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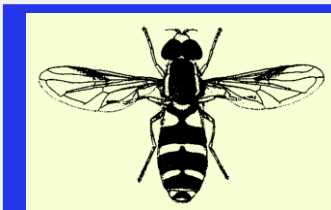

In July 2001 the First International Workshop on the Syrphidae was held in Stuttgart, since when a Syrphidae Symposium has taken place in alternate years, each in a different country. This year sees a return to Germany for the 8th in the series, which will be in Monschau from 4 to 8 June. The organisers have now issued final details which can be found on their website www.iss8.zfmk.de. This issue of the newsletter reflects continued high activity among the hoverfly recording community in spite of the insects themselves being yet again in rather short supply. The long-awaited status review is now published and a new edition of **Britain's Hoverflies** is imminent - and we also have another species of *Melanostoma* to look out for in the field and in existing collections.

This newsletter and those of other schemes are published within the Bulletin of the Dipterists Forum, but the copy that is issued in the Bulletin is reproduced in black and white. The original version which includes colour images and sometimes colour graphics will be filed in due course as a pdf. on the Hoverfly Recording Scheme website, but any reader who would like to receive a copy of the pdf. sent as an email attachment may let me know, and I can send one once the Bulletin has been despatched. Articles and illustrations (including colour images) for the next newsletter are always welcome. Copy for **Hoverfly Newsletter No. 59** (which is expected to be issued with the Autumn 2015 Dipterists Forum Bulletin) should be sent to me: David Iliff, **Green Willows, Station Road, Woodmancote, Cheltenham, Glos, GL52 9HN, (telephone 01242 674398), email:davidiliff@talk21.com**, to reach me by 20 June 2015. The hoverfly illustrated at the top right of this page is a female *Volucella bombylans* (a buff-tailed example, apparently intermediate between forms *plumata* and *haemorrhoidalis*).

Hoverfly Recording Scheme Update, Winter 2014-15

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Finally published! At long last the hoverfly status review has emerged into the daylight and on to the website of JNCC. It has been 8 years in gestation, during which time the numbers of species listed have steadily declined as we get an improved understanding of hoverfly distribution. This is very much a result of the records contributed by recorders, who all deserve a big 'thank you'. For those who want a copy, it can be downloaded from http://jncc.defra.gov.uk/page-6907.

Well that is one job off the list, but there are many more ideas in development. Firstly, the **WILD***Guide* 'Britain's Hoverflies': late this summer and during the autumn we were very busy preparing revisions to the book for a second edition. It is amazing to think that the first print run of (we think) 4,000 copies has almost sold out. So, we have sorted out the known glitches and have added various additional bits; not least a substantial section on photographic tips, and four pages of plates using stacked photographs from specimens. Several additions have also been made to the species accounts. The plates represent the species most commonly recorded by photographers and will hopefully help them get to grips with the family. The technique seems to work well, so we may well use it in other products. The revised guide should be in the shops by April. As in the case of the first edition, royalties will go to Dipterists Forum to support training efforts, production of keys etc.

The photos we have used in the plates in the **WILD***Guide* were originally taken to populate a new hoverfly card for the Field Studies Council. Hopefully, with the **WILD***Guide* out of the way, we will make progress on that too and get it off the books this autumn. We also have a revision of the Hoverfly Atlas in hand. As we write, records as pouring in and

the dataset is growing rapidly. It currently stands at over 820,000 records, of which over 811,000 are regarded as reliable and are used in analysis. 2014 could be a very good year for records as we start to see the results of several years training taking effect. Several alumni are now very substantial contributors to the scheme and it is great to see replacements for the 'old guard' filling the ranks that have been somewhat depleted by time. It is amazing to think that a substantial number of the original contributors to the scheme are continuing to make regular contributions but, as figure 1 shows, there was quite a drop in recruitment in the period 1990 to 2005 before the effects of the training scheme kicked in.

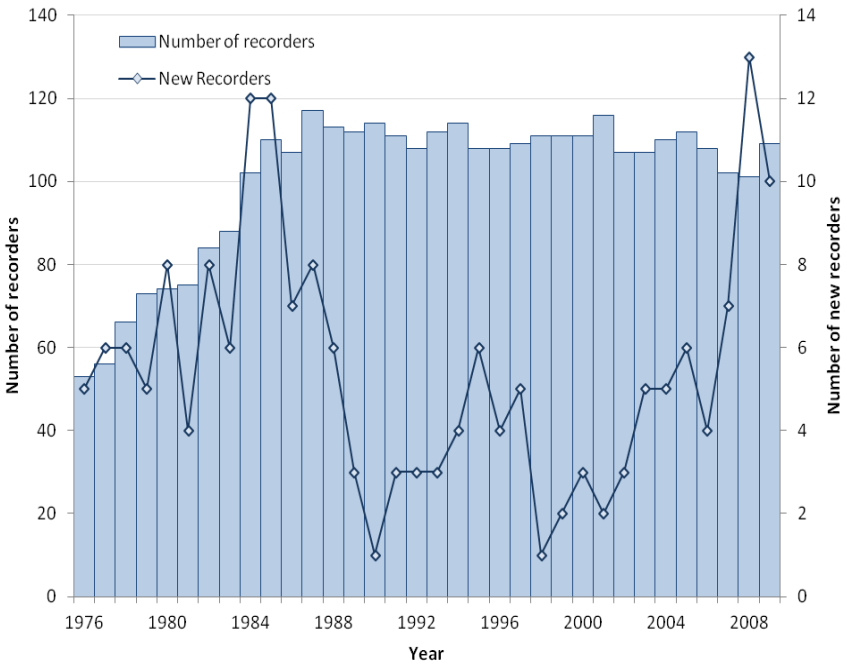

Figure 1. Yearly numbers of recorders and recruitment of new major contributors.

Recorder = someone who has submitted ≥5 records on at least two occasions

Started = first year we had records from someone who has submitted ≥ 250 records

Inevitably, numbers of records for individual years have fluctuated, but since 1984 at least 15,000 records have been submitted annually, with the majority of years exceeding 20,000 since 1985. Peaks in activity largely coincide with major events such as the publication of Stubbs and Falk in 1983, a call for records in the early 1990s, and a further call to support the 2011 atlas (figure 2).

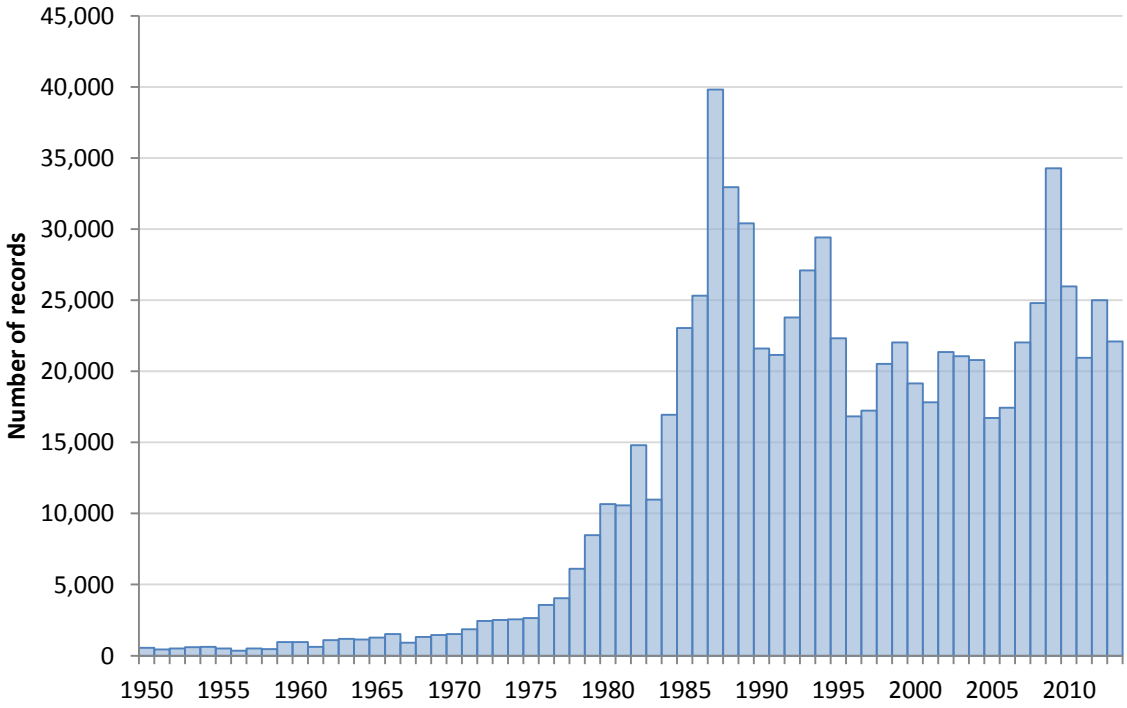

Figure 2. Numbers of records within the HRS database from 1950 to 2013.

The HRS dataset is now at a scale where it can be used in a great many ways, and it is regularly called upon by academic researchers. At the moment the interest is pollinators and the HRS data are being used to inform the development of ideas for a national pollinator monitoring programme. Quite what will emerge is as yet unclear, but in the meantime the HRS has launched its own attempt to develop a long-term dataset with the garden monitoring scheme. A small but dedicated band of recorders has been active this year and data are starting to come in. At this stage we have not undertaken an analysis but we will have done so by the next issue. Our intention is to prepare a first year report and to make this available as a download on the UK Hoverflies Facebook page. It will also, perhaps go onto the DF website and will be made available upon request too. More next time!

Meanwhile, we are also working on organising a one-day conference for hoverfly recorders to help to inform everyone about the scheme's outputs and to give feedback on the contributions made by everybody. Some of that feedback will include analysis by JNCC that helps to inform Government about the plight of Britain's wildlife. Hopefully it will also include the initial results of the garden monitoring scheme and data from the incredibly active group of photographers that post on UK Hoverflies. Details of the conference have yet to be finalised and will be posted on the DF and HRS websites as well as the UK Hoverflies and UK Diptera Facebook pages. Our hope is that it will take place in April and will coincide with the production of a revised atlas.

One of the recurring questions about biological recording is whether distribution maps do much more than plot the distribution of recorders. We think that the results are a bit more complex, as the maps tend to show nice places where people like to go, which in turn may be indicative of biodiversity hotspots. Distribution modelling can help to test whether the maps have meaning and hopefully the following gives a clear picture of the relative species-richness of hoverflies across the country (figure 3a-c).

Figure 3a. Overall coverage. Filled = 2000 to 2014, grey = 1980 to 1999; open = pre-1980

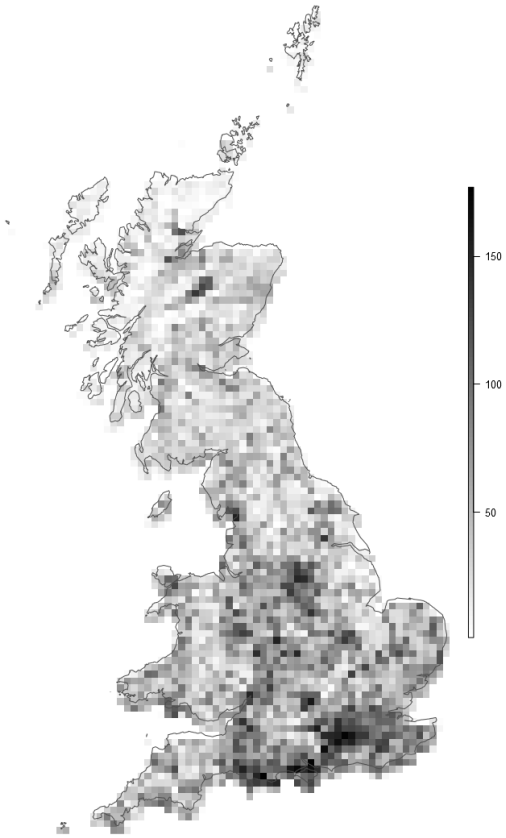

Figure 3b. Numbers of species per 10km square. The maximum number of species is 177 in SY89

Figure 3c. Modelled species richness using Frescalo [i].

The resulting modelled species-richness map seems to be highly plausible, demonstrating the importance of the southern woodland belt and showing how perceived weak areas on dot maps are likely to look if recorder effort was constant across the country. Areas of likely low richness are as expected: the Fens of eastern England, parts of central and north Wales, The Pennines and high ground in the Lake District, the southern uplands of Scotland and much of the Highlands and Islands of Scotland. The immense richness of southern England illustrates just how significant demand for new building land in the south-east could be for hoverflies and, as likely as not, much of the rest of Britain's biodiversity.

[i] Frescalo is a computer program that estimates species richness and time trends when recording effort is uneven.

Melanostoma mellarium (Meigen, 1822): one step forward in resolving *Melanostoma* identification issues

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The truism that even the longest march begins with but a single step may have been first used in relation to human endeavour far removed from the naming of hoverflies. But it does seem somewhat appropriate when considering the advance represented by the reinstatement of the species *Melanostoma mellarium*. It's no secret that *Melanostoma* is a bit of a dog's dinner, taxonomically, with either polymorphic species or unrecognised taxa tending to complicate the naming of specimens, even from quite mundane localities. And *Melanostoma*, of one sort or another, can turn up almost everywhere in this part of Europe, from March to October!

Genetic characterisation of Fennoscandian *Melanostoma* populations has led Haarto and Ståhls (2014) to recognise four species in that part of Europe. Their work validates the status of *M. mellinum* (L.) and *M. scalare* (Fab.) as distinct species, at the same time confirming the conclusion of others that *M. mellinum* can exist in forms with large frontal dust spots in the female. They also confirm the separate identity of *M. dubium* senu auctt in Fennoscandia, but establish that *dubium* of Zetterstedt is actually a synonym of *M. mellinum*, so requiring them to give a new name to *dubium* sensu auct. , which they name as *Melanostoma certum* Haarto and Ståhls. The fourth species recognised from this genetics work is *Melanostoma mellarium* (Meigen). *M. mellarium*, in its general appearance, overlaps with both *M. mellinum* and *M. scalare* but, now that it has been characterised genetically, its morphological diagnosis becomes possible and keys separating it from other *Melanostoma* species can be produced. From data available to the author it is apparent that *M. mellarium* is widespread in Europe, occurring in Scandinavia, the Alps, the Pyrenees and northen Spain, and in the British Isles. This note is to bring the existence of this rather obscure species to the attention of those interested in the distribution of syrphids in Britain and Ireland. The key provided will hopefully help in separating *M. mellarium* from the other known Atlantic zone species. However the key is not particularly easy to use and if it can be improved upon that would be all to the good. It should also be borne in mind that reinstatement of *M. mellarium* does not resolve all the taxonomic puzzles involving *Melanostoma*! Following the key what is known of the ecology of *M. mellarium* is summarised and other "*Melanostoma* issues" are briefly discussed.

Key to some *Melanostoma* species, 19 December 2014
This key comes with the health warning that it is unlikely to deal with all *Melanostoma* specimens collected in Britain or Ireland.

1 Males, eyes meeting on frons **2**
----- females, eyes separated on frons **5**

2 Sternite 2 more than 2x as long as the width of its posterior margin; body length 8 – 11mm (junction of cross-vein r-m with wing-vein R4+5 nearly always basal to the junction of wing-vein Sc with the costa; distance between junction of Sc with the costa and vein Rs with the costa greater than the distance between the latter point and the junction of R4+5 with the costa: Figure 1) ..... ***scalare*** (Fabricius)
widespread in European lowland and montane zones
----- sternite 2 less than 2x as long as the width of its posterior margin; body length 6 – 8mm **3**

3 Hairs on the anterior half of the mesoscutum including many at least as long as half the median length of the scutellum; hairs on the tergites all pale (white/pale grey); body length 6 – 7mm ..... ***certum*** Harrto and Stahls + *dubium* sensu auct of Scotland and many parts of the Alps; *montane/ subalpine zones*
----- hairs on the anterior half of the mesoscutum no longer than one quarter of the median length of the scutellum; tergites with black hairs intermixed with the pale hairs, especially along the mid-line and close to the posterior margins of the tergites; body length 7 – 8mm **4**

4 Sternite 2 at least 1.5x as long as its maximum width; mesoscutum usually with black hairs intermixed with the pale hairs (can be predominantly black-haired); body length 7 – 8mm (frons mostly black and shining, dusting restricted to a very narrow band against the eyes) ..... ***mellarium*** Meigen; *montane/subalpine zones of the British Isles and the Alps; less frequently at lower altitudes*
----- sternite 2 no more than 1.25x as long as its maximum width; mesoscutum usually without black hairs (hair-covering brown/greyish-brown); body length 7.5 – 8mm ..... ***mellinum*** (L.) + various forms of unknown taxonomic status; *widespread in European lowland and montane zones, also strongly migratory and in consequence encountered at higher altitudes*

5 Sternite 4 2x or more as wide as long; tergites entirely black, or with at most a pair of very small, round, orange marks on tergite 2; body length 6 – 7.5mm ..... *dubium* (female) sensu auct, of many parts of the Alps and Scotland
----- sternite 4 distinctly less than 2x as wide as long; tergites 2 – 4 either with pale markings, or with pale markings on only tergites 3 and 4, ot tergites entirely black; body length 6 – 11mm **6**

6 Hairs on the arista more-or-less outstanding and, in the basal half of its length, slightly longer than half its basal diameter; body length 7.5 - 9mm (junction of cross-vein r-m with wing vein R4+5 nearly always basal to the junction of wing vein Sc with the costa: Figure 1) ..... ***scalare*** (female)
----- hairs on the arista more-or-less adpressed to the arista and all shorter than half the diameter of the arista **7**

7 Mesoscutum (measured between the wings) wider than the maximum width of the abdomen (Figure 2b); body length 7 – 8mm (tergites usually with a pair of pale marks on tergite 3 and on tergite 4; tergite 2 usually without a pair of pale marks, but may have a pair of small, obscure pale marks; tergites may be entirely black; when pale marks are present on a tergite they are confined to the anterior half of the tergite: Figure 2b)
..... ***mellarium*** (female)
----- mesoscutum (measured between wings) narrower than the maximum width of the abdomen
..... **8**

8 Lateral to the lunule, the frons is dusted across its entire width, to the eye margins; tergites entirely pale-haired and without pale markings; body length 5 – 7mm ..... ***certum*** (female)
----- frons, lateral to the lunule, only narrowly dusted along the eye margin, undusted and brightly shining across most of the distance to the eyes; tergites partly black-haired and often with a pair of pale marks on at least tergite 3 and tergite 4; body length 6.5 – 8mm ..... ***mellinum*** (female) + forms of uncertain taxonomic status

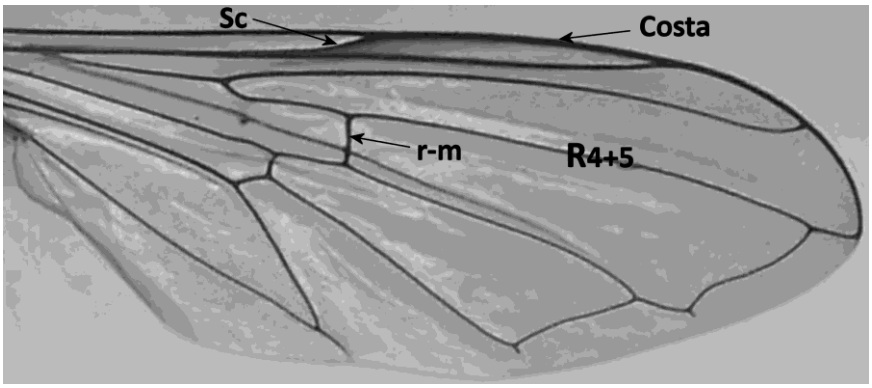

Figure 1: right wing of *Melanostoma scalare*

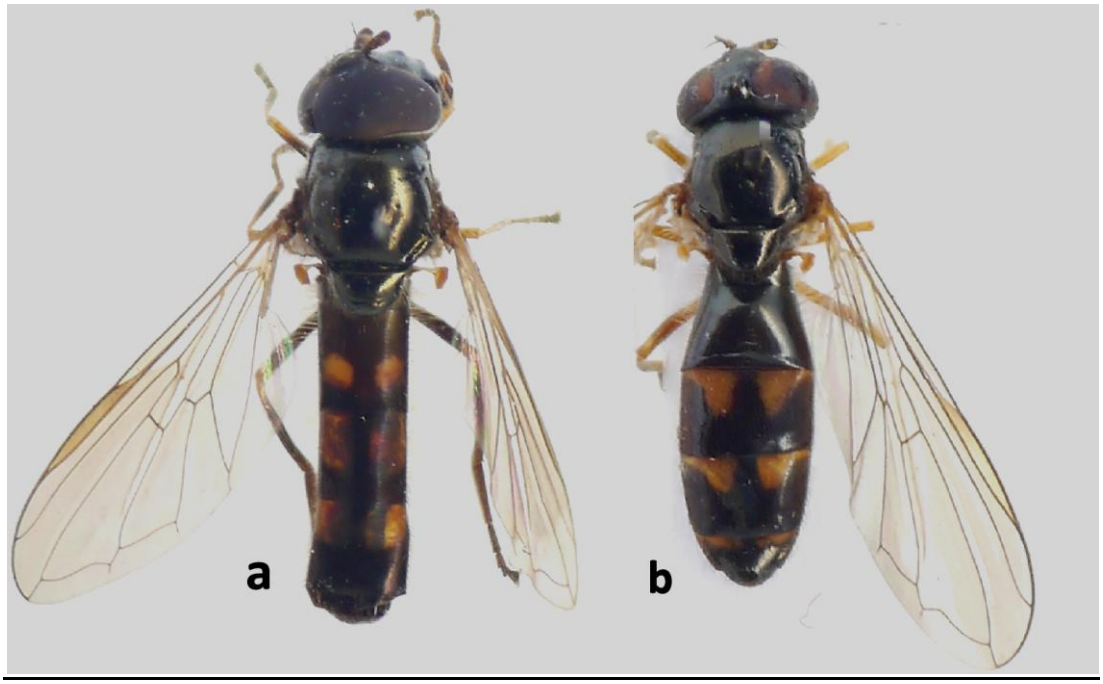

Figure 2: *Melanostoma mellarium*, a = male; b = female.

Melanostoma mellarium

In central Europe, *M. mellarium* is hardly met with below 1000m, but becomes quite frequent in both calcareous and non-calcareous grassland in the subalpine zone. On more acid sites it is usually found along streams. The same is true of the Pyrenees (Jean-Pierre Sarthou, pers.comm.). In Finland, Haarto and Ståhls (2014) refer to *M. mellarium* as found above the tree line. In Atlantic parts of Europe, *M. mellarium* occurs in unimproved upland grassland and moor and also at lower altitudes, being recorded almost at sea level along streams in blanket bog in the west of Ireland. In the limestone grassland at c. 200m alt., in the Burren in Co. Clare, *M. mellarium* also occurs away from streams. This species can be found in flight with other *Melanostoma* species, but has a shorter flight period than both *M. mellinum* and *M. scalare*. *M. mellarium* seems to be univoltine, and is on the wing in June/July. In Britain, scattered records of *M.*

mellarium might be expected along streams in moorland and in upland grassland, from Cornwall to the north of Scotland.

Other taxonomic issues in *Melanostoma*

The opening remark of this note alludes to re-instatement of *M. mellarium* as but a step towards sorting out how many *Melanostoma* species are present in Europe. The above key highlights one of the other issues, by separating females of *M. certum* from females of *M. dubium* sensu aucct of the Alps and Scotland. For the moment, one option is to consign these apparent variants to *M. certum*. But, whether they are conspecific with *M. certum* will require a more comprehensive genetic examination of *Melanostoma* populations to decide: Haarto and Ståhls (2014) refer only to genetic characterisation of Fennoscandian populations. There are other more-or-less distinct *Melanostoma* phenotypes in the humid beech forest of the Alps and Vosges mountains, another in the Schwarzwald, another in the rather special, montane wetlands of the Jura and doubtless more elsewhere in Europe. Based on morphology alone it is just not possible to know whether these are discrete species. So far, genetic characterisation of *Melanostoma* populations shows promise in resolving such issues. The next step might usefully be to genetically characterise the British *Melanostoma* populations, in order to clarify the relationship between *M. certum* and Scottish "*M. dubium*", for instance.

The key included in this note is derived from Speight and Sarthou (2014). More infomation on European *Melanostoma* species can be found in Speight (2014).

References

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Portevinia maculata in Norfolk – a targeted survey

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Among diptera taken by Tony Irwin during a collecting session at Holt Hall, North Norfolk in May 2011 was a male *Portevinia maculata* which represented the first county record for 73 years. This gave rise to the realisation that other populations must be present in the county and as a consequence a targeted survey was undertaken in 2014. It was promoted via Norfolk Wildlife Facebook, Norfolk Wildlife Yahoo Groups and the Norfolk Biodiversity Information Service (NBIS). With a database of Ramsons sites to hand, supplied by Bob Ellis, the Botanical Recorder for East Norfolk, participants were requested to search sites during the spring flowering period when the distinctive males can be found on the inflorescences and foliage of the foodplant. Photographic evidence was requested.

An enthusiastic response led to the discovery of nine sites which included Warren Woods, Cromer where Ken Durrant had recorded the species in 1938. The other sites (in a further 5 ten-kilometre squares) were Ashwellthorpe Lower Wood, Booton Common, Castle Rising Wood, a woodland site near Felbrigg Great Wood, Hockering Wood, Reffley Wood near Kings Lynn, Sheringwood in Beeston Regis and Swanton Novers Great Wood. The stronghold is evidently North Norfolk where further populations can be anticipated in unvisited, mainly private, woodland, and potential sites remain to be surveyed elsewhere.

Above all perhaps, the survey has highlighted how, within Norfolk, a widespread albeit local hoverfly with a short flight period can go undetected if its habitat lies outside the high profile areas of the Broads, Breck and coastline, where most diptera research has been undertaken. The reliance of *Portevinia maculata* on a single foodplant, and the ease with which it can be identified from photographs, make it ideal for a Citizen Science project. A survey run on similar lines to the above in other parts of East Anglia where the species is poorly recorded could well produce similar results.

Xanthandrus comtus in Cornwall

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On 9 September 2014 I noticed a male *Xanthandrus comtus* in my garden in Torpoint, Cornwall, the first I had seen since 2008. Then, on the morning of 14 October, I found a female in my overnight garden moth trap (a Heath trap, using a 40W actinic tube). On the morning of 20 October, I found a male in the same trap followed by another male on 22 October near the trap, although not inside it. This is not the first time *X. comtus* has been attracted to the trap: males were found in the same trap in November 2007 and October 2008.

My first encounters with *X. comtus* were on the Isles of Scilly: St Mary's and St Martin's in 1992, followed by records from Tresco in 1993 and St Mary's again in 1995, 1996 and 1997. In all cases they were found visiting ivy flowers in October. I haven't visited the islands since 1997.

Since 1993 I have recorded *X. comtus* at six (mostly coastal) sites in my local patch, the extreme southeast of Cornwall, with several records in 1993, no records from 1994 to 1997, then annually from 1998 to 2008 when another gap took place until 2014. Most of the above records (both from Scilly and mainland Cornwall) occurred between August and November, although, at Penlee Battery Cornwall Wildlife Trust Reserve, I recorded it once in June 2000 and three times in July 2008.

The autumnal dates would indicate that it occurs as a migrant, although the mid-summer dates could suggest that it is also an occasional resident in the area.

As for its appearance in the moth trap, *X. comtus* does appear to be relatively easily attracted to the light. Only *Melanostoma scalare, Platycherus albimanus* and *Episyphus balteatus* have appeared in the trap more often and there are plenty of common species in the garden which have never done so.

An outbreak of *Criorhina ranunculi* (Panzer, 1804) on Wenlock Edge, Shropshire.

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I noted with interest Ian Andrews' note of large numbers of *C. ranunculi* at cherry laurel in east Yorkshire in April 2014 (Andrews, 2014). Subsequently, Jim Cresswell and Keith Fowler informed me of a similar encounter on 9 April 2014 in an old quarry on Wenlock Edge, Shropshire (SO5998). Here Jim and Keith witnessed "over three dozen" *C. ranunculi* about goat willow flowers. Jim reported: "It was a sunny day with a strong south westerly breeze. All the insects interested in the willow were sheltering on the leeward side on the whole extent of the tree, from waist height to the top." Some of the males were engaged in the usual head butting of any medium to large sized insects that were also flying about the goat willow.

In some thirty years of hoverfly watching I have personally only ever seen up to five individuals at one site, so this observation, taken alongside Ian Andrews' observation, does seem to indicate that the spring of 2014 was a remarkable season for this spectacular spring hoverfly.

Reference

Andrews, I. (2014), Large numbers of *Criorhina ranunculi* at cherry laurel, *Hoverfly Newsletter* No. 57.

Callicera rufa in England – an update

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Since I reported the recording of *Callicera rufa* in England in 2009 and 2011 (Jones 2011 & 2012), three further sites have been discovered in Shropshire, Staffordshire and Norfolk.

In June 2013 Brett Westwood came across a female *C. rufa* ovipositing into a tiny rot hole on a fallen trunk at The Million, Enville Common, Staffordshire (SO8486). Brett reported that this particular female was so engrossed in its ovipositing activity that it landed on his camera and his arm as he was trying to photograph it! The Million is heavily planted with pine and other conifers.

On 26 June 2013 Maria Justamond photographed a single female resting on an oak tree trunk in plantation woodland at Shawbury Heath, Shropshire (SJ543195). This site is about 5km north of Haughmond Hill, so it is very plausible that one site has "seeded" the other. The four sites across Shropshire and Staffordshire are within an area less than 30 miles across, so it is certainly well established in this part of the West Midlands.

Roger Morris informs me that there is a 2014 record for *C. rufa* from Holme, Norfolk, so together with previous records from Bedfordshire and Nottinghamshire, we now know of records from five English vice counties. It seems highly likely that *C. rufa* is widespread across England and very probably into Wales.

C. rufa appears to have quite a long season, based on 13 Shropshire sightings, in 2011 – 2014, the date range is 7 May – 27 June, with ten of those sightings falling in May. There is a good spread of dates throughout May.

In 2014, at Little Hill, Wrekin on 17 May, Keith Fowler witnessed several *C. rufa* lekking on two Scots pines on the hilltop and also flying about and landing on leaves of a rowan tree. At Haughmond Hill a single male on a Scots pine trunk was seen by me on 18 May. At both Little Hill and Haughmond Hill, *C. rufa* has been seen at precisely the same two locations in four consecutive years. At Little Hill *C. rufa* has been seen on one particular tree in each year. At Haughmond Hill trees have fallen down and so different trees have been used in different years, but nonetheless the area used by lekking males is very small. Despite thorough searching across Haughmond Hill, no other areas have been found with *C. rufa* present. These observations strongly indicate that lekking locations are quite critically defined.

References

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Jones, N. (2012). A further record of *Callicera rufa* Schummel, 1842 in Central England. *Hoverfly Newsletter* No. 52. 6-7.

Creating artificial rot holes for *Callicera rufa*

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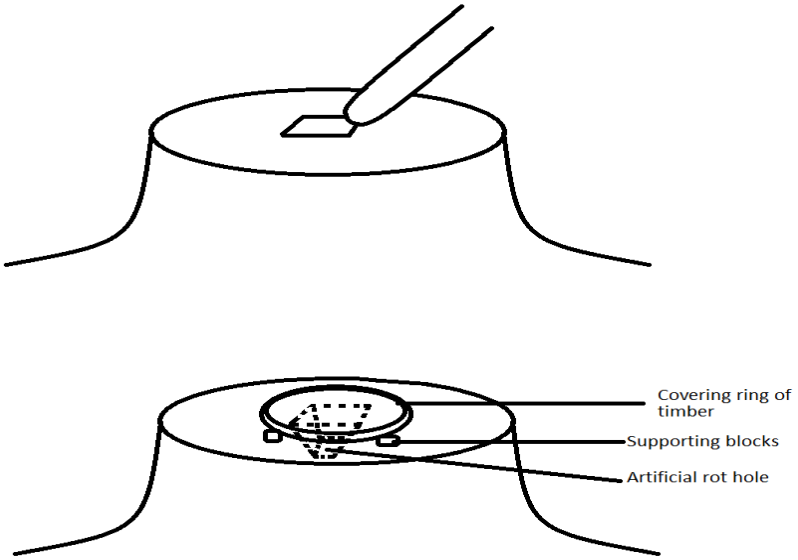
The Malloch Society has trialled the use of artificial rot holes as a way of promoting habitat for some of Scotland's rarest hoverflies (*Callicera rufa* and *Blera fallax*) They have demonstrated that it works, and it would seem that the holes are very easy to construct. We know that *Callicera rufa* will colonise such holes relatively quickly.

The principles are simple. It would seem that in the wild, rot holes in pine stumps need to be in stumps over 20 inches in diameter (50cm). Holes in stumps of Scots Pine *Pinus sylvestris* are known to work well, but the possibility of colonisation of other conifer stumps should not be ruled out. There is therefore scope to create holes in a range of stumps and to monitor these for their efficacy. We just do not know what will turn up, so all options are worth

considering. Notches cut into the junction of a branch and trunk have also been successful and have been shown to be colonised for many years after the original hole was created. The one issue I would worry about is whether such notches weaken the tree and hasten its collapse – beware as there may be health and safety implications.

An artificial rot hole is very simple to make. In essence, it is an inverted pyramid or box, created by drilling the centre to the stump by a chainsaw. The hole will naturally fill with water, and the mixture becomes quite viscous as pine resins seep into the water. Placing a raised cap over the hole is useful because it shields holes from desiccation and predators. A cap can be easily made from a thin slice of a trunk or branch raised above the stump on several blocks of wood – again, off-cuts. The hole can be 'seeded' with chips of conifer timber resulting from the drilling process, and this does seem to help the development of the rot hole biology.



The absolute dimensions of artificial rot holes can be varied but holes around 5 to 6 inches square and four to five inches deep are probably about right. The obvious issue is how long each takes to cut, so it is necessary to be practical about what can be achieved. Variations on a theme might also be worth trying. It may also be helpful to place brash over the stumps to provide some additional protection against disturbance and desiccation but this is not essential as far as I am aware. The hole will naturally fill with water over time, but priming it with rainwater may help. The holes need to be created before May/June when the adults fly.

Once the holes are created, there is a need for patience. Checking the holes in the autumn or spring will reveal whether any larvae have started to develop. It is possible that you will see several species of larvae, but those of *Myathropa florea* are most likely. Those of *Callicera rufa* have much shorter tails and more obvious pseudopodia.

The logical way of recording the larvae is to count and photograph them before returning them to their rot hole. Once photos have been assembled, we can determine what has been found. Numbering the artificial holes and recording which photos relate to which hole will help relocation of any likely larvae. It is not certain that larvae will be found in the first year, but the chances are good that something will be found, if only *Myathropa florea.*

Interesting records from Shropshire

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In common with most other dipterists, I found 2014 to be an appallingly poor year for Diptera, with very low numbers of even the most common species throughout the season. Amongst the Syrphidae only some *Eristalis* species appeared in any numbers as the season progressed. Consequently finding the scarcer species was even more challenging than usual and my report for 2014 is accordingly a short one.

Cheilosia soror – At Buildwas (SJ6305), where there are soils with a calcareous influence, a single female was amongst numerous *Cheilosia* species pooted from upright hedge parsley *Torilis japonica* and hogweed *Heracleum sphondylium* flowers on 23 July. This is the second Shropshire record. 23 July was one of very few days in 2014 when I witnessed decent numbers of *Cheilosia* flying.

Cheilosia velutina – on another day when good numbers of *Cheilosia* were flying, I collected a single female *C. velutina* from hogweed flowers from a meadow within plantation woodland at Dudmaston (SO7490). This was only the second vice county record for the species.

Brachyopa – three species, *B. bicolor*, *B. pilosa* and *B. scutellaris* were all flying about beech trees at Haughmond Hill, Shrewsbury (SJ5314) on 30 April, a most unusual occurrence.

Chalcosyrphus eunotus – a single female was recorded from alongside the Cound Brook at Big Wood, Eaton Mascott (SJ5305) on 29 June. This was a well worn individual and is a very late date for this early spring species. This record brings the number of known sites for *C. eunotus* in Shropshire to 11. Coincidentally, Alastair Hotchkiss discovered several new sites for the species in neighbouring Montgomeryshire during 2011, confirming, at long last, the long held conviction that it must be present in many mid Wales valley woodlands.

Also at Big Wood, Eaton Mascott on 29 June, a single female *Xylota florum* was recorded, the first I had encountered in several years.

Winter hoverflies

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Many of us cease recording hoverflies by the end of September, even though we know that some will be found throughout the year. This almost certainly means that winter records are under-represented in the dataset. Recent advances in photographic recording and the development of a new recording community at Facebook's UK Hoverflies page have made a huge difference in this respect. Photographers are seemingly far less inhibited by the cold and regularly post shots of hovers seen in the winter. This new data source has generated some really surprising results. For example, we see remarkable numbers of posts of *Xanthandrus comtus* in December and January (Figure 1). The majority of the records are from southerly locations, however, and therefore we must not assume that the potential for winter hoverflies is universal. Nevertheless, they are certainly about where conditions are favourable!

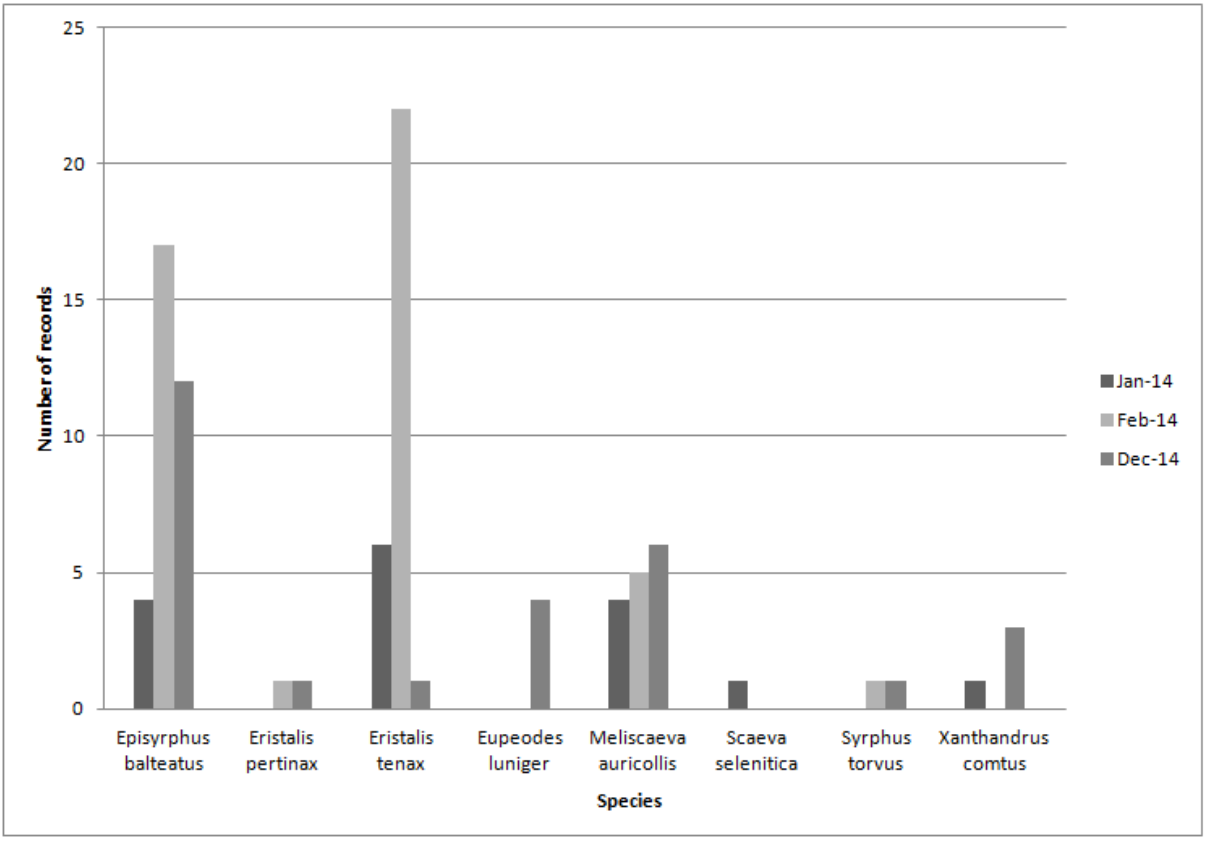

Figure 1. Hoverfly species recorded by photographers in the winter months of 2014.

There are several striking points about the data. The most obvious is the frequency of *Episyrphus balteatus*, which is often primarily regarded as a migrant. This is clearly not the case as *E. balteatus* occurs throughout the winter months in southern England, often as very dark forms that are indicative of development in cold conditions. Similarly, *Meliscaeva auricollis* is frequently observed and appears to be continuously brooded at least in southern England (figure 2). Hibernation by *Eristalis tenax* also seems to break quickly if temperatures rise, with numbers rapidly rising in February.

By March (figure 3), the range of species on the wing gathers pace but records continue to be dominated by the broader winter assemblage. As might be expected, *E. pertinax* starts to become dominant in the photographic record, but an interesting feature is the numbers of *Syrphus torvus*. Only a small proportion of *Syrphus* can be identified from photographs but *S. torvus* can often be spotted in good quality photographs in which the eye hairs can be seen when enlarged.

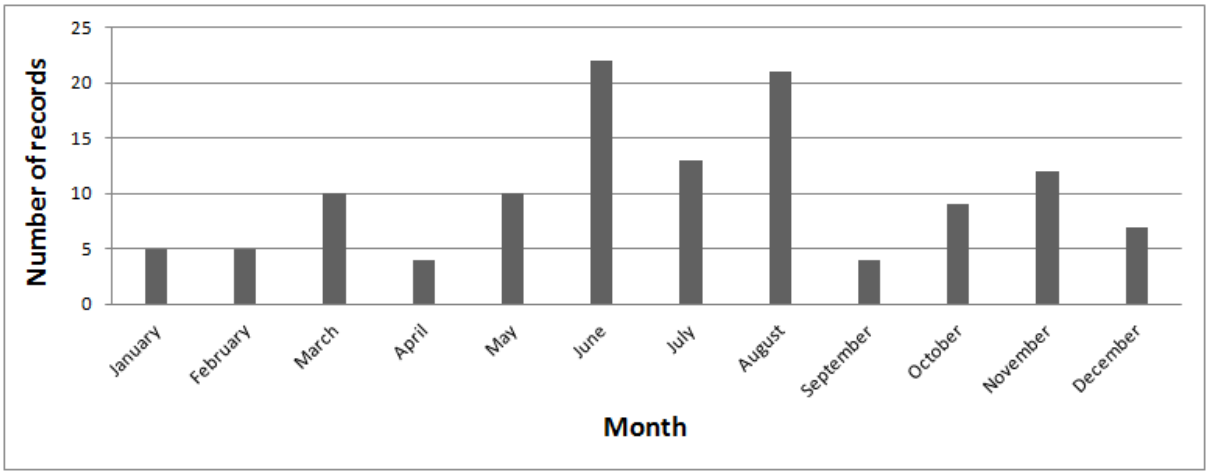

Figure 2. Abundance of *Meliscaeva auricollis* in 2014 based on photographic records.

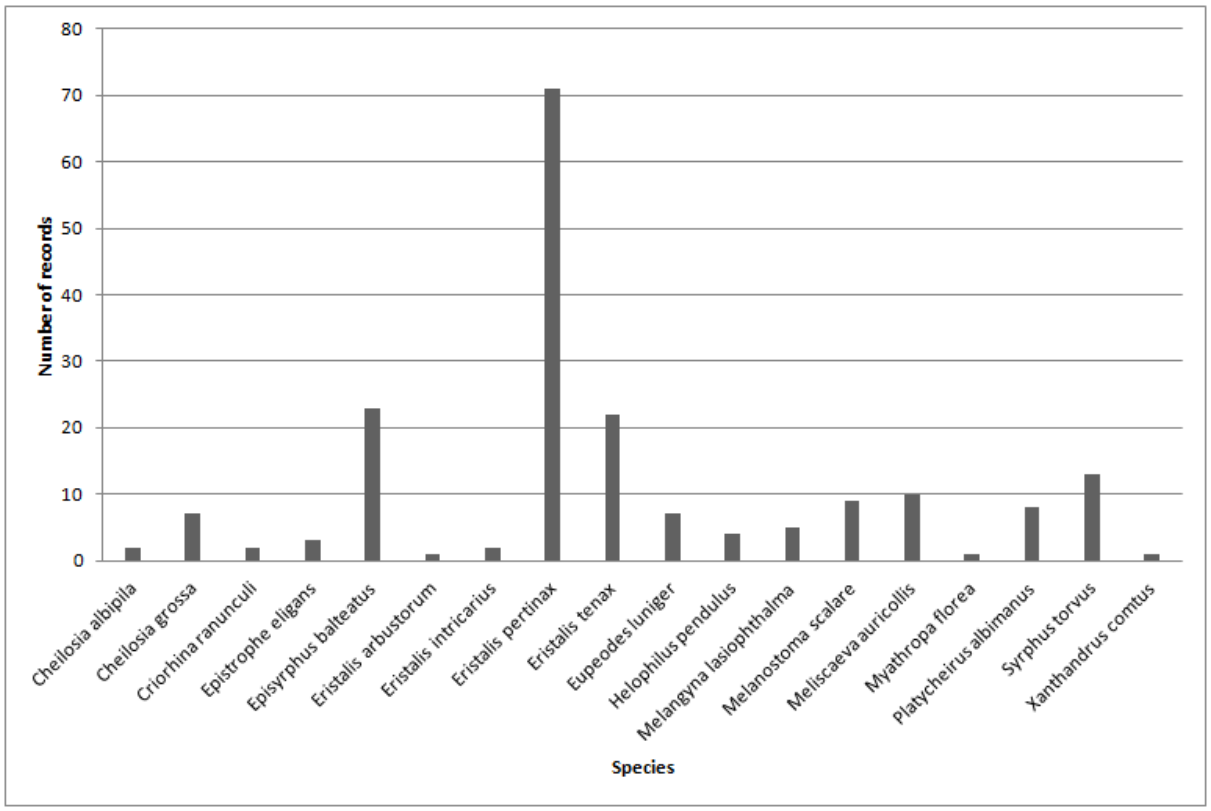

Figure 3. Hoverflies recorded by photographers in March 2014

There is much more to be done with the photographic data - eventually more will emerge, but meanwhile these graphs for *Eristalis tenax* (figure 4) and *E. pertinax* (figure 5) may be of interest in connection with activity in winter and early spring.

The apparent spring emergence peak for *E. tenax* appears to have been in February, which suggests that this species was very much on the wane by April. More data will be needed to determine quite how this compares with other years. The dataset for 2012 and 2013 is probably not as comprehensive because we did not have quite such an active Facebook group. Data for 2015, on the other hand, could be very constructive as this group is now making a substantial data contribution.

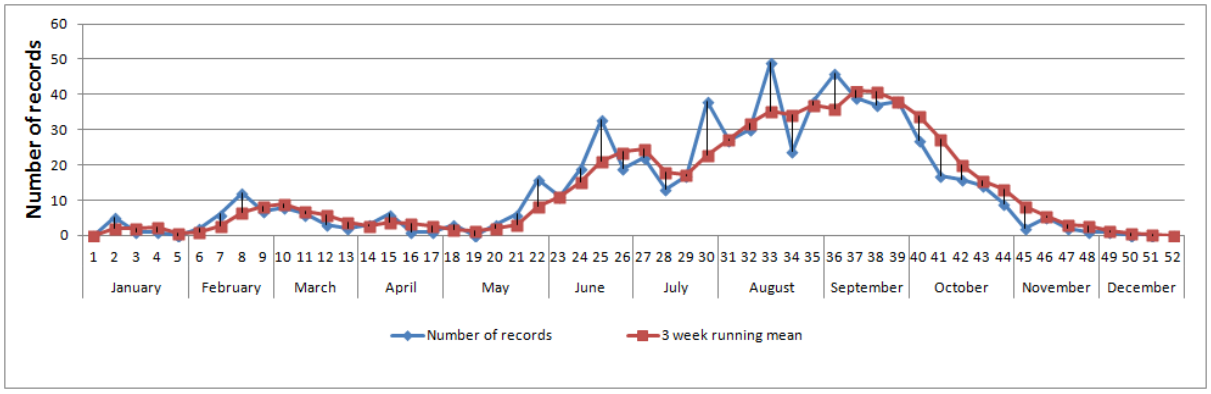

Figure 4. Frequency of photographic records of *Eristalis tenax*, with a 3-week running mean used to smooth the data superimposed.

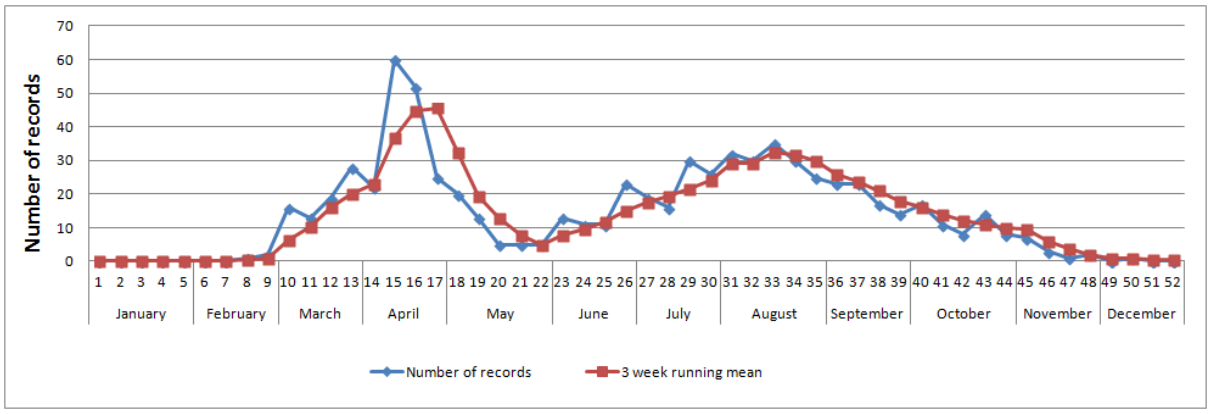

Figure 5. Frequency of photographic records of *Eristalis pertinax*, with a 3-week running mean used to smooth the data superimposed.

Both graphs are instructive because they show very clear patterns of abundance which suggest that photographers are providing quite an accurate picture of what is happening for those species that they see, and which can be identified from their photos. Intuitively, the graphs look to mirror field experience. In the case of *E. tenax* I frequently reflect on how few I see in the spring and have often wondered whether I am missing them somehow. I find myself reassured that I am probably not overlooking them. These very simple analyses offer an important insight into the potential value of building a network of photographic recorders through social networking and image-hosting sites.

There is no doubt that the range of species depicted by photography is more limited than the overall assemblage of hoverflies at a site. Some species are really only seen by developing a good knowledge of their biology and behaviours, or by using techniques such as sweeping that do not lend themselves to photography. Others are so taxonomically difficult that they cannot be reliably identified from photographs. BUT, there is a significant proportion of the British fauna that CAN be identified from photographs and these sources do yield valuable information that may be used in certain important applications such as looking at pollinator abundance and perhaps also monitoring range changes.

There is no escaping the problems of difficult genera such as *Cheilosia*, *Platycheirus* and *Pipiza*, but this should not dissuade the recorder who prefers not to take specimens from making a meaningful contribution to recording schemes such as the HRS. Clearly, substantial data for common species can be used in ways that extend beyond the simple development of dot maps. The critical issue is to be aware of which species can and cannot be identified, and to know which species dominate the dataset, so that the inevitable skews in the data are recognised in any analysis.