Hoverfly Newsletter
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Copy for **Hoverfly Newsletter No. 79** (which is expected to be issued with the Spring 2026 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 20th November 2025. 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 female *Meligramma guttatum.*

13th International Symposium on Syrphidae

Jon Heal

I received the following message from the the Symposium organising committee:

Dear Fellow Syrphidologists,
We are very pleased to announce that the 13th International Symposium on Syrphidae (ISS13) will be held in Italian Alps, at Fiera di Primiero, in the beautiful **Natural Park of Paneveggio - Pale di San Martino**.
In response to requests from many participants, the symposium dates have been moved to the beginning of summer. The symposium will thus begin on **Monday June 22nd 2026**, late afternoon and will end on **Saturday June 27th 2026**, in the morning. Save the dates!
The symposium will be organized by the Natural Park of Paneveggio - Pale di San Martino, in collaboration with the Università degli Studi di Modena e Reggio Emilia, Università di Torino, and the Museo Cantonale di Storia Naturale di Lugano.
Further details will be shared in due course, but we want to ensure you are informed of the updated dates. Should you have any questions, please feel free to contact us at this email address: syrphidae13@gmail.com.
We are looking forward to meeting you all in Fiera di Primiero in June 2026.

On behalf of the Organizing Committee,
Valentina Gasperoni, Bärbel Koch, Umberto Maritano, Piergiovanni Partel, Lucia Pollini Paltrinieri, Daniele Sommaggio, Walter Taufer, Cristiano Trotter.

Roger Morris comments: previous meetings have been very interesting and worth attending, so it would be great to see some Brits taking part – numbers from these islands tend to vary greatly but are generally low. So, do you have a relevant project to present? More detail can be found at:

https://www.syrphidae.com/symposia.php

HOVERFLY RECORDING SCHEME UPDATE: Autumn 2025

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

Progress report

At the time of writing, we have incorporated all spreadsheet data for 2024/5 as well as data from iRecord/iNaturalist but have still to incorporate SyrphBoard data. The dataset has now passed **2 million** records with 2,074,734 records on the database, of which there are 1,732,015 'unique', species records. Those numbers indicate that as always there is some duplication (roughly 15%), which is inevitable, given that data come from a variety of sources and it is a huge job to vet and clear individual duplication. From an analytical perspective, there are

computational ways of cleaning the data of most duplicates.

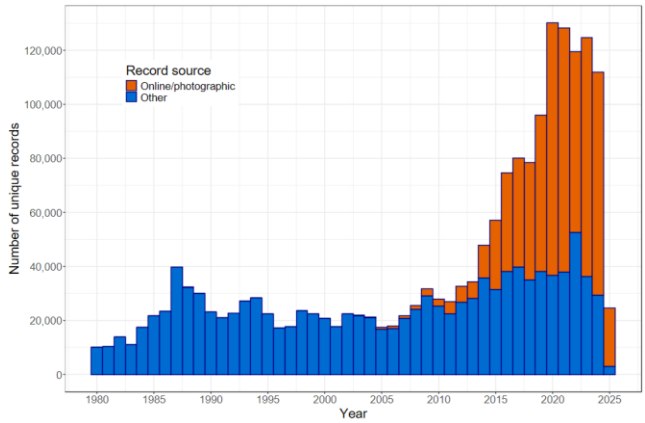


Figure 1. Numbers of 'unique' records per year since 1980. Note that 2024/5 data are incomplete

In theory, it looks as though the numbers of hoverflies recorded peaked in 2020 but it is likely that this total will be surpassed in 2024 because we know that there is a substantial volume of data on SyrphBoard. We had hoped to deal with this dataset earlier in the year, but unfortunately Roger was distracted by editing species accounts for the forthcoming TaxoFly project website. Even without this important dataset, coverage in 2024 looks impressive (Figure 2).

What will happen in 2025? It depends upon who one talks to. Some people have found hoverflies to be very scarce; others have seen numbers far greater than in recent years. Without some form of standardised approach, it is impossible to say. In our experience, models tend to be heavily skewed by recorder biases and it is noteworthy that the proportion of the dataset composed of relatively 'easy' to find and identify species continues to grow (Figure 3). Meanwhile, the strongest 'declines' appear amongst species that cannot be reliably identified from photographs. *Syrphus vitripennis* is especially noteworthy as neither *S. torvus*, nor *S. ribesii* show such a decline. We suspect that this decline is a modelling artifact. Similar problems exist for *Neoascia podagrica* and *Melanogaster hirtella*, although our own field experience suggests that both species have declined markedly in SE England.

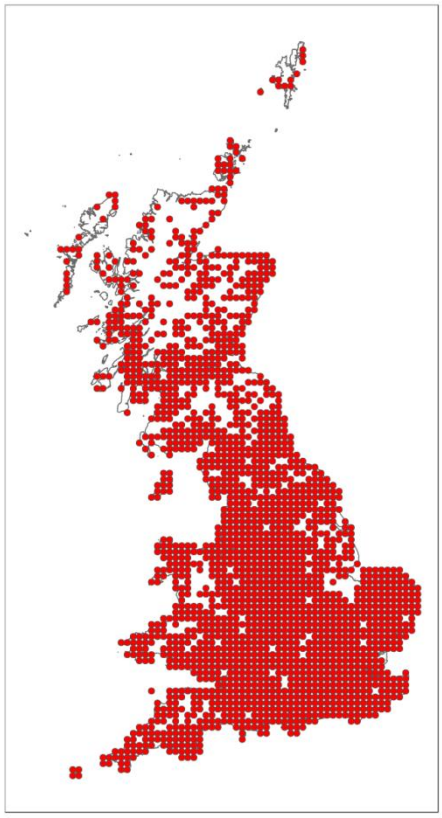


Figure 2. Coverage in 2024

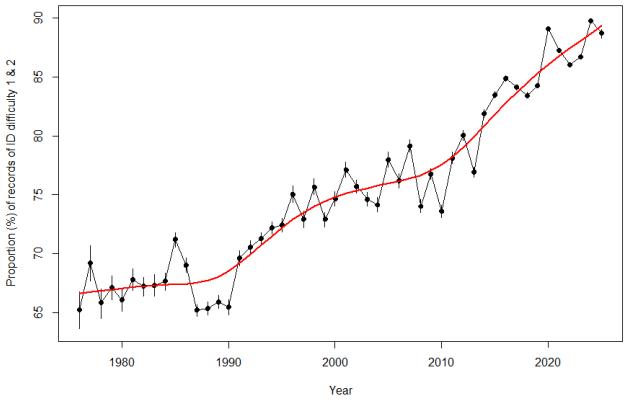


Figure 3. Proportion of the HRS dataset composed of species considered to be identifiable by novices and from basic photographs

Figure 3 highlights the increasing problem of a lack of growth in the necessary skill-set needed to record species that are hard to find and difficult to identify. Over the years, we have tried to resolve this problem by running training courses. Our track record has been pretty good in the sense that hoverflies have become the 'entry level' to British Dipterology.

Many members of Dipterists Forum's current committee were recruited through these courses, making it possible to keep British Dipterology alive despite ongoing reductions in the numbers of 'professionals' in museums and other publicly-funded

bodies. Nevertheless, we seem incapable of retaining the most able within Syrphidology. Why is this?

The most obvious reason is that we have a remarkably small fauna when compared to Europe (~285/>900). So, once the majority of low-hanging fruits have been picked, the quest for new challenges emerges. Our alumni have gone on to very interesting new opportunities, be they Sphaeroceridae, Phoridae, Muscidae or Anthomyiidae! The benefits to British Dipterology are considerable, but it does not resolve the underlying problem that we need a new generation of specialists to ensure ongoing development of data for more challenging Syrphidae species.

An anniversary atlas

The HRS was established in 1976 with John Ismay as its first organiser. John was succeeded by Philip Entwistle who retired in 1987, after which the scheme was dormant until 1991 when Stuart and Roger agreed to take it on (asked by Alan Stubbs). Thus 2026 will be the 50th anniversary of the Scheme! It will also be the 35th Anniversary of tenure by Ball & Morris!

We hope to celebrate this event with a new provisional atlas. Quite what form it will take has yet to be fully resolved – we will explore options with CEH but the most obvious approach is to produce a pdf that can be downloaded from our website, the Facebook page or from CEH's website. This way, costs will be minimised as will demand for paper and energy consumption, whilst it should be accessible to all. Obviously, some people prefer to own hard copy, and it does make sense to have a limited print run to supply libraries and other repositories of such information. We may therefore look at producing a short run based on known demand. Hopefully we will be able to say more in the spring Newsletter. Meanwhile, those readers who have not submitted records recently are encouraged to get them to us.

Please send spreadsheets to Roger (syrphid58@gmail.com).

Towards a new Hoverfly Recording Scheme web-site

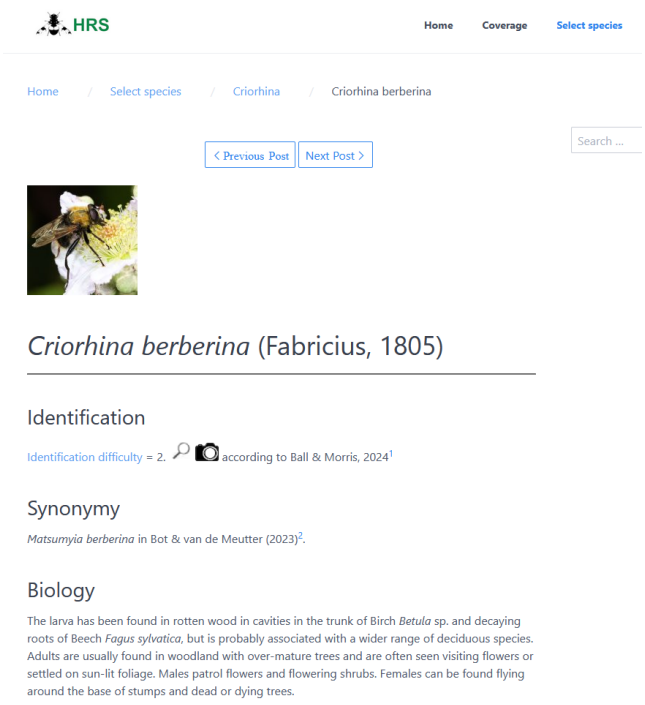
Stuart Ball

The HRS web-site has been at https://hoverfly.uk/hrs/ for some time. This site consists of two elements on separate servers: a front-end built using Drupal 7 and a backend which runs an R server to generate maps, phenology plots, trends, etc. dynamically, allowing a degree of user interaction. Various people have told me that they could not access the maps and other dynamic content. This steadily got worse and, eventually, I could not get it to work either. I have not managed to work out why this happened. If I call the map directly from the backend server it worked fine. The other problem was that it required a massive set of summary information to be held in a database on the backend server. Updating the database was quite a big job and so I did not do it very often!

Consequently, I have been looking at building a new version of the web-site. I feel that the important thing is to present up-to-date distribution maps, phenology plots and trends. Ideally, these things should be as easy to update as possible. The user interaction provided by the old site was nice, but I don't think it is essential to replicate.

In looking around, I came across a web-building tool called Grav (https://getgrav.org/) - described as a flat file CMS – i.e. it does not use a database, all the content is arranged as a structure of files and directories. This makes it simple to set up and very fast and responsive in use. It also uses "responsive design" methods which allow the site to adapt to different devices – PC, tablet or mobile phone. This is an advantage compared to the old site. People are increasingly likely to be accessing the site using their phone – and the old site did not work too well on a phone screen!

I have developed a new version of the site using Grav. It seems to work well and presents the required information. The maps, phenology plots and trend plots are just three directories of image files. Generating a new set is just a matter of running an R script, after changes have been made to the HRS database, and then updating the web-site is a simple file upload. There are still a couple of issues that need sorting out and then I will move it to the existing location at hoverfly.uk.



Book Review: *Hoverflies of the Fylde*, Malcolm Evans, 80pp.

Roger Morris

It has been quite a while since I last saw a new county hoverfly atlas, so it is very pleasing to see this one covering the Fylde coast of Lancashire. The Fylde is a somewhat nebulous geographic area to most of us, but is pretty obvious on the map, apart from its eastern-most boundary, which in this work is defined as the A6 trunk road. In itself, this definition highlights how modern boundaries are governed by our transport network rather than natural features.

The data used include records extracted from the Hoverfly Recording Scheme database up to 2024 but it should be noted that at the time the download was sent data from iRecord and SyrphBoard had not been incorporated, so there could be many more records. One hundred and twenty-two species are listed for The Fylde, which is quite surprising given that so much of the landscape is agricultural – an area that I generally drive past as quickly as possible. Perhaps I and others should stop more frequently!

The maps are presented at tetrad level, which is appropriate for this sort of geographic scale. They are based on some 8,000 records with considerable variation in the numbers of species recorded across the region. More data seems to exist for the more southerly areas and the thinnest density of records is towards the north-east where several tetrads still need a visit. The richest tetrads range in numbers from 60 to 80 species, but as might be expected from this highly agricultural region there is considerable variation and only scattered species richness. Some of this diversity doubtless reflects the degree to which a tetrad attracts recording – it takes quite a lot of tenacity to visit places where one might only encounter an occasional *Episyrphus balteatus*!

Most species accounts are accompanied by a map and in many cases there is also a colour photograph. The exceptions are species that have been recorded insufficiently often to warrant a map. This is a sensible approach I think, given that single dots are often meaningless.

In the introduction Malcolm Evans emphasises that this atlas is intended both to inform and to stimulate new recording. Maps do tend to encourage people to say 'I'm sure I can add to the list from my area' or 'I reckon I get more species from my garden than is shown for this tetrad'. If they follow-up and add new records that is very much what is hoped for. Similarly, I hope that this atlas provides impetus for gap-filling; maybe somebody will do some serious square-bashing once they see the coverage?

Malcolm emphasises that hoverfly recording on The Fylde is 'work in progress'. The fact that an atlas has been produced is evidence of progress to date. It is noteworthy that recording up until the 1990s was extremely limited but in the intervening years the numbers of recorders has grown considerably; to some 82 contributors by 2019 and 166 to the current maps. This growth in activity very much mirrors growth in recording nationally, driven largely, I suspect, by the combination of digital photography and social media.

This atlas is roughly B4 in size, with a soft cover and is 'perfect' bound. Paper quality is good and the reproduction in my copy is excellent. The atlas is published by Lancashire & Cheshire Fauna Society and is available from the NHBS for £7.99. Anybody interested in producing such an atlas should acquire a copy because it serves as a good model for what can be done at a cost-effective scale that is affordable for local societies to fund.

Revision of *Orthonevra brevicornis*

Roger Morris

A recent review of specimens of '*Orthonevra brevicornis*' by Żoralski *et al*. (2024) has shown that there are in fact two species under this name: *O.*

brevicornis and a new species, now named as *O. atlantica*. Specimens from both the Falk and Morris collections were examined, based on photographs of the male genitalia, and it is reasonable to assume that they are representative of this comparatively scarce and poorly known species in GB. There is clear geographic separation of the two species (hence the new name *O. atlantica*). As might therefore be expected, the British specimens conform to the features of *O. atlantica*.

The paper draws attention to useful additional characters apart from those in the male genitalia:

'Males of *O. atlantica* sp. nov. are also distinguishable by non-genital characters: from *O. brevicornis* mainly by having black hairs on the scutum and on the vertex (yellow in *O. brevicornis*) and from *O. bouazzai* (both sexes) by having a shorter and partly orange-brown postpedicel (elongated and black in *O. bouazzai*). Females of *O. atlantica* sp. nov. have an unmodified tergite V (5) without a keel or incision, a shiny sternite I and a partly orange short postpedicel — a set of characters that differentiates them from the females of all other European *Orthonevra* species except for the females of *O. brevicornis*. Characters to distinguish females of *O. atlantica* sp. nov. and *O. brevicornis* are subtle and influenced by individual variability. The colour of the postpedicel of *O. atlantica* sp. nov. is black with a restricted orange-brown area baso-ventrally, whereas the orange-brown area extends more to the tip in *O. brevicornis* with the dark areas often being brown instead of black. A subtle but generally good indicative feature is found in the wing venation: if we draw an imaginary line between the vein junctions M1/M 2 and C/R2+3, the junction M1 /R4+5 is located usually at the wing base side of this line in *O. atlantica* sp. nov. (Figs 7A, 7B), whilst in *O. brevicornis* it is usually situated on the line or at the wing tip side (Figs 7F, 7G).

The full paper can be accessed at:
https://www.aemnp.eu/data/article-1981/2032-64_1_223.pdf

Reference

Żoralski, R., Van de Meutter, F., Mengual, X. & Gadawski, P., 2024. Two Palaearctic species of *Orthonevra* (Diptera: Syrphidae) under the name *O. brevicornis*. *Acta Entomologica Musei Nationalis Pragae*, 64(1): 223-242

Take a careful look at data before interpreting phenology – a cautionary tale!

Roger Morris

Whilst doing some editing of *Pelecocera* species accounts for the EU's Taxofly project I had reason to look at the phenology of *Pelecocera tricincta*. My initial impression, looking at the clock-face histogram (Figure 1), was that the main peak was in July and that numbers tailed off towards the autumn. It did not quite ring true with the reports of this species via the Facebook group. So, I delved further. If I changed the date range, there was a dramatic change in the phenology (Figure 2), so there must be something skewing the data!

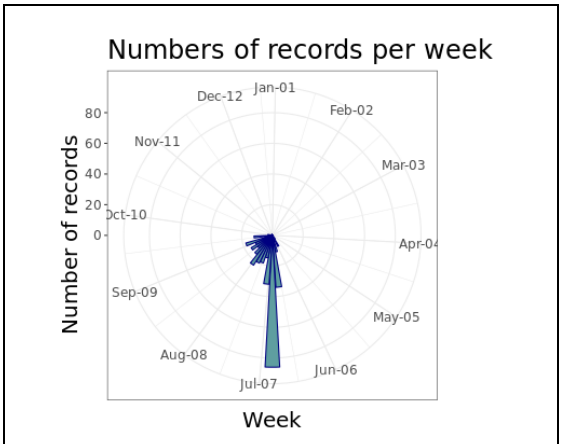


Figure 1. Clockface histogram for *Pelecocera tricincta* records 1980 to 2023.

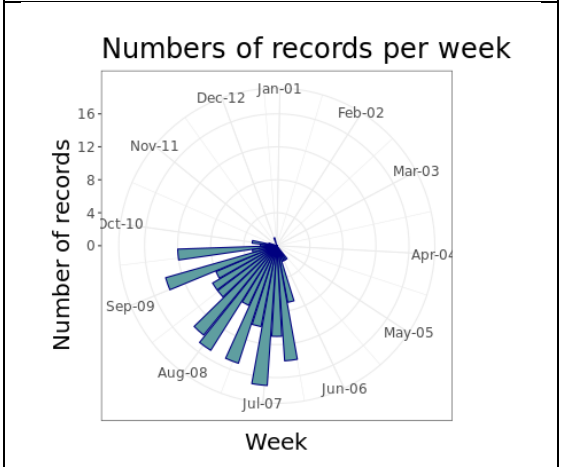


Figure 2. Clockface histogram for *Pelecocera tricincta* records 2000 to 2023.

A bit more investigation led me to conclude that there had been a large number of records submitted for 1998 – why might that be? The answer is pretty obvious – we had a field meeting in Dorset that year; a

very successful meeting that yielded lots of interesting hoverfly records. I suspect everybody found and reported *P. tricincta* from multiple sites!

This sort of skew is something that has previously been highlighted for trends, as there are many ways in which they can be affected by changes in recording effort and methods. The most obvious large-scale impacts of single events are likely to be those created by the specialist surveys conducted by NCC teams in the late 1980s – especially the Welsh Peatlands Invertebrate Survey (WPIS) and the East Anglian Fens Survey (EAFIS), both of which generated high numbers of records of wetland species. Thus, interpretation of declines in wetland species such as *Anasimyia lunulata* need to be treated with the utmost caution!

Volucella from a Wasp Nest in Oxford

Sarah Loving

In 2024, a colony of *Vespula vulgaris* (common wasp) built a nest beneath an old tree stump in my Oxford garden. Throughout the summer, I regularly observed three *Volucella* hoverfly species—*V. pellucens*, *V. zonaria*, and *V. inanis*—near the nest entrance. *V. inanis* preys on wasp grubs, while the other two species initially feed on decaying matter before entering the comb to feed on larvae as the nest declines and the adult wasps become less attentive.

Wasp activity continued until mid-December, well beyond the first frosts, suggesting they can survive freezing and thawing. Once the wasps had abandoned the site, I examined the nest cavity. Although much of the structure had collapsed, I removed a fragment about 10 × 20 × 5 cm. As I lifted it, over 60 *Volucella* larvae—mostly large—spilled out. I didn't count them precisely. Nicola Garnham of the UK Hoverfly Larval Facebook Group identified the larvae as either *V. pellucens* or *V. zonaria* and encouraged me to rear them. I also noticed many smaller fly larvae among them.

I placed the nest material, larvae, and some soil into a lidded plastic container and kept it inside a closed cardboard box in an unheated shed over winter. Apart from occasionally moistening the contents, I left it undisturbed. In early May, I transferred the container to a rearing cage in a shaded part of the garden and began checking daily.

The first adult hoverfly—a male *Volucella pellucens*—emerged on 16 May. By 15 June, five *V. pellucens* and 53 *V. zonaria* had emerged. It's notable that both species successfully exploited the same wasp nest, though *V. zonaria* clearly did so more successfully on this occasion.

On 11 June, I returned to the original nest site to estimate its size (roughly football-sized, typical of wasp nests) and discovered nearly 50 additional pupae underground. I had assumed the remaining larvae would have dispersed to pupate elsewhere, but that wasn't the case. I am now keeping these pupae separately. None has emerged so far, which may suggest that storing the earlier batch in the shed sped up their development.

The larvae *V. pellucens* and *V. zonaria* are similar in appearance with no easy features to reliably distinguish them. However, *V. zonaria* tends to be larger, reaching up to 26 mm compared to 21 mm in *V. pellucens*. Both larvae are somewhat flattened and greyish, brownish, or orange, with rows of fleshy projections along their sides and longish fleshy lappets at the rear. Like other hoverflies, they have the characteristic single fused posterior respiratory process, though in their case it is relatively short. In contrast, the orange-hued larva of *V. inanis* lacks these fleshy projections and has a much more prominent posterior respiratory process (Rotheray, 1999).

A full account of the emergences will appear in the next newsletter.

Reference

Rotheray, G.E. (1999). Descriptions and a key to the larval and puparial stages of north-west European *Volucella* (Diptera, Syrphidae). *Studia Dipterologica*, 6(1), 103–116.

Volucella pellucens/zonaria larvae
(Photos:Sarah Loving)

Targeted searches for the eggs and larva of *Parasyrphus nigritarsis* as a more effective recording technique

Geoff Wilkinson, Nicola Garnham, Stephen Suttill and Matt Vosper

On this sunny June day, the *Parasyrphus nigritarsis* season is in full swing—and 2025 is already proving productive. A recent check on iRecord shows 50 verified records so far, a marked improvement on the past five years (see Figure 1). Only three records are based on adults, highlighting the value of targeting eggs and larvae, which are far easier to find than the elusive adults.

This season's efforts have already expanded the species' known range, with many new hectads and sites recorded. At the current rate, egg and larval records may soon outnumber adult records in the Hoverfly Recording Scheme (HRS) database. There is still significant potential to add new locations. Any local site with dock, alder or willow is worth exploring.

Please refer to the identification guide (see Figure 1) and current distribution map for inspiration for future searches:

http://hoverfly.uk/hrs/taxonomy/term/619/map

A quick reminder: always record the life stage on your spreadsheets or other platforms. This adds value to your record, removes ambiguity, and supports more effective data analysis, such as tracking adult flight times.

Further information and advice are available from the UK Hoverflies Larval Facebook Group. We aim to analyse the full 2025 dataset in context, so please submit all *P. nigritarsis* records—including adults—as soon as possible.

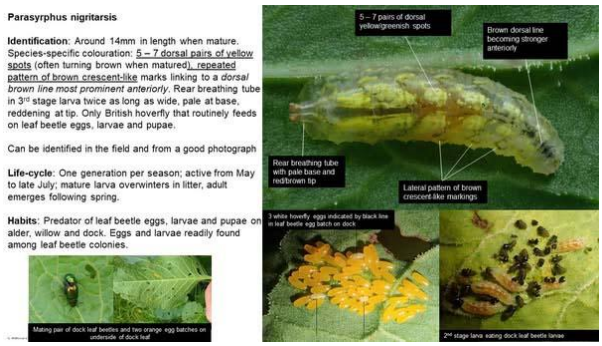


Figure1: *Parasyrphus nigritarsis* identification guide

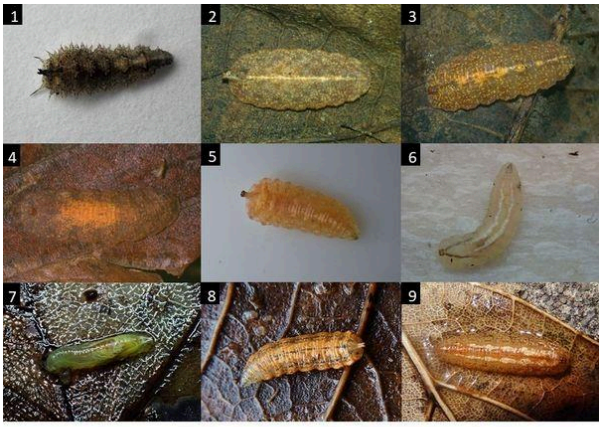
Hoverfly Larvae in Winter Leaf Litter

Geoff Wilkinson

For most of us in Britain adult hoverflies are scarce or even absent in the winter. However, many species overwinter as larvae, lying dormant to tide out unfavourable conditions. Aphid predatory larvae, for example, can be searched for in leaf litter throughout the winter. You can find them by hand-searching fallen leaves under isolated trees or in woodland. Sycamore leaves are especially productive and easy to examine. Common finds include *Syrphus*, *Melanostoma*, *Epistrophe grossulariae*, *Dasysyrphus*, and *Parasyrphus punctulatus*.

Searching for larvae in winter is a great way to continue hoverfly recording year-round. You can inspect leaf litter in situ or collect samples to examine at home. It's also a gentle introduction to rearing adults, as most larvae have stopped feeding and are relatively inactive—except *Melanostoma*, which continues feeding on cohabiting fly larvae. You might even get an unexpected bonus – a parasitoid wasp emerging instead!

A PDF guide to the species most frequently found in winter leaf litter and how to rear them is available via the UK Hoverflies Larval Facebook Group. Why not give it a try?



What has happened to *Brachyopa insensilis*?

Roger Morris & Stuart Ball

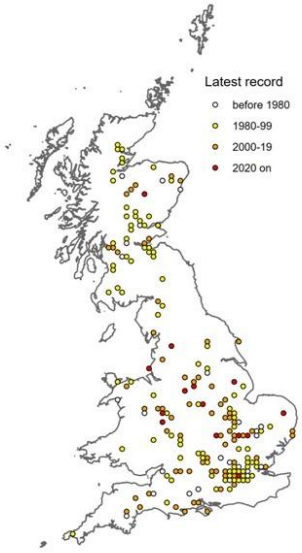
Brachyopa insensilis is a relatively common hoverfly but is rarely reported. Males can be seen hovering around sap runs on Horse Chestnut but can be found in association with other tree species, especially Black Poplar. They also seem to patrol some flowering shrubs such as *Pyracantha* and can be found hovering is semi-shaded areas below the flowers (once found with *B. bicolor* by RM).

When the association with Horse Chestnut was first recognised, it sparked a burst of recording activity. It

became clear that the species could be found, either as larvae or as adults, even at sap emanating from damage to street trees in urban areas. The hoverfly proved to be rather widespread. Interest in finding it has seemingly waned, as the numbers of records have dropped over the decades:

Period	n-records	n-hectads
Pre-1980	64	39
1980-1999	201	103
2000-2019	123	70
2020-2025	35	14

The distribution map reinforces this message:



We have no reason to believe that this really represents a serious decline. It can still be found readily enough if searched for. Thus, it provides an example of a species becoming invisible because it is not being actively searched for. It could easily become a flagship for a species undergoing decline, if the data were to be interpreted by non-specialists. There are many other species that face similar recording challenges because they are either difficult to find, or difficult to identify.

In the case of *B. insensilis* it should be possible to rectify the situation by a detailed search for larvae, which may well be identifiable from photos, but which might also be forwarded to a suitable specialist for rearing and formal identification. Does anybody want a challenge – to build up a new and comprehensive picture of the distribution of *B. insensilis*?

Hoverfly fluorescence

Roger Morris

Jonathan Wallace recently posted a very interesting observation on the UK Hoverflies Facebook group in which he depicted a specimen of *Eupeodes corollae* illuminated by his 365 nm wavelength UV torch. Subsequently, Nicola Garnham showed that hoverfly larvae could also be illuminated using this method. Is this a widespread phenomenon or is it confined to just a few species? As yet, we don't know, but this does seem to be something that could be followed up by a 'citizen science' project – what else might be found using this technique and, moreover, what do hoverflies do at night? Do some actually visit flowers? Where do they hide or, do they hide? Of course, such investigations might reveal a lot more about other British insects too.

This observation comes with a very strong health warning by Andrew Dyer whose PhD project is looking at fluorescence in hoverflies and wasps: all UV light is **potentially harmful** and **the harm is cumulative**. Although in theory 356 and 395 nm LED torches emit in the less harmful 'UVA' range, poorly filtered examples (of which there are many) can 'leak' wavebands both shortwave (more harmful) and humanly visible, making the torch light visible to human eyes. **Don't try this without taking suitable precautions for your eye health**.

Syrphus vitripennis – a recording problem

Roger Morris

One of the most dramatic modelled declines is seen in *Syrphus vitripennis*, which at least initially seems surprising because the same does not seem to be happening in the two other banded species, *S. torvus* and *S, ribesii*. My own field experience in SE England between 2020 and 2024 suggests that the ratio of occurrence is: *S. ribesii* 70%, *S. torvus* (2%) and *S.*

vitripennis 28%, whilst the trend for this timescale seems to be consistently flat (Figure 1). These data are based on a combination of field data for female *Syrphus ribesii* and collected specimens for all males and for females of *Syrphus torvus/vitripennis*; a total of 2919 records (not specimens). Using data for males only (where the sample is confined to collected specimens), the proportions for 2025 based on the actual number of specimens retained (to 19 July) are: *S. ribesii* 72.6%, *S. torvus* (0.9%) and *S. vitripennis* 26.6%. All the data are generated by recording as complete species lists as possible for all sites/visits (notwithstanding escapees from the net).

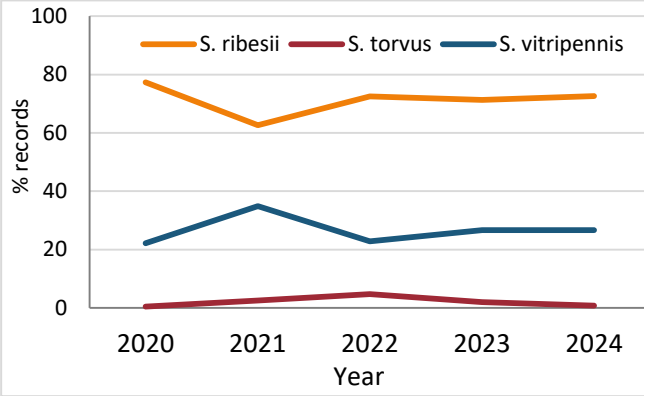


Figure 4. Proportions of records of banded species in the genus *Syrphus* in south London between 2020 and 2024.

Digging a little deeper, the reason for the modelled result is pretty obvious: unlike *S. ribesii* and *S. torvus*, we rarely get reliable records of *S. vitripennis* from the photographic recording that now dominates the dataset. The reason for this difference lies in the characters used to date in our keys, which can be summarised by the following:

- *S. torvus* can be recognised by its hairy eyes - in males they are usually quite dense and obvious from better photographs but difficult to detect in lower resolution shots. Females are far more problematic, however, as eye hairs are much sparser and often shorter and can be confused with the micro-hairs that occur between the facets of both *S. ribesii* and *S, vitripennis*. Nevertheless, many can be identified and are logged as such.
- *S. ribesii*. The leg characters of males are highly variable and difficult to interpret without good magnification and comparative specimens. Making judgments using a comparison between one third and a quarter the femoral length yellow is hard enough under ideal conditions; doing so from a somewhat oblique angle from a photo relies on luck rather than judgement! Recognising hair colour is equally problematic as lighting is critical. For this reason, I have always avoided giving a firm view on the identity of photographs of male Syrphus where eye hairs are not obvious. Females are generally recognisable because the hind femur is almost completely orange, although occasionally it has an indication of a dark ring. This feature can take the specimen both ways - either to (rarely) *ribesii* or (usually) to *vitripennis*.
- *S. vitripennis* is easily recognised from the area bare of microtrichia on the second basal cell but there is a lot of scope for confusion without microscopy. Like *S. ribesii*, male leg hair colours and extent of yellow are problematic, so I have maintained that they cannot be done reliably from photographs. Females are more problematic. In theory bare eyes and a partly dark hind femur might suggest *S. vitripennis*, but given that eye hairs are often very sparse in *S. torvus* this is a big assumption to make, especially in lower resolution photos. Until now, I have erred on the side of caution, hence not putting a name to most shots of what in all likelihood are *S. vitripennis*.

These complications mean that until now I have opted to not assign a formal identification to photographs of male *S. ribesii/vitripennis* and to those female *S. torvus/vitripennis* in which eye hairs cannot be discerned and there is a significant chance of misidentification. I have wrestled with this conundrum for a long while, frustrated in the knowledge that using a less cautious approach could result in a lot more species records (a similar problem obtains for *Sphaerophoria scripta* females and for *Neoascia podagrica*).

There might be some help at hand, however: I cannot remember who on the Facebook page suggested that tarsal colours might be used. It was suggested that unlike *S. torvus* and *S. ribesii* the tarsi on the middle legs are yellow (rather than black). I was very sceptical about this distinction at the time but Bot & van de Meutter (2024) recognise this in their text but use the hair colour at the tip of the hind femora to separate *S. ribesii* and *S. vitripennis*. So, is it a reliable character that might be used in determinations from photographs?

This summer (2025), I spent a lot of time checking tarsal colours of female *torvus/vitripennis* and then following up on a sub-sample under the microscope! Whilst in *S. ribesii* and *S, torvus* the tarsi on the front and middle legs are usually very dark, almost black, this character is less intense in *S. vitripennis*, but subject to a degree of variation (as is also the case with *S. torvus/ribesii*). Using the character to detect *S. torvus* has helped but not always! Was I to live further north, perhaps a bigger sample of *S. torvus* would

present a more compelling case? I need to develop some statistics to assess the risk but this approach has helped to reduce the numbers of *Syrphus* I end up retaining. Can it be used for photographic recording too? Unfortunately, unless photographers retain specimens and get them assessed there is no way one can be sure that a putative identification is acceptable. Yet, we do need to find a way of making more of the photographs that form the backbone of current recording effort.

It is also worth noting that *S. torvus* seems to be very sensitive to humidity and the effects of drought. Almost invariably when I come across reliable posts on iRecord they are from more northerly and westerly regions; yet this year I have also seen more in the SE in June/July, which I attribute to the previous two years damp cooler conditions. Clearly, there must be some ecological separation between the three species; my initial thoughts are:

S. ribesii - widespread, common, resident.

S. torvus - widespread, resident, common in north and west but largely confined to spring and autumn in southern regions, and often very scarce.

S. vitripennis widespread, resident but numbers bolstered substantially by migration and subject to some fluctuation in numbers.

All three species have two obvious generations per year (Figure 2) but, as each is protracted, a rolling process of emergence may mean that there is a partial third generation. There is an additional complication because in 2025 several female *S. torvus* were taken in July, suggesting that there is scope for variation in this species, which seemingly appears in spring and autumn but not in mid-summer in my part of SE England. More data from a wider range of sites and regions is needed!

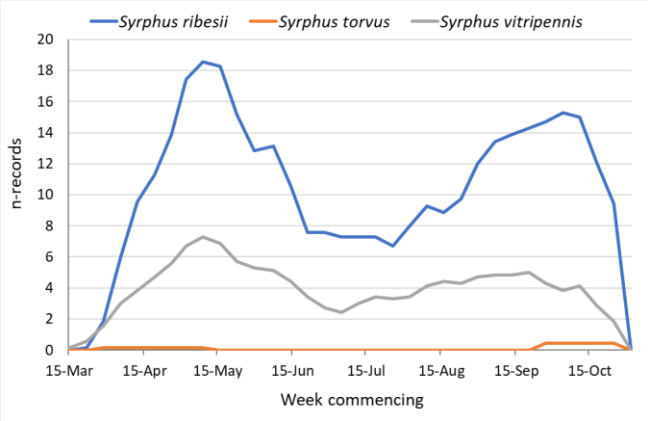


Figure 5. Phenology of banded *Syrphus* species in south London between 2020 and 2024.