewed from above, with two basal setae 0.8 times as long as segment's length, and 3-5 setae postero-dorsal setae spaced evenly along shaft, each about half the segment's length. ..... *pulicarius*

\- Mid tibia without postero-ventral seta; hind tarsal segment 3 slightly longer than segment 2 (1.1 times); third segment flattened on the apical two-thirds so appears narrower distally when viewed from above, with two basal setae about 1.2 times segment's length; along pd side are 1-2 setae at the extreme base, followed by bare zone then several mixed black and white setae in apical half, each up to half the segment's length.



..... *septentrionalis*

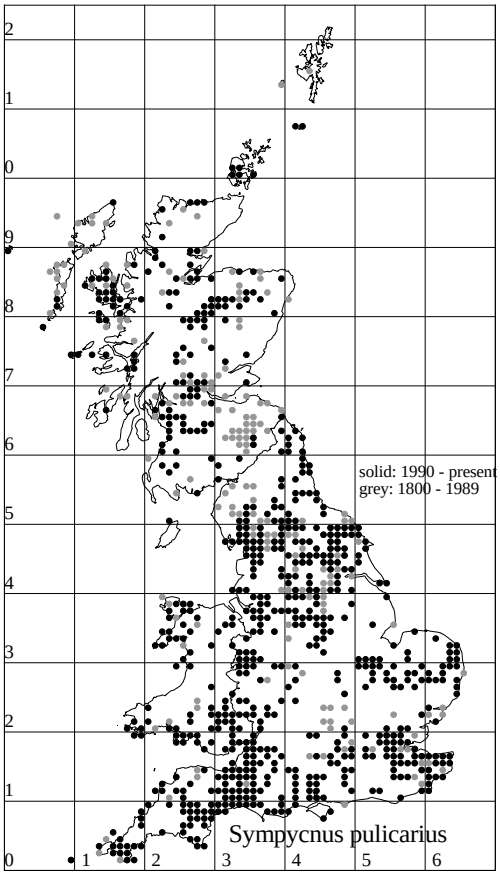
Females

1 Postpedicel (third antennal segment) as long as wide; front coxa dark with apical quarter to half yellow; hind coxa external seta always black. ..... *pulicarius*

\- Postpedicel blunt-ended; front coxa dark with apical sixth yellow; hind coxa external seta usually black but sometimes white. ..... *septentrionalis*

References

Pollet, M., Persson, M., Bøggild, E, & Crossley, R. 2015. A long-lasting taxonomic problem in European *Sympycnus* resolved, with the description of a new species and data on habitat preferences. *Zootaxa* **4032**, 81-102.



Acknowledgements

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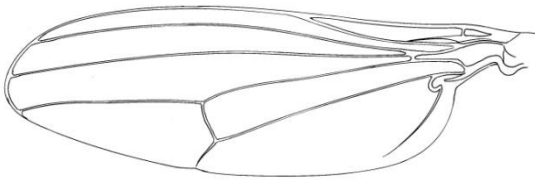
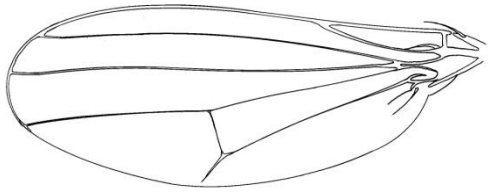
Key to species of *Aphrosylus*, both sexes

Wing lengths are measured from cross-vein h so are about 10% shorter than the whole wing.

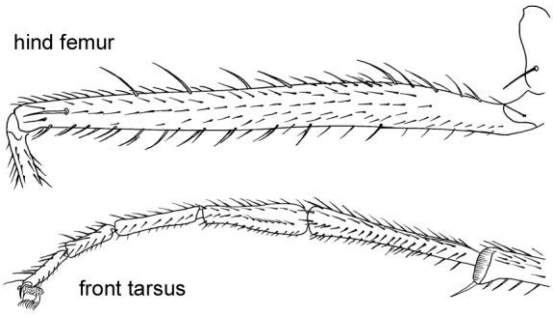
1 Large species, wing length at least 3.5 mm, usually about 4.5 - 5 mm; wings narrower, on average nearly 3 times as long as wide; 5-7 dc setae. 2



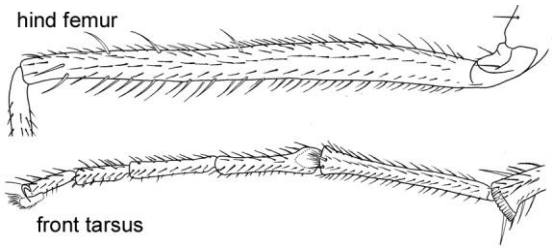
\- Much smaller species, wing length less than 2.5 mm; wings broader, on average 2.5 times as long as wide; 4 dc setae. 3



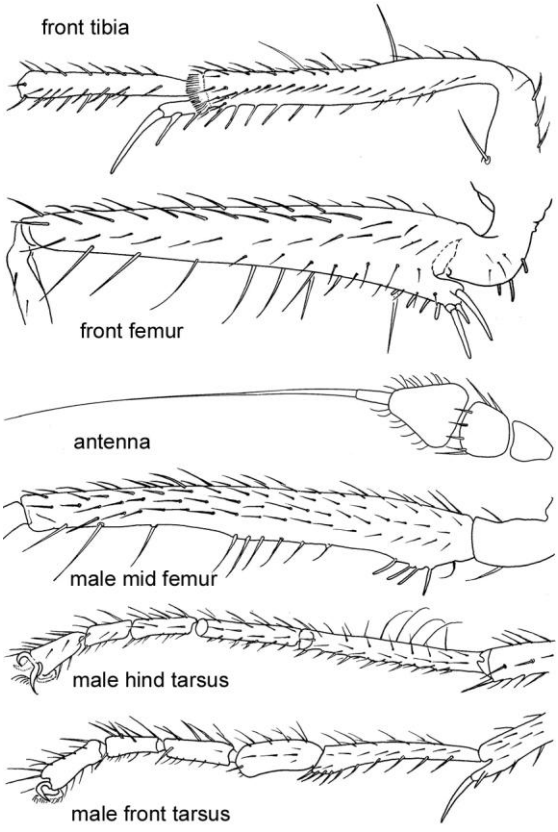
2 Tergite hairs stouter and less dense, forming about three ranks along each tergite, those on side of tergites as strong and long as pv and av setae of hind femur; mesonotum with shifting patches of almost black sub-shining ground colour showing through dull pale dusting when tilted back-and-forth viewed from above; hind femur with anterodorsal setae forming an interrupted row from base to tip with 4-5 dorsal setae usually distinctly differentiated from general covering of setulae at base; **male**: second segment of front tarsus dilated in basal half to two-thirds; wing length ♂ 3.8-4.8 mm, ♀ 4.5-5.1 mm. ***celtiber***



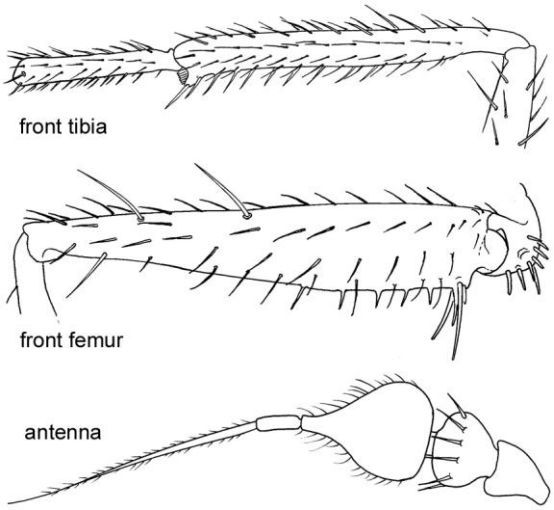
\- Tergite hairs finer and denser, forming about 4-5 ranks along each tergite, those on side of tergites clearly finer than pv and av setae of hind femur; mesonotal pattern, viewed as above, not becoming sharply demarcated, even in anterior view not showing almost black patches; hind femur anterodorsal setae becoming smaller and almost indistinguishable from general covering of setulae in basal quarter; **male**: second segment of front tarsus swollen at base only; wing length ♂ 4.7 mm, ♀ 5.0-5.6 mm. ***raptor***



3 Front tibia with an extension at apex beneath bearing a spur at tip; front femur with two equally stout setae at the extreme base beneath, no outstanding pd setae but pv setae in apical half at least as long as width of femur where they arise; hind femur with one ad pre-apical seta; third antennal segment conical, not tapered into an extension; mesonotum in dorsal view with no undusted midline running entire length; **male:** hypopygium large, deeper than depth of abdomen; mid femur with irregularly spaced pv setae, with clusters in basal quarter and mid point and 2-3 setae in apical quarter; hind metatarsus with at least 4 fine dorsal hairs, most being twice width of segment; front tarsus with 1st and 2nd segments swollen below; wing length ♂ 1.8-2.1 mm, ♀ 2.2-2.5 mm. ***ferox***

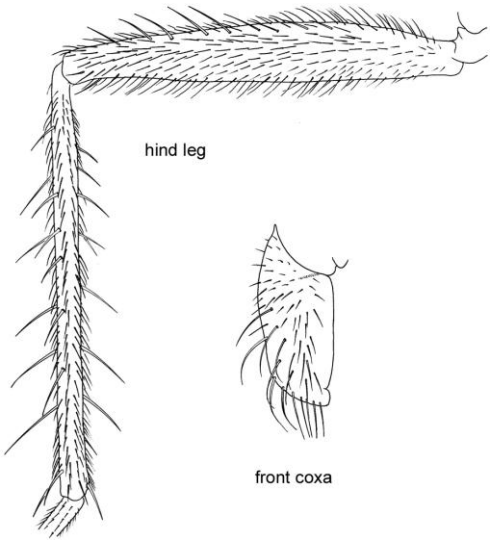


- Front tibia simple at apex; front femur with one stout seta and sometimes another half as long at the extreme base beneath, 2-3 long pd setae in apical half but pv setae inconspicuous, much shorter than width of femur, 2-3 long pd setae; third antennal segment bulbous with narrow drawn-out apical extension not clearly distinct from arista; **male**: hypopygium tiny and hidden; mid femur with regularly spaced pv setae; hind metatarsus without long hairs; front tarsus unmodified; wing length ♂ 1.6-1.8 mm, ♀ 2.0-2.3 mm. ***mitis***

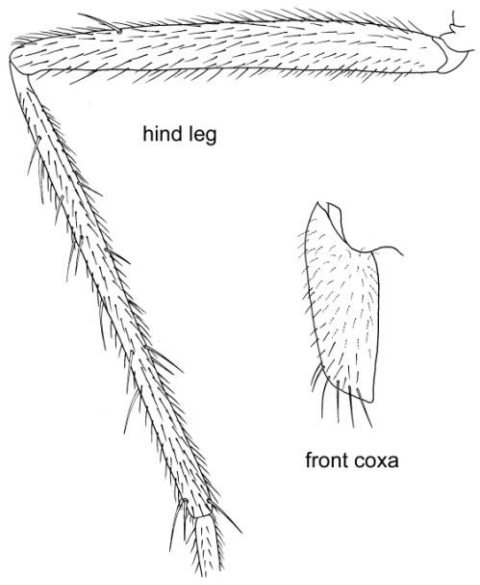


Key to female *Thinophilus*

1 Front coxa black, all hairs black with some stout and long; hind femur with row of 7-8 antero-dorsal setae; tibial setae dense and robust, hind tibia with row of strong ventral setae; femora usually black but may be entirely brownish yellow; large species, wing-length 5.2-6.0 mm. ***flavipalpis***



- Front coxa yellow with mainly fine short pale hair, black hairs only at apex and outer edge; hind femora with a single antero-dorsal seta at apical fifth; tibial setae sparse and weak, hind tibia with only 2-3 antero-ventral setae; femora always entirely yellow; small species, wing-length 3.0-3.8mm. ***ruficornis***



County Recorders

Scotland

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

Ireland

- CEDAR (Ulster Museum)

North West England

- Cumbria Biodiversity Data Centre
- Greater Manchester LRC
- Lancashire Envi. Record Network
- Merseyside BioBank
- rECOrd (Cheshire)
- Isle of Man

Wales

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

West Midlands

- Staffordshire Ecological Record
- EcoRecord (Birmingham & Black Country)
- Herefordshire BRC
- Warwickshire BRC
- Worcestershire BRC
- Shropshire

South West England

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

This map depicts the UK Local Records Centres arranged by standard UK regions. The dipterists shown are acting as County Recorders. They have good local knowledge, are willing to help out with Diptera enquiries in their region and all have some degree of liaison with their LRCs. The yellow labels indicate hoverfly specialism.

North East England

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

East Midlands

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

East of England

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

Greater London

- Greenspace Information for G. L.

South East England

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

Many thanks to everyone who helped with this survey which began with an enquiry to all Local Environmental Records Centres and then led on to an investigation of Dipterists known to be working in various areas.

Treat this as a first draft, if you know of workers in areas which seem not to be covered or wish to assist in recording then please contact your LERC (list at www.ALERC.org.uk) and the Bulletin Editors.

Darwyn Sumner

Dipterists Forum

ALERC
Association of Local Environmental Records Centres

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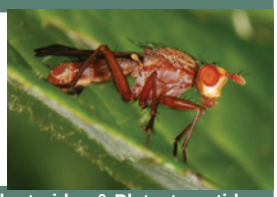

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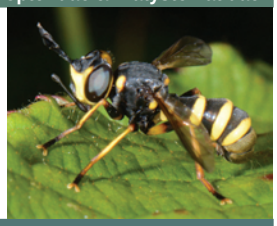

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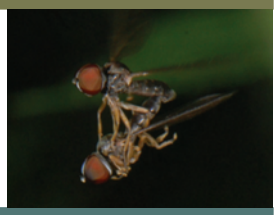

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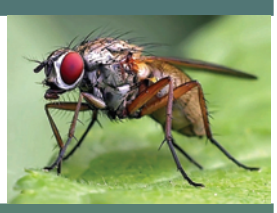

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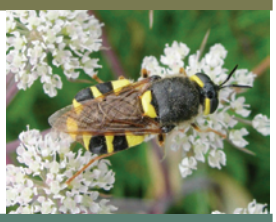

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