

Soldierflies and Allies Recording Scheme

Newsletter 10, spring 2024

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

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

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

Robberflies and aphids



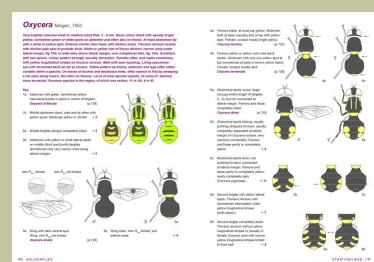
Stripe-legged Robberfly *Dioctria baumhaueri* with aphid prey – photo by jerry2018 via iNaturalist

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

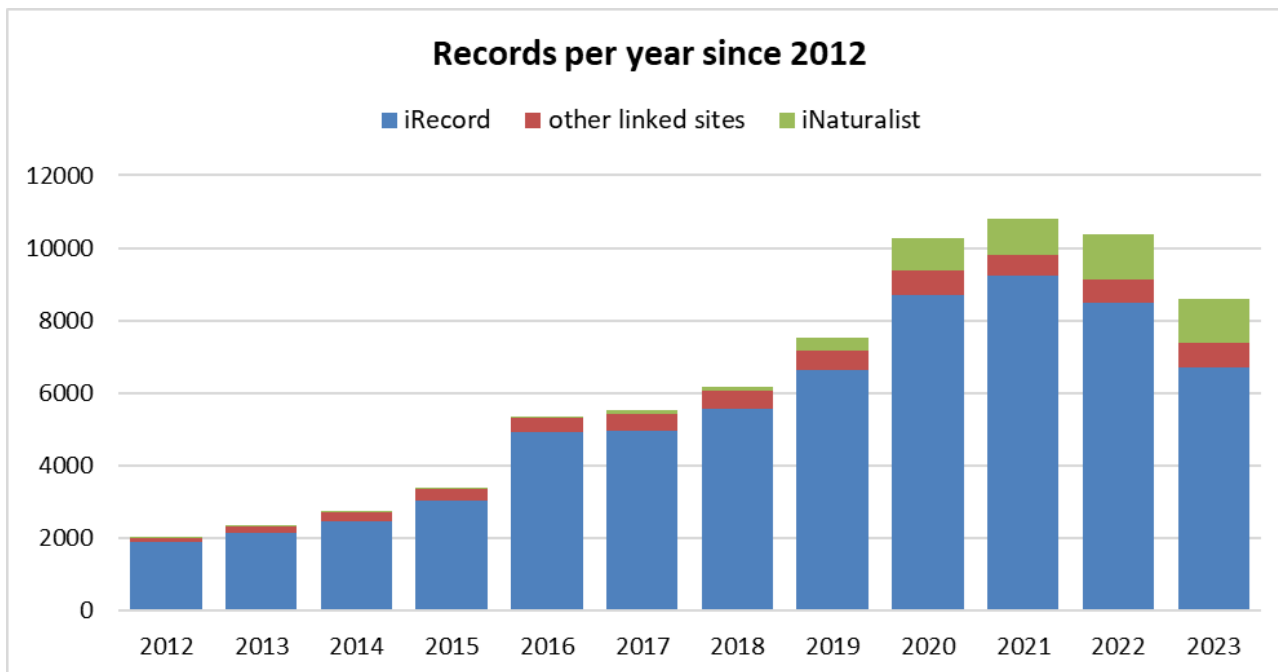
By coincidence a week or so later iNaturalist user jerry2018 posted photos of *Dioctria baumhaueri* preying on another aphid. In addition, Lavigne's [Predator-Prey Database for the family Asilidae](#) cites one instance of *Dioctria baumhaueri* preying on the grain aphid *Macrosiphum avenae* in the United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

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

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



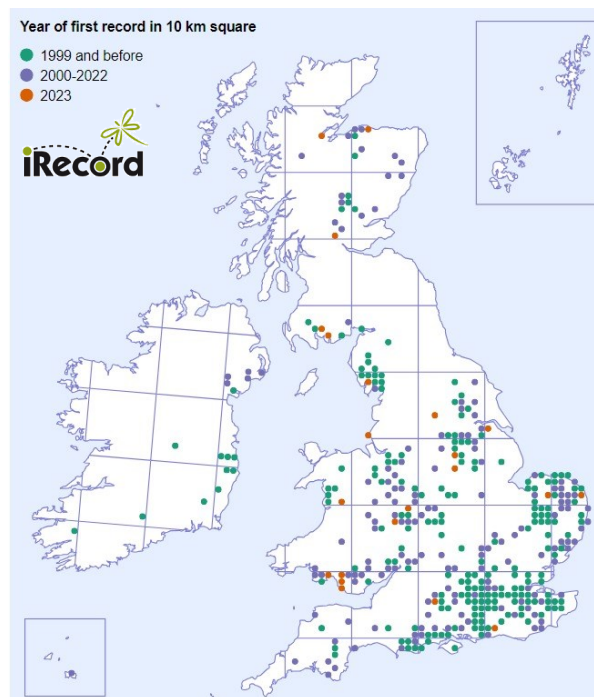
Recording scheme updates



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

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

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



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

‘Missing’ species

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

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

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

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

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

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

‘Newest’ species

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

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



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

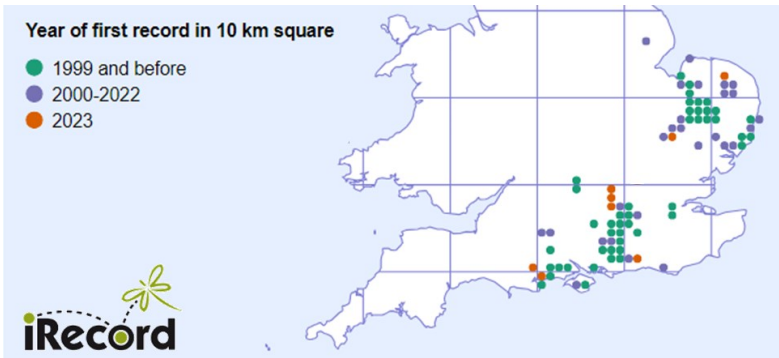
Soldierflies and allies in the entomological journals

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

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

Robberfly *Eutolmus rufibarbis* extending its range and habitat

by Martin C. Harvey



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

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

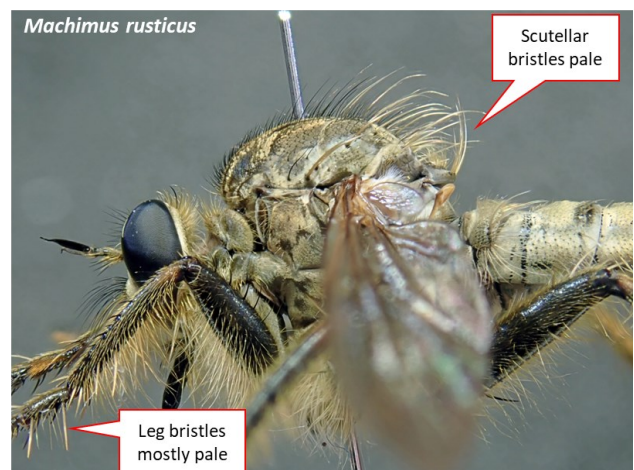
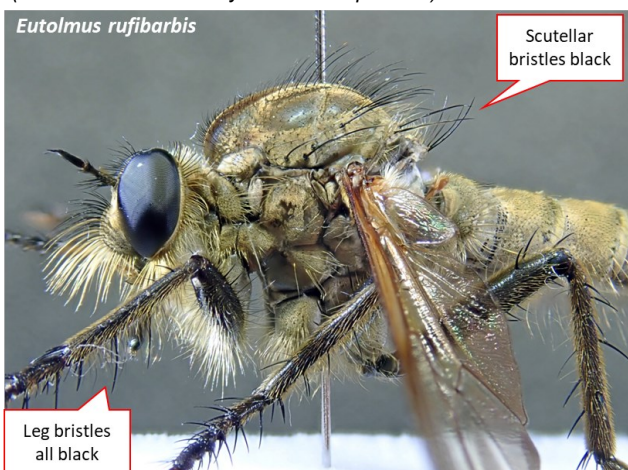
On 23 July 2023 another Buckinghamshire site was reported on iRecord, when Andy Spragg photographed an individual at Chairborough Local Nature Reserve, High Wycombe (SU8492). This site is a relatively small area of chalk grassland and scrub, entirely surrounded by housing and commercial buildings. Further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

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



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

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



Grapefruit as a monitoring tool for soldierfly larvae

by Richard Newton

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

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

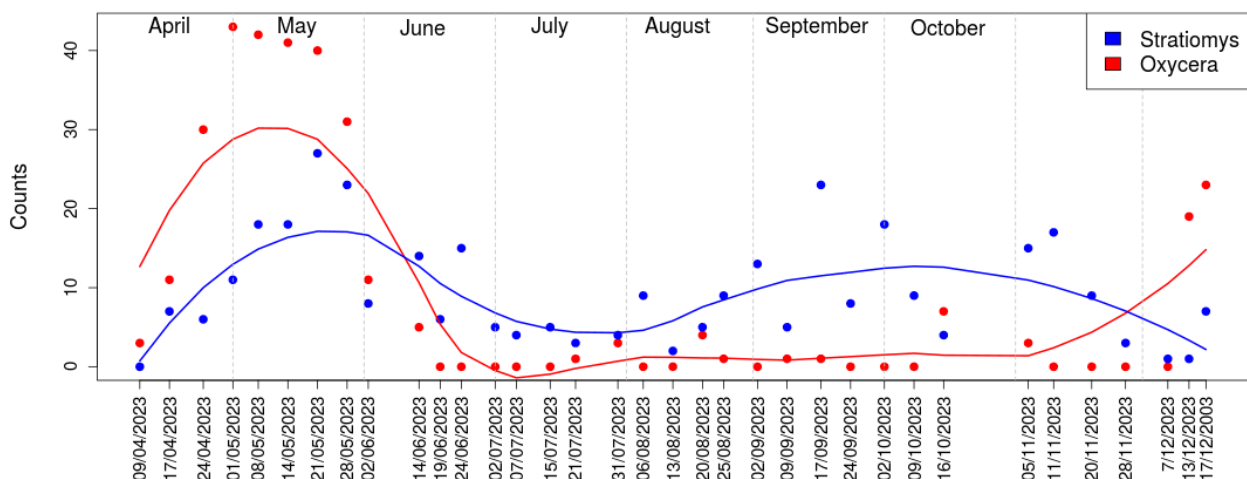


Above: grapefruit skins positioned in wetland habitat at Chilswell Valley.
Below: larvae of *Stratiomys* sp. attracted to the grapefruit.
Photos by Richard Newton

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



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



Soldierflies on the move

by Martin C. Harvey – adapted from a blog first published on the [Buglife](https://www.buglife.org.uk/) website

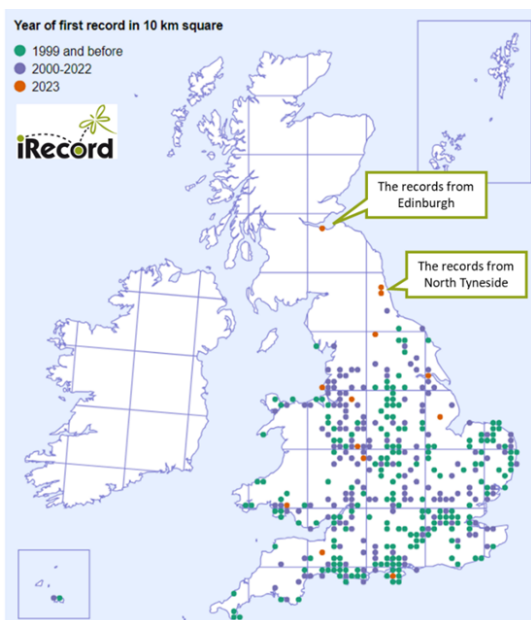
An entomologist is always on the lookout for insects, even in unlikely places! In early July 2023, Chris Barlow was inspecting a wooden fence around a supermarket car park in North Tyneside. Perhaps not the first place that springs to mind as good habitat for insects, but Chris knew that the fence was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



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

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

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

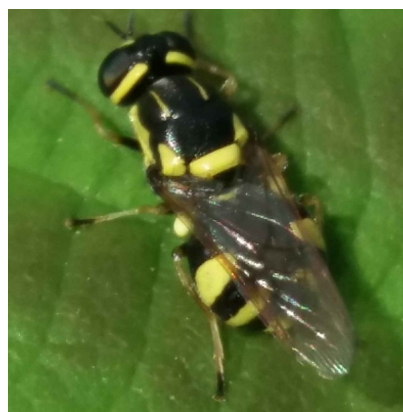


But the Four-barred Major didn't stop there: a couple of weeks later David Notton recorded this species at Lauriston Agroecology Farm, on the Firth of Forth coast near Edinburgh. This was the first ever record for Scotland, and pushed the known range further north by some 100 km. The habitat here was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

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

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

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



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

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Copy for **Hoverfly Newsletter No. 76** (which is expected to be issued with the Autumn 2024 Dipterists Forum Bulletin) should be sent to me: David Iff, **Green Willows, Station Road, Woodmancote, Cheltenham, Glos, GL52 9HN, (telephone 01242 674398), email: davidiliff@talk21.com**, to reach me by 20th June 2024. Given the size limitations it may be worthwhile to send your articles in good time to ensure that they are circulated with the bulletin, in which newsletters are restricted to a maximum of eight pages. My thanks to all contributors, and also to Martin Matthews for his meticulous proof-reading of the text.

The hoverfly illustrated at the top right of this page is a male *Microdon myrmicae*.

**HOVERFLY RECORDING SCHEME
UPDATE: Spring 2024**

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

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

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

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

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

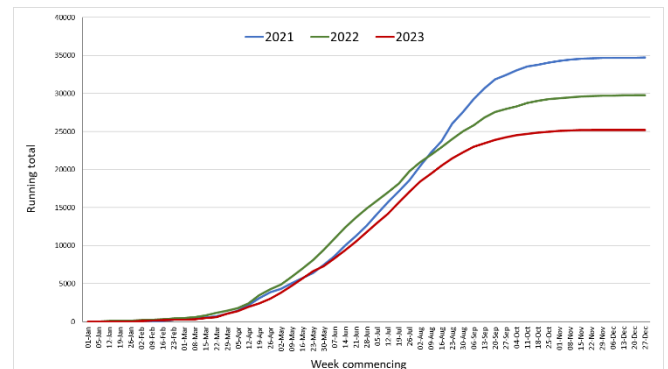


Figure 1 Record accumulation curves for data extracted from Facebook between 2021 and November 2023.

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

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

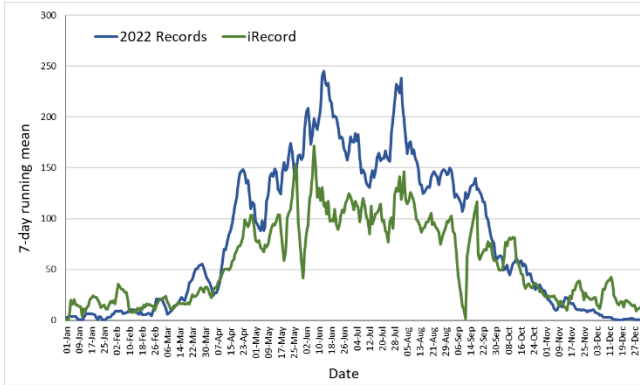


Figure 2a Numbers of daily records for Facebook extraction (blue) and iRecord verification from photos (green) in 2022

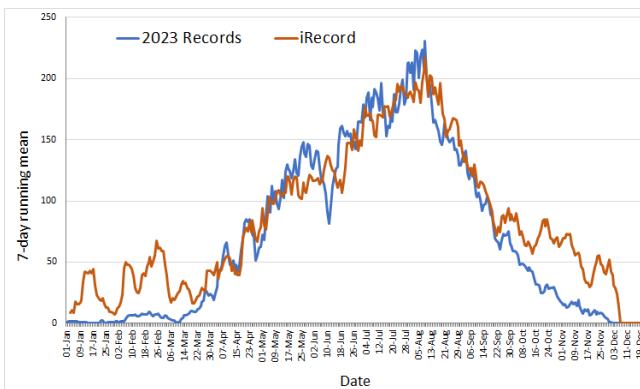


Figure 2b Numbers of daily records for Facebook extraction (blue) and iRecord verification from photos (orange) in 2023 up until 30 November.

Species status review

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

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

Growth in the use of online recording platforms

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

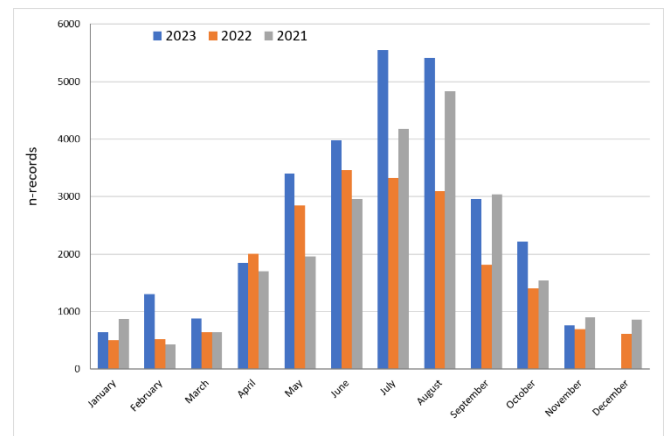


Figure 3a Numbers of records accompanied by photographs verified on iRecord between 2021 and 2023.

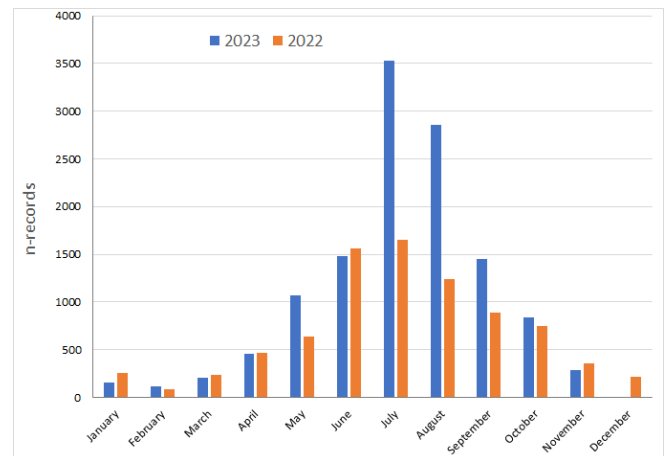


Figure 3b Numbers of iNaturalist records accompanied by photographs verified via iRecord in 2022 and 2023.

iNaturalist

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

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

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

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

12th International Conference on the Syrphidae

The following was circulated to previous attendees of hoverfly symposia:

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

Arrival: 2nd September 2024

Symposium: 3rd – 5th September 2024

Excursion: 6th September 2024

Departure: 7th September 2024

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

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

Xanthandrus comtus males hold territory

Roger Morris

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

Archive Records – can you help?

Roger Morris

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

Flower-visit records

Roger Morris

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

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

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

Sander Bot & Frank van de Meutter

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

Book Review by Roger Morris

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

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

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

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

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

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

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

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

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

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

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

The Chrysomelid diet of the larvae of *Parasyrphus nigritarsis*

Stephen Suttill

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

the Tame valley on the Pennine fringe of Greater Manchester.

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

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

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

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

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

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

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



P. nigritarsis larva with Alder Leaf Beetle eggs



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

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

David Iliff

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

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

Caliprobola speciosa in the New Forest

Andy Murdock

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



Caliprobola speciosa (male). Photo: Russel Wynn

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

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

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

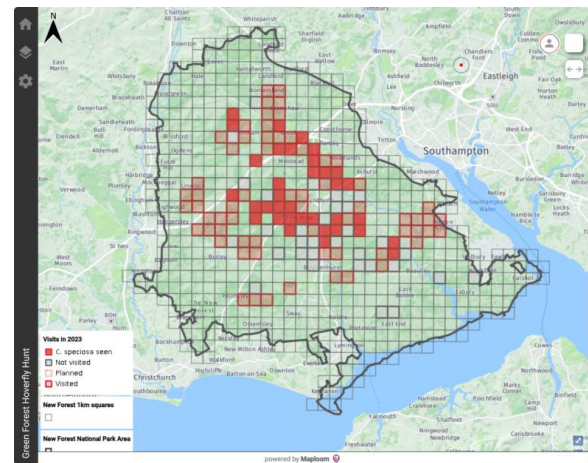
photos of the trees were available to surveyors on a mobile phone map along with surveyor location.

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



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

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

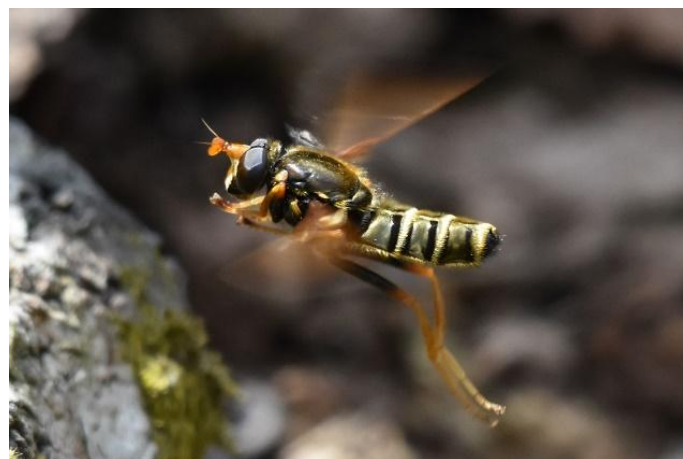


2023 *Caliprobola speciosa* New Forest distribution (bold red squares)

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

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

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



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

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

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

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Cranefly News

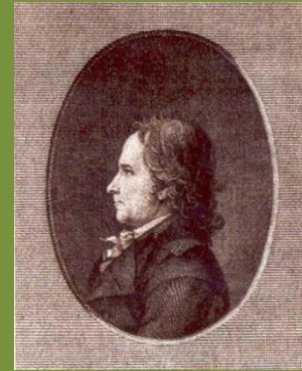
The Dipterists Forum Cranefly Recording Scheme

For Superfamily Tipuloidea & Families Ptychopteridae & Trichoceridae

Newsletter No 42

Spring 2024

Editor: John Kramer



Johann Christian Fabricius. Photo. EGH

The Way Forward.

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

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

Craneflies and Light.

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

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

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

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

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

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

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

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

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

Notes on selected species.

Tipulidae

Nephrotoma

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

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

Tipula

Tipula pagana. Forty noted during October and November.

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

Tipula staegeri. Six in October.

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

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

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

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

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

Pediciidae

Dicranota (Ludicia) claripennis

Dicranota lucidipennis

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

Limoniidae

Subfamily Chioneinae.

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

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

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

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

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

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

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

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

Subfamily Limnophilinae.

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

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

Subfamily Limoniinae

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

Trichoceridae*

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

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

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

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

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

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

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APPENDIX. Detailed results.

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

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

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

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

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

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

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

*Attracted to house lights on one occasion.

Steve Robbins

An Overview of Craneflies attracted to light.

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

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

Pete Boardman and Colin Legg.

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

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

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

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

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

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The elusive larva of *Neolimonia dumetorum* - Alan Stubbs

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

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

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

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

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

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

Literature (selected from the *Catalogue of the Craneflies of the World* website)

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[Hovemeyer, K. 1998](#). Diptera associated with dead beech wood. *Studia Dipterologica* 5: 113-122). Using emergence traps great majority were from a beech stump, indeed by far the most abundant reared species of cranefly (but precision of niche remains unknown).

[Hovemeyer, K.; Schauermann, J. 2003](#). Succession of Diptera on dead beech wood: a 10-year study. *Pedobiologia* 47: 61-75. *N. dumetorum* had a preference for strongly decayed logs with low density and C:N ratios.

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

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

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

2 males, 2 females on 23 April 2023

8 males, 3 females on 8 August 2023

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

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

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

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

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

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

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

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

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

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



Fig 1.

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

Fabricius and Diptera

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



Fig. 2.

increased exponentially as the nineteenth century progressed meant taxonomists could only function effectively in more specialised ways as coleopterists, lepidopterists, hemipterists, etc. Fabricius spent most summers between 1767 and 1789 visiting London to access collections that were accruing as a product of exploratory voyages, the processes of colonisation and London being a centre of world trade. His activities and method of working are given in his own account (Fabricius, 1784) parts of which were translated by Armitage (1958). After that period usually he visited Paris each summer consulting collections there to spend more time with his family; his wife preferred French society. Linnaeus’ collections are in the Linnean Society of London, Burlington House, Piccadilly but specimens utilised by Fabricius can be found in a number of European museums. From his London period the two main surviving collections are those of Joseph Banks (1743-1820) in NHM (London) and William Hunter (1708-1783), in the University of Glasgow. Some background to this particular period of activity is given in Hancock (2015). Apart from consulting the original publications Zimsen (1964) provides a list of names with an indication of the existence and location of types she could establish at the time. It rapidly becomes clear that not all survived wars and civil strife alongside the ravages of time - a common fate of these early collections.

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

The output of Fabricius for crane-flies (Tipuloidea), restricted to currently valid names, was six Palaearctic, two Nearctic, one Afrotropical and nine Neotropical species. Linnaeus had named thirteen crane-flies, twelve of which occur in Britain but none were from beyond Europe, reflecting the relative breadth of their sources. To focus on the British checklist, Linnaeus authored 12 species and 6 were Fabrician names. For comparison, Meigen was the author of 78 British species, Schummel 19, Zetterstedt 14; Francis Walker 8 and 34 were by F.W. Edwards.

In Fabricius (1805) three genera covered the “crane-flies”, *Ctenophora*, *Ptychoptera* (in earlier works these were in *Tipula*) and *Tipula*. Trichoceridae also were included in *Tipula*. A number of other names he placed within *Tipula* were of species since moved to a range of families such as Chironomidae, Mycetophilidae, Bibionidae and even Therevidae.

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



Fig. 3. *Bittacomorpha clavipes*

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

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

Tipulidae

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

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

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

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

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

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

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

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Captions for figures

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

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

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

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

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

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

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

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

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

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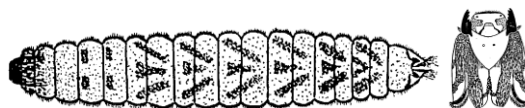
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CRANEFLY LARVAE - DACTYLOLABINAE - Alan Stubbs

Members of this small family are specialised to live on wet rock surfaces (hydropetric habitat), the larvae are camouflaged by colour and disruptive markings (and perhaps debris adhering the body). The family has only 1 genus, *Dactyolabis*, with 2 species in Britain. These are *D. transversa* (Meigen 1804) and *D. sexmaculata* (Macquart 1826). There are 20 species in Europe.

Larval characteristics of British species

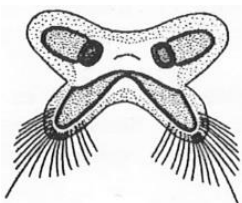
- 10-12 mm long (full grown).
- Anal segment with 4 well developed lobes, each with a sclerotised plate.
- Body depressed, with raised tubercles.
- Body segments with pairs of oblique dorso-lateral dark lines.
- 4 anal papillae, pointed, long or short.
- Head capsule massive.



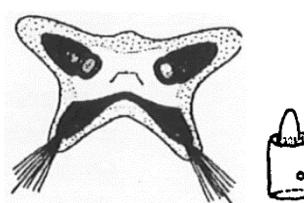
Body and head of *D. sexmaculata* (Bangerter, 1931)

Key to Larvae of British species of *Dactyolabis*

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



D. sexmaculata



D. transversa

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

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

The Pupae

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

Locating larvae

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

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

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

Species notes

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

sexmaculata (Macquart, 1826)

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

transversa (Meigen, 1804)

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

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

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

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