Hoverfly Newsletter
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With this edition of the newsletter we have reached the landmark of the 50th issue. The first was dated October 1982, a year before the publication of the first edition of British Hoverflies, and since then we have managed to compile two issues in most years, thanks to a rich vein of articles supplied by you, the readers. That first issue, mainly the work of Philip Entwistle, the first editor, featured notes on three species that were than relatively new to the British list, *Dasysyrphus friuliensis*, *Eriozona syrphoides*, and *Parasyrphus malinellus*, so it is perhaps appropriate that this 50th in the series should include a piece by Alan Stubbs on species new to the UK.

Some contributors have expressed concern at the early copy deadline (late November) for the current newsletter, a month earlier than was customary in the past. This change has been made to fit in with the closure date for the Spring Dipterists Forum Bulletin which has been brought forward to 31 December. The copy dates for the autumn issues of the newsletter and bulletin remain as before. Thus, although there will continue to be two issues of each per year, they are not equally separated in time; there is a seven month gap between the spring and autumn issues, but only a five month gap before the spring ones.

Articles and illustrations (including colour images) for the next newsletter are always welcome. Copy for **Hoverfly Newsletter No. 51** (which is expected to be issued with the Autumn 2011 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 2011.

The hoverfly illustrated at the top right of this page is *Xylota xanthocnema*.

Hoverfly Recording Scheme update Winter 2010-2011

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Although the 2010 field season has been extremely disappointing in many respects, it has also yielded surprises, including a new *Dasysyrphus* and a new *Syrphus* courtesy of Ian Rabbarts and Mick Parker respectively. We will let them announce their finds properly before going further, but suggest that recorders really need to be looking carefully at their *Parasyrphus punctulatus* specimens and also at *Dasysyrphus pinastri/venustus* specimens. These are exciting additions to the British fauna and will hopefully be joined by others soon. There remain tantalising reports of *Milesia crabroniformis*, and we hear that *Temnostoma* species are on the move in Europe.

We have not been idle either. Our ongoing jobs list includes organising the 6th International Symposium on the Syrphidae, writing an updated atlas that will hopefully be one of the components of delegates' packs at the Symposium (provided sufficient sponsorship is gained), and writing a WILDGuide to hoverflies! Meanwhile, we have also won an OPAL (Open Air Laboratory) grant to buy a camera microscope and to print course literature for our very popular "*Introduction to Hoverflies*" course.

The first time we used the new microscope was a course we ran for Shetlands Biological Records Centre in early August. Neither of us had been that far north before so we decided to make the trip into a holiday and did a grand tour, including one excellent day in the Spey Valley, three days on Orkney and ten days on Shetland, including three nights on Fetlar in search of Red Necked Phalarope. We dipped on the Phalarope but got amazing views of Dotterel on the *Racomitrium* heath on the plateau of Cairngorm: there were at least twenty birds and we got really great views of some. Our haul of hoverflies was less impressive but we did get a new site for *Eristalis abusivus* on Shetland and saw a huge amount of the coastline, which includes a spectacular array of stacks, tombolos and barrier beaches. It is a fantastic place to go and well worth a trip if you enjoy wildlife. We got great views of Otters, were regularly mobbed by Great Skuas, handled a Storm Petrel, and visited numerous colonies of Fulmars and Shags. Harbour and Grey Seals were abundant and we even saw the occasional Harbour

Porpoise. Sadly we did not see Killer Whales so we will just have to go back!

The Hoverfly Symposium is for us a major event. As readers will know, we have attended all of the past five and have used them as a platform to publicise the Recording Scheme and the work that it is doing. Most importantly, we have shown how your data can be used in a much wider context – looking at range change, predicting responses to climate change, phenological change, and of course producing atlases and status reviews. This year we hope to go one better and actually produce something in print!

The atlas that we will produce for the Symposium will be a combined effort between the Hoverfly Recording Scheme and the Scottish Hoverfly Recording Scheme and consequently it will be the first time that the combined data will be available as maps. Its authorship will include Kenn Watt and Graham Rotheray. As we have previously said, the atlas will also be distributed free of charge to those contributors who have submitted 150 or more records since 2000. Those readers who still have a stash of un-submitted records can do so, but hurry – we will be finalising the text by early May so the last date for records is 30 April 2011.

WILDGuide: *Britain's Hoverflies*

We have been working on this book for much of the Autumn and it looks like it is set to be a really nice product. We hope to illustrate live photographs of 150 species of hoverfly; but this is only part of it as there will be close-up photographs of key characters from preserved specimens. We hope that this will make the book an essential companion to Stubbs & Falk.

The publishers, WILDGuides, are a small independent company set up by Rob Still and Andy Swash, with Rob doing the design and Andy the editing. Their business model is to be an ethical publisher with a proportion of the profits going to conservation bodies and related organisations such as Dipterists Forum. This approach means that Dipterists Forum has been given the opportunity to act as agent for the pre-publication offer and to draw an income from that part of the venture.

Thus, we are pleased to announce that there is a pre-publication offer for Dipterists Forum members and for people who use the Dipterists Forum and Hoverfly Recording Scheme websites. The "Britain's Wildlife" series normally retails for £17.95 + postage and packing, bringing the total cost to about £20.00 for UK residents. We will be offering the book at £16.00 including Postage and Packing to a UK destination. This will mean that for every book sold Dipterists Forum will make £4.00 which we hope to use to underpin the cost of printing the forthcoming hoverfly atlas. Any residue will go towards other Dipterists Forum ventures such as the production of teaching materials for our very popular *Introduction to Flies* course.

To make sure you get your copy of *Britain's Hoverflies* you need to send the reservation form accompanying this bulletin, together with a cheque payable to Dipterists Forum for £16.00. The form must be returned to Roger Morris no later than 30 April 2011. The projected publication date for the book is Friday 19th August at the Bird Fair at Rutland Water. The Authors will be there for signing in the morning but will leave at lunch time to go to Preston Montford to run a hoverfly course!

Other editions in the "Britain's Wildlife" series include Butterflies, Dragonflies, Orchids, Arable Bryophytes and Reptiles & Amphibians. The full catalogue can be viewed at http://www.wildguides.co.uk/.

We are writing a smaller guide that will form part of a new series of introductory books on the plants and animals that are likely to be found in the urban environment and related wildlife areas. This will cover approximately 60 species and will be marketed at below £10.00. It is written in such a way that we hope it will appeal to the absolute novice who does not want to spend huge sums on a bumper book of hoverflies but does want to find out what they have seen whilst out for a walk or going round the garden. It will probably be less appealing to Dipterists Forum members but will make an ideal present for children in much the same way as the "Observers" and "I-Spy" series did for previous generations. The publication timetable for this venture is a little further away so expect an announcement on the Dipterists Forum website www.dipteristsforum.org.uk in the spring.

6th International Symposium on the Syrphidae, 5-8 August 2011

There have been regular calls for this Symposium series to be held in the UK and so it is appropriate that in 2011 it is to be held at Glasgow University from 5-8 August. The organising committee comprises Stuart Ball, Francis Gilbert, Geoff Hancock, Roger Morris & Graham Rotheray. The venue takes advantage of nearby Halls of Residence which means that accommodation will not be expensive (around £25 for a single room with shared facilities). The main event – 3 days of talks and posters - will hopefully be followed by an excursion to Loch Lomond on the 8th. This will be dependent upon numbers wishing to participate.

The cost of the meeting itself has yet to be finalised – this will depend upon how much we attract in sponsorship, and how many people attend. The basic fixed costs per person are daily catering for morning and afternoon breaks plus a buffet lunch, but the group costs comprising room hire and janitorial commitments do not vary with numbers so, the more people we get there the cheaper the costs per person are. We hope that this will be kept to below £100 but VAT plays quite a big part in the cost and everybody will be aware of the recent hike in VAT to 20%!

The event organisers have approached a number of possible sponsors and are hopeful that there will be sufficient sponsorship to make possible the publication of a new hoverfly atlas to supersede the one we published in 2000. We are also setting up a fund to assist students and delegates from poorly resourced places. At the time of writing (November 2010) we have been promised support from Dipterists Forum and have also had an encouraging response from the Smithsonian Institute's Williston Diptera Research Fund. Meanwhile we are awaiting responses from the major societies in the UK.

Although the use of the term Symposium conveys a grand event, these meetings are exceptionally down to earth – they are gatherings of people with similar interests meeting to enjoy their mutual passion for hoverflies. They are not stuffy and academic, and are very informal, so it would be really good to see lots of members of the Recording Scheme at this event. This is a great opportunity to come and engage with many of the people whose names you will recognise from species added to the British list in recent years. It is also the place where you could present your own studies – if not a presentation then maybe a poster? If not a poster, the why not just attend to meet people and see what is going on. Pictures of the last meeting in Novi-Sad accompanied the write-up for that meeting (see Hoverfly Newsletter 47) and hopefully convey the very informal atmosphere.

Deadlines set are:

- Submission of Abstracts – 15 May
- Registration – 15 June

News updates will be provided on the Recording Scheme website www.hoverfly.org.uk.

Do come and join us and make this a big event in the hoverfly calendar for 2011. Expressions of interest should be sent to Roger Morris roger.morris@dsl.pipex.com.

Hoverfly Training Events

In our last update we announced that we had sought a grant of nearly £4,000 from **OPAL** (*The Open Air Laboratory*) a **Heritage Lottery Fund** initiative to encourage greater public participation in biological recording. Our bid was successful and we are now equipped with a microscope and camera supplied at a very reasonable price by GX Optical of Cambridge. What is more, we have five years' supply of course literature. This means that we can make our courses even better by projecting images of real animals so that everybody can start to understand the wonders of challenges such as hairy humeri, plumose arista or hairy squamae without queuing to peer down the microscope and thinking they have seen something! This is a great step forward.

To gain this grant we must of course do something! Our contribution is to run training courses for prospective hoverfly enthusiasts and we are now committed to running events at the Natural History Museum (January), and for the Lincolnshire Wildlife Trust (March) and the Wildlife Trust for Bedfordshire, Cambridgeshire, Northamptonshire and Peterborough (February and March). We have already run courses for the Field Studies Council at Preston Montford (August), for Glasgow Naturalists (September) and for Shetland Biological Records Centre (August) as part of this commitment.

We are now working on a bid for funding for a set of microscopes so that we can run courses in places where the group does not have access to a supply of microscopes. If this is successful then we will be appealing for groups to organise a venue and students so that we can enthuse a new generation of hoverfly recorders. If you know of a group that would like to organise such an event then please let us know (contact Roger Morris at roger.morris@dsl.pipex.com.

A review of extra and potential extra hoverflies

Alan Stubbs

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The Second Edition of British Hoverflies was published in autumn 2002. Such is the pace of study that there are at least a dozen extra species have now been either confirmed as occurring in Britain or have circumstantial evidence that they may do so.

Named new species.	7
Unconfirmed named new British	5
Name for 2002 un-named species	1
Un-named new species	3
Further new potential forms/taxa	2
	—
	18

Excluding *Melanostoma mellinum* complex with c.5 further taxa.

Attention is drawn to a further 5 species that may potentially occur in Britain. Obviously it would be possible to extend such a list unduly. Some hoverflies, as other insects, have been changing distribution rapidly in recent decades so that historic status is no longer a sufficient guide.

NEW KEY WORKS AND MONOGRAPHS

BARTSCH, H. et al. 2009. *Nationalnyckeln till Sveriges flora och fauna. Tvavingar, Blomflugor: Diptera: Syrphidae: Syrphinae*. ArtDatabanken, SLU, Uppsala.

BARTSCH, H. et al. 2009. *Nationalnyckeln till Sveriges flora och fauna. Tvavingar, Blomflugor: Diptera: Syrphidae: Eristalinae & Microdontinae*. ArtDatabanken, SLU, Uppsala.

HAARTO, A. & KERPPOLA, S. 2007. Finnish Hoverflies and some species in adjacent countries. Pianopaikka, Keuruu.

REEMER, M. et al., 2009. De Nederlandse Zweefvliegen (Diptera: Syrphidae). *Nederlandse Fauna* **8**. [atlas]

VAN VEEN, M.P. 2004. Hoverflies of Northwest Europe: identification keys to the Syrphidae. KNNV Publishing, Utrecht.

The 2007 and 2009 books are superbly produced, though nearly all the text is in native tongues. Both the Finnish and Swedish works have colour illustrated keys in English as well as their native tongues. The Finnish book has a pinned specimen photo of most species. The Swedish book has nice paintings of most species and a generalised distribution map covering the whole of Scandinavia for each species. These two publications substantially improve the understanding of the Arctic Scandinavian fauna.

The Dutch book is a distribution atlas, the accounts having in English a short summary statement on status.

These books take presentation to a much higher level, frankly making *British Hoverflies* style look archaic (as also the 2004 key). However, such generous use of colour comes at a price via subsidy for artist's work or publication costs, or both, and even so the selling price is not cheap. For efficiency and keeping costs down, the 3rd Edition of *British Hoverflies* will maintain its established style this time round. It is anticipated the updated 2011 provisional British hoverfly atlas, due in 2011, will be well illustrated.

The big gap in modern published works on the fauna of NW Europe is NW France. Here there are extra species such as *Milesia crabroniformis* (see entry below). The earlier key works for Denmark and Belgium are now somewhat out of date as regards taxonomic improvements and species newly moving into the western fringe of Europe.

ADDITIONAL CERTAIN OR QUESTIONABLE SPECIES (since 2002)

Cheilosia caerulescens: Wing vein r-m darkened. Garden species on imported house-leeks. Published.

***Dasysyrphus hilaris*:** Yellow face without dark stripe, sternites entirely yellow or almost so. Confirmed as a separate species.

***Dasysyrphus pauxillus*:** Resembling *pinastri* (ex. *lunulatus*) but male frons angle is obtuse (acute in *pinastri)* and the female frons is only dusted grey near the eyes (grey dust band in *pinastri*). The third antennal segment is yellow beneath and the scutellar hairs mainly yellow. It is a relatively small species. One British specimen.

***Dasysyrphus* Species A:** Dieter Doczkal is working on this ally of *venustus.*

***Orthonevra intermedia*:** Tibiae partly yellow as in *geniculata* but cross-vein-m clear and stigma uniformly coloured . (in *geniculata* r-m clouded and stigma bicoloured). Published.

***Melanogaster parumplicata*:** The 2002 version of *British Hoverflies* includes this species and the text to *aerosa* makes passing mention. Two females from grazing levels sites key out as *parumplicata* but advice received from the continent is that the face profile character can be variable. Whilst *aerosa* is a species of acid bogs, it is now particularly important to trace a male of *parumplicata* taken on grazing levels (flat coastal or floodplain grassland with ditches in place of hedges as field boundaries). Pevensey Levels, the North Kent Marshes, and the coastal marshes of Essex and Suffolk are good candidates, and one female inland in Yorkshire. Status uncertain, Please check collections.

***Milesia crabronifomis*:** Very large, hornet mimic. Two probable sightings in Cornwall. Published as probable sightings.

***Pipiza festiva*:** Front tarsi entirely yellow, as *luteitarsis* . Spots on tergite 2 practically merge. Old specimen from Ireland. Published; some uncertainly of det. .

- Abdomen with pale hairs; tergite 2 with rather narrow rectangular well separated spots, with can be vague and greyish in the male. ***luteitarsis***

- Abdomen with black hairs, at least dorsally; tergite 2 with a large pair of spots, often fused. ***festiva***

***Scaeva dignota*:** See *British Hoverflies* key p. 104. Photo appears to be this species, no specimen. Probable.

***Syrphus admirandus*:** Resembling *ribesii* but the frons just above the lunulae is yellow (not black) and the sternites are usually entirely yellow. A recently described species. Old specimen in a Scottish collection but without data saying it is British. Very plausible in the Scottish Highlands. Uncertain British.

***Syrphus nitidifrons*:** Not easy to recognise as a *Syrphus* since tergites 3 and 4 have well separated bars, and the dorsal surface of the squama has few if any hairs. The frons is shining black, the female virtually without dust spots. A specimen from Dorset was exhibited in autumn 2010 by Mick Parker. Accepted British, formal publication awaited.

***Trichopsomyia lucida*:** Outer cross vein oblique so unlike *T. flavitarsis*. New key below. Published

***Xanthogramma stackelbergi*:** A split from *pedisequum.* Ventrally, the membrane between tergites and sternites 3-5 (sometimes also 2) is completely yellow (key in Barstch et al., 2009). The sides of the thorax have 4 bright yellow patches, including one rearwards of the wings as some Sp. A). Male tergite 2 side spots blunt oblique. Apparently OK**.**

***Xanthogramma* Species A:** There is a further split (Wouter van Steenis working on this). If the sides of the thorax have extensive bright yellow, but the membrane between the tergites and sternites alternating black and yellow the specimen may belong to this extra species, the problem being intermediates with *pedissequum* (ideally with only 1 vertical yellow patch on the side of the thorax but there can be extra markings). Specialist agreement on existence of this unnamed species.

***Microdon*:** Giant larva (Rob Walton).

NEW NAME

Eupeodes goeldlini = Species B (Published).

NEW FORMS

Chrysotoxum bicinctum

Form A. Wing broad and darkening confined to below the stigma.

Form B Wing slightly more pointed and darkening extending to near wing tip.

Current opinion on the continent is that these are variants of the same species, the form with darker wings mainly occurring in Britain: a very few intermediates. The female third antennal segment is longer than in the male but there may be variation. Segregation may allow recognition of ecology and phenology.

Melanostoma scalare

Form A (? species). Antennal segment 3 entirely dark.

Form B (? species). Antennal segment 3 entirely pale beneath.

It has long been said that there are 2 species in Europe: possibly more. In order to see if there is any simple way of treating this two decades freeze, the above treatment is floated to encourage others to see if such a treatment makes sense. One aspect is whether ecological differences become apparent.

Melanostoma mellinum

Regrettably the species complex recognised some 20 years ago is still fraught on a Europe wide scale, though making sense in some districts. In has been said that another 5 or 6 cryptic species occur in Britain and Ireland.

POTENTIAL EXTRA SPECIES

***Callicera fagesii*:** The most frequent species in the Netherlands. It is all too easy to jump to the conclusion that any *Callicera* taken in mid summer outside the Scottish Highlands must be *aurata*. See key in 2002 version of *British Hoverflies* which gives various other options.

***Dasysyrphus lenensis*:** Tergites 2 and 3 markings do not reach the lateral margin so there is a resemblance to *pinastri*. The latter species has short rounded dark spots on the sternites, bar right across in *lenensis* and *pauxillus*; third antennal segment of *lenensis* is black (as *pinastri*), but *pauxillus* has the underside of that segment yellow..

***Brachyopa grunewaldensis*:** The pit on the third antennal segment is minute so specimens could be overlooked as *insensilis.* The scutellum is entirely covered in microtrichia (largely bare in *insensilis*).

***Eristalis picea*:** In the Netherlands this species is associated with fenland so there is a good chance that it occurs in Britain, the Broads and East Suffolk coastal fens being of prime potential. It has some darkening of the wing below the stigma as in *horticola* but the abdomen markings are too dull. To be sure one would need to hinge-out and examine the male genitalia.

***Psilota*:** The standard British species is *P. anthracina.* However, in the Netherlands *atra* occurs in much the same restricted area. Less likely is *inupta* (Central Europe).

Key to *Psilota* (based on van Veen, 2004).

1. Thoracic dorsum with pale hairs. [*inupta*]

- Thoracic dorsum with black hairs. 2

2. Abdomen black haired. Hind femur about as broad as mid femur. [*atra*]

- Abdomen with mainly pale hairs. Hind femur about

twice as broad as mid femur. *anthracina*

OTHER BITS OF REVISED KEY

***DASYSYRPHUS pinastri* group** currently recorded from Britain **(**bars on tergites 3 & 4 do not reach the lateral margin)

a. Sternites only darkened in middle. ***pinastri***

- Sternites with a complete dark band (at least on sternite 2).

b. Third antennal segment yellow beneath. ***pauxillus***

- Third antennal segment entirely dark (as *pinastri*)

c. Tergites 3 and 4 with upper edges of bars deeply undulating. ***friuliensis***

- Tergites 3 and 4 with bars of fairly uniform width. [***lenensis***]

British Hoverflies 2002 keys *nigricornis* as a potential British species. It is now clear that this species is very unlikely to occur in Britain.

TRICHOPSOMYIA

Our long-standing species, *T. flavitarsis,* is distinctive so the finer niceties of generic characterization could be ignored. The addition of *T. lucida* breaks the mold since it could easily pass for a species of *Heringia* or *Pipiza.*

Generic feature: flat anterior part of mesopleuron with long hairs (side of thorax, upper part in front of wing base)

Key, incorporating *joratensis* (occurs in Holland).

1. Males (eyes meeting above the antennae)……...**2**

…….females (eyes separate throughout)……..**4**

2. Antennal segment 3 at least 2x as long as its maximum depth; maximum width of the face (in anterior view) no greater than the maximum width of an eye ……**3**

…….antennal segment 3 no more than 1.5x as long as its maximum depth; maximum width of the face c. 1.5x the maximum width of an eye……***joratensis*** Goedlin (male)

3. Posterior cell of wing (cell r5 of Ball et al, 2002) ending apically almost in a right angle; antennal segment 3 approximately 3x as long as its maximum depth……***flavitarsis*** (Mg.) (male)

......posterior cell ending apically in a distinct acute angle; ant. seg. 3 no more than 2x as long as its maximum depth.....***lucida*** (Mg.) (male)

4. At the level of the antennal insertions the face (in anterior view) is no wider than an eye at the same level; hairs on hind tibiae including some longer than the width of the tibia……**5**

……..at the level of the antennal insertions the face is approximately 1.5x as wide as an eye at the same level; hairs on hind tibiae shorter than the width of the tibia (frons without dust spots; hind tibiae almost entirely black-haired; posterior cell ending apically almost in a right angle)……...***joratensis*** (female)

5. Hind tibiae black-haired; posterior cell ending apically almost in a right angle; frons without dust spots……***flavitarsis*** (female)

……..hind tibiae silver-white haired; posterior cell ending apically in a distinct acute angle; frons with a pair of distinct, silvery-grey dust spots……***lucida*** (female)

FOLLOW THROUGH

1. Check collections and revise identifications if need be.

2. Inform Hoverfly Recording Scheme organizers of any revised or new data as usual.

3. In particular data on *Xanthogramma stackelbergi* and *Melanogaster parumplicata* will be gratefully received. A new British atlas is under preparation (hopefully in time for the Glasgow symposium, summer 2011) so new taxa need supporting data.

4. Taxonomic enquiries should be channeled via alan.stubbs@buglife.org.uk.

5. Events during the year may provide opportunity for me to examine awkward specimens, including uncertainties with Pipizinae as a whole. By the time of the hoverfly symposium in Glasgow I hope that the number of identification uncertainties can be narrowed down for the advice of the assembled group of European specialists.

Is *Xanthogramma stackelbergi* present in Britain?

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Mention of *Xanthogramma pedissequum* with multiple spots on the thoracic pleura, in a note by David Iliff in Hoverfly Newsletter No.49, reminded me that *X.stackelbergi* might easily be present in Britain. It is very similar to *X.pedissequum*, but only recently has it appeared in identification keys. There is also another European *Xanthogramma* that could occur, namely *X.dives*. *X.dives* and *X.stackelbergi* have been confused both with *X.pedissequum* and with one another. The most recent version of the StN Keys volume (Speight and Sarthou, 2010) contains a key that separates these three species. That key is reproduced below, for those who might wish to check their British material of *X.pedissequum*, in case it includes one of the other species. *X.stackelbergi* is known as far North as southern Scandinavia, and as far South as the Mediterranean. *X.dives* appears to be predominantly a Mediterranean zone species (but its distribution remains poorly known at the moment). It has, however, been found as far North as northern France, where it occurs in chalk grassland. *X.stackelbergi* might be expected at the edge of well-drained woodland. Neither of these species seems very partial to acidic conditions. Females of *X.stackelbergi* seem rather secretive, flying more within woodland than out of it. It is not yet known with which ant species *X.dives* and *X.stackelbergi* are associated.

Both *X.dives* and *X.stackelbergi* have multiple yellow spots on the thoracic pleura. The wings of *X.stackelbergi* are much less heavily infuscated than is normal for *X.pedissequum* and, in the female at least, the actual wing tip of *X.dives* is noticeably darkened.

***XANTHOGRAMMA:* Key to European species 2010**
This key does not include the two Caucasian species *X.caucasica* Violovitsh and *X.maculipenne* Mik.

1 Abdominal tergite 2 wider than long; alula entirely covered in microtrichia **2**

----- abd.tg.2 longer than wide; alula extensively bare (tg.3 with yellow, transverse band; costal margin of wing darkened to wing-tip) ..... ***marginale*** (Loew)

2 Males (eyes meeting above antennae) **3**

females(eyes separated) **7**

3 Eye hairs very sparse, no eye hairs longer than the diameter of the anterior ocellus; tergites 2-4 each with a pair of pale (yellowish), transverse marks **4**

----- eyes hairs dense, longer than 2x the diameter of the anterior ocellus; tg 3, at least, normally with the pair of pale markings meeting in the mid-line to give a transverse yellow band (wings entirely covered in microtrichia; eyes meeting above antennae for a distance greater than one third the length of the frons ..... ***laetum*** (Fabricius) (male)

4 Eyes meeting above antennae for a distance greater than one third the median length of the frons (pale marks on tergite 2 at most 1.25x as wide as long, almost reaching the base of the tergite laterally; hind legs usually with the tarsi and the apical quarter of the femur infuscated, darker than the fore and mid legs, which are yellow, but all legs sometimes almost entirely yellow) **5**

----- eyes meeting above antennae for a distance less than one quarter the median length of the frons; pale marks on tg 2 1.5x as wide as long, well separated from the base of the tergite; all legs entirely yellow (wing membrane may be vaguely darkened, along costal margin and at wing tip, including distal end of cell sm) ..... ***citrofasciatum*** (de Geer) (male)

5 Abdominal membrane between each tergite and sternite with a distinct dark grey band (sometimes missing between tg4 and st4), as long as more than half the length of each sternite (second basal cell of wing 0-25% bare of microtrichia; pale marks on tg.2 usually reaching their greatest length on the lateral margins of the tergite, so that there they extend closest to the posterior margin of the tergite - or at least as close to the posterior margin as elsewhere on the tergite; at the lateral margins of the tergite, the pale marks on tg.3 occupying at least as great a length of the tergite as elsewhere; 1-4 pale marks on the thoracic pleura) ..... ***pedissequum*** (Harris) (male)
----- abdominal membrane between each tergite and sternite entirely yellow, except for between tergite and sternite 1 and tergite and sternite 2, where there is a broad, distinct, dark-grey band **6**

6 Hairs on posterior third of surface of mesoscutum nearly all long; marginal hairs on plumule (and usually also on lower lobe of calypterae) dark brown/black; inner (medial) extremity of yellow marks on tergite 2 usually pointed (but may be rather rounded), the pale marks nearly always reaching their greatest length on the lateral margin of the tergite (i.e. pale marks hardly, if at all, cut away postero-laterally); pale marks on tergite 3 nearly always reaching lateral margins of tergite at their maximum length; anterior margin of black band across sternite 2 straight or with a low, more-or-less rounded median projection; wings with 2nd costal cell yellow, contrasting in colour with the 1st subcostal cell, which is dark grey (or both of these wing cells grey); wing cells m and sm usually darkened at wing-tip, contrasting with the almost clear cell po (2nd basal cell of wing 25-90% bare of microtrichia; 3-4 pale marks on the thoracic pleura) ..... ***dives*** (Rondani) (male)

----- hairs on posterior third of surface of mesoscutum of two different lengths, a distinct, often dense, layer of short

hairs within the general covering of long hairs; inner extremity of yellow marks on tergite 2 very rounded; anterior margin of the black band across sternite 2 with a pointed, median extension; wings with 2nd costal and 1st subcostal cells usually of almost the same yellowish colour, though the 2nd costal cell may be almost clear and colourless and the 1st subcostal cell can be contrastingly grey; infuscation of wing restricted to the area of cell m posterior to (below) the stigma; pale marks on tg.2 often cut away postero-laterally, so that usually they are closest to the posterior margin of the tergite at some distance from its lateral margins; pale marks on tg.3 cut away antero-laterally, so that they occupy a greater part of the length of the tergite at some distance from its lateral margins; (2nd basal cell of wing 20-30% bare of microtrichia; 3-4 pale marks on the thoracic pleura) .... ***stackelbergi*** Violovitsh (male)

7 Tergites 3 and 4 each with a pair of pale (yellowish), transverse marks (in some specimens of *X.dives* the pale marks on tg3 may meet in the mid-line, to make an entire yellow band across the tergite; legs with or without dark marks; eyes with very sparse hairs shorter than diameter of anterior ocellus) **8**
----- tgs 3 and 4 each with a transverse yellow band across entire width (legs entirely yellow; eyes with sparse hairs that are longer than the diameter of the anterior ocellus ..... ***laetum*** (female)

8 Hind legs nearly always partly darkened (dark parts distinctly darker than fore and mid legs, which are entirely yellow); wings with areas bare of microtrichia; stigma brown/dark brown; tergite 2 posteriorly <2x as wide as its length in the mid-line and the pale marks at most 1.25x as wide as long **9**
----- legs entirely yellow; wings entirely covered in microtrichia; stigma brownish-yellow; tg2 posteriorly >2x as wide as its length in the mid-line and with pale marks 1.5x as wide as long (wing membrane often vaguely darkened close to costal margin and at wing tip; abdominal membrane yellow, except for a wide, dark grey band between tergite 2 and sternite 2) ..... ***citrofasciatum*** (female)

9 Abdominal membrane between each tergite and sternite with a distinct dark grey band (sometimes missing between tg4 and st4), as long as more than half the length of each sternite (hairs on ventral parts of the mesopleur shorter than the maximum width of basitarsus 1 in dorsal view; 2nd basal cell of wing 0-30% bare of microtrichia; pleura with 1-4 pale marks)
..... ***pedissequum*** (female)
----- abdominal membrane between at least tergite 3 and sternite 3 entirely yellow; between tergite and sternite 1 and tergite and sternite 2 there is a broad, distinct, dark-grey band; membrane between tg4 and st4 either entirely yellow or with a grey band (pleura with 3-4 pale marks) **10**

10 Median, black, longitudinal stripe on frons broad anteriorly, so that it reaches the posterior margin of the lunule (which is normally yellow) across almost the entire width of the lunule; posteriorly, the median black stripe on the frons usually reaches the black vertex, at least as a thin black line; hairs on ventral parts of the mesopleura usually noticeably longer than the maximum width of basitarsus 1 in dorsal view; 2nd costal cell yellow; wing tip nearly always distinctly infuscated; marginal hairs on lower lobe of calypterae and on plumule dark brown/ black (pleura with 3-5 pale marks; 2nd basal cell of wing 25-90% bare of microtrichia; alula entirely covered in microtrichia) ..... ***dives*** (female)
----- median, black, longitudinal stripe on frons narrowing anteriorly, so that it meets the posterior margin of the lunule across only half, or less, of the width of the lunule; posteriorly, the median black stripe on the frons terminates before reaching the black vertex; hairs on ventral parts of the mesopleura noticeably shorter than the maximum width of basitarsus 1 in dorsal view; 2nd costal cell clear, almost colourless; wing-cell m without infuscation; wing-tip clear; marginal hairs on the lower lobe of the calypterae and on plumule yellow/yellow-brown (2nd basal cell of wing 30-40% bare of microtrichia) ..... ***stackelbergi*** (female)

Reference

Speight, M.C.D. & Sarthou, J.-P. 2010. StN keys for the identification of adult European Syrphidae (Diptera) 2010/Clés StN pour la détermination des adultes des Syrphidae Européens (Diptères) 2010. *Syrph the Net, the database of European Syrphidae*, Vol. 60, 107 pp, Syrph the Net publications, Dublin.

Sphaerophoria loewii breeding in Bedfordshire

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On 29th May 2008, Stephen Plummer (SP) was looking for hoverflies at a private wetland site not far from Stewartby, Bedfordshire, when he noticed an *in cop* pair of *Sphaerophoria* of unusual appearance. He netted the flies, which were resting on low vegetation, and took them home. Consulting Stubbs & Falk (2002), SP considered that both sexes showed the characters given for *Sphaerophoria loewi*. However, as the species is known to occur inland only very exceptionally (see below), he asked John O'Sullivan (JOS) to look at the specimens. JOS was quickly convinced, and passed them to Roger Morris, who kindly confirmed the identification. An interrupted yellow stripe on the side of the thorax

distinguishes this species from other British *Sphaerophoria* except *S. rueppellii*, which differs in having yellow antennae. The male genitalia are also distinctive. The specimens are now in JOS's collection.

SP and JOS revisited the site together the following year, on 28th May 2009, and found a minimum of five individuals of the species (three females, two males), all five being netted and carefully checked. In 2010, SP and JOS visited the site on 21st May; despite extensive searching and sweeping with nets, no *loewi* was found. However JOS visited the site on 3rd June, and found at least four, probably five, individuals (one male, the remainder females). All females appeared to be gravid.

Ball and Morris (2000) state that this is "A very rare species known only from a few widely separated coastal localities." Stubbs and Falk (*op. cit.*) also refer to it as rare and coastal. Both these references mention a single inland record, near Aviemore, in central Scotland, of some years ago. Thus, the Stewartby records are noteworthy, being far inland, confirming breeding, and covering the three seasons up to and including the most recent.

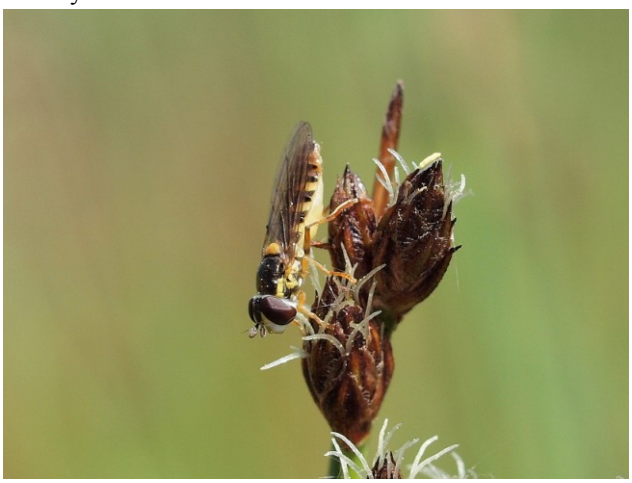
The Bedfordshire site lies in an extensive landscape of former brick-clay workings. An area of shallow open water has a margin of emergent plants, mainly Common Reed (*Phragmites australis*) and Sea Club-rush (*Scirpus maritimus*). A separate small clump of club-rush lies in a damp area some 40 metres from the edge of the water. In the immediate vicinity, and in the surrounding area, there are large reed-beds and other areas of open water, but no Sea Club-rush has been found except at the site. All the flies seen/caught in 2009 and 2010 were at least in close proximity to, and probably all actually in, patches of flowering Sea Club-rush. All were around the edges of the water, except for a single female in 2010, which was in the isolated patch of club-rush. In the authorities quoted above, this hoverfly is mentioned as being associated at the coast with Sea Club-rush and Common Reed; the Aviemore specimen was swept from *Phragmites*. At the Stewartby site, the apparently clear attachment of the adult flies to the flowering club-rush could be simply as a source of nectar/pollen. However, there is also the possibility that the plant may host aphids on which the larvae of the hoverfly feed.

It is hoped to continue to make observations of this small colony in the coming seasons, and wider searches of the Stewartby area are planned. It may be that other inland areas of Britain are suitable: former mineral workings - perhaps in particular flooded former brick-pits - might well produce a pleasant surprise for searchers.

References

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

Stubbs A.E. & Falk S.J. 2002. *British Hoverflies*. Reading, British Entomological and Natural History Society.



Sphaerophoria loewi female, near Stewartby, Bedfordshire, June 2010. Photo: John O'Sullivan

Behaviour of *Volucella inanis* female near wasps' nest

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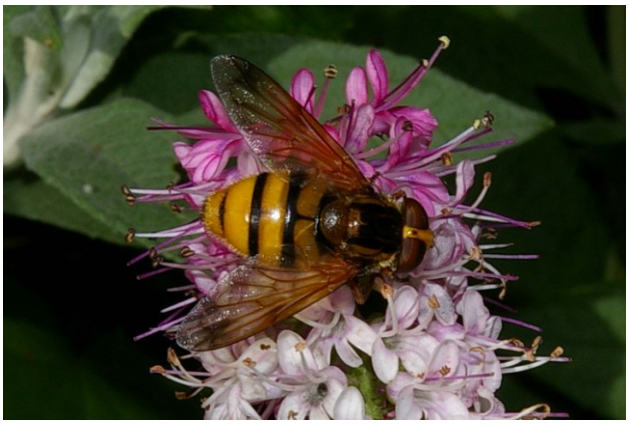
In the roof of my house in Reading this year there has been a nest of Common Wasps, *Vespula vulgaris*, with the entrance in a corner under the gutter. It has been quite a busy nest, with about 25 arrivals per minute in August. The same point of entry had been used by wasps the previous year. On August 22nd I saw that *Volucella inanis* females were in the vicinity of the nest, so I watched to see how easily they could get in. One female tried ten times in one hour. She would fly to within 20-40cm., then walk slowly, keeping in the shade or under cover of creeper stems. Usually she was found by a wasp patrolling the entrance, and after a brief tussle flew off a short distance. That wasp would then actively search the immediate area for 1 or 2 minutes. Twice she got to within 5cm. of the entrance, but was put off by wasps leaving, although those did not attack her. In fact I did not see any female *inanis* gain entry, although there were often one or two to be seen near the nest. They would frequently extend and contract the terminal segments of their abdomens, although one female not showing that behaviour stayed in the shade of a leaf, 40cm from the entrance, for two hours, occasionally grooming. Perhaps she was not able to oviposit yet.



Volucella inanis female (photo: David Iliff)

On September 7th I noticed a *Volucella zonaria* female on the wall near the nest, walking steadily towards the entrance. A wasp leaving the nest touched her briefly on the thorax in passing, but she appeared to ignore this, and gained entry. Unfortunately I missed seeing her leave, with so many wasps coming and going. How long she had been in the vicinity I do not know, but in 2008, again on September 7th, I saw a *zonaria* arrive from a distance at a similar nest site and get through the entrance after 10 minutes. Since *V. inanis* were finding entry to the nest area so difficult, I assumed the entrance might be small, but later found it was a vertical crack about 6cm. long, which naturally I won't repair.

My bedroom window is about 60cm. from the entrance, and on several occasions when the light was turned on, generally after midnight, as many as three *inanis* females promptly came through the open window and flew loudly about the room, generally ending up in the lampshade since attracted to light. There is a possibility that these had simply emerged from the wasp nest which was active in 2009, but considering the time of year and the fact they were all female, it is likely that they were roosting near the nest before trying to oviposit the following day.

V. inanis females are clearly prepared to invest a considerable amount of time at a single site, having spent yet more time locating it in the first place. I wonder then how many nests on average they successfully visit.

Polytunnels – fly traps par excellence

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Polytunnels can be useful for so much more than growing veg. and flowers. Each of the authors has been regularly checking a horticultural tunnel in recent years, and these have proved to be great sources of fly records, acting as effective Malaise-type traps. We recommend having a good look around any you may come across (with a carefully prepared excuse at the ready to explain just why

you are sneaking around the produce – you could even ask permission first!).

John's tunnel is in Bedfordshire and operated by professional gardeners for growing flowers and shrubs. Rob's tunnel in Devon is on the family farm, and used for growing vegetables. On the hoverfly front, between us we have had some good records. For instance, John has captured *Callicera aurata* and *Myolepta dubia*, while Rob has found *Ferdinandea ruficornis*, a species not apparently recorded in Devon before. Among other less common species, we have both also recorded *Criorhina berberina* and *Xanthandrus comtus*. Our tunnels turn up species seldom if ever encountered in the surrounding countryside when sweeping or searching, especially pipizines (*Heringia (Neocnemodon), Pipiza* and *Trichopsomyia*). Since 2003, John has recorded a total of 95 hoverfly species in the tunnel; and in just the last two years Rob has found 74 – all with a lot less effort than more traditional methods!

From our observations, not all polytunnels act as effective fly traps. Situation seems to be the key, though there must be many potentially successful variations. Ours differ from each other in several respects. Rob's is aligned north-south and perpendicular to a natural flight line. The Bedfordshire polytunnel is aligned east-west along the south side of a row of trees: it is some 7m long, 3m wide and 2.5m high, with a house-door sized opening at either end. The Devon tunnel is larger, 15m long by 7m wide and close on 4m high, with large sliding doors at either end. In both cases, the insects collect at the sunny end or corner, conveniently concentrated for the entomologist's tubes or pooter. The presence of flowers in the tunnel seems to have little influence on catching ability.

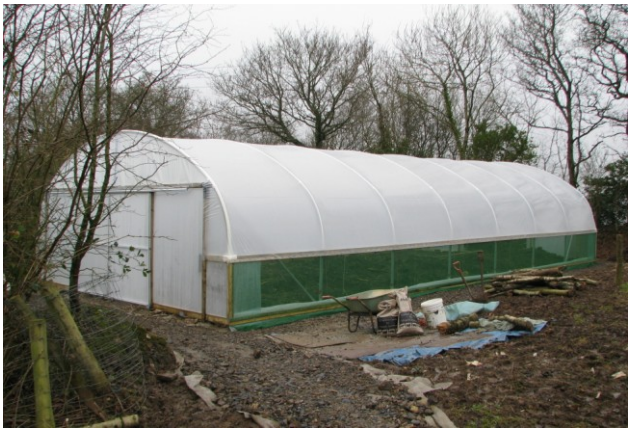
There are downsides, though: a polytunnel can be a death trap. The regular summer routine involves rescuing larger individuals, especially butterflies (including silver-washed fritillaries in Rob's case), hummingbird hawkmoths and bumblebees. We have to admit that many of the smaller black jobs tend to be left to their own fate. Perhaps they help to fertilise the soil beneath.

Local birds compete with us for the rich harvest of insects – wrens, robins, tits and even migrant warblers. This year Rob surprised an enterprising tree pipit having an easy meal.

Be warned though that not everything attracted to the tunnels may be so welcome. Apart from cabbage whites, harlequin ladybirds, wasps and hornets, they can concentrate horse flies. In June 2009 Rob's polytunnel had so many clegs *Haematopa pluvialis* that harvesting veg. had to be done at a run to avoid being savaged to pieces. But, on the plus side, the tunnel is a magnet for other, more interesting blood-suckers. The large and impressive *Tabanus sudeticus* is a frequent visitor in Devon, along with a number of other *Tabanus* and *Hybomitra* species. *Chrysops relictus* is regular in Bedfordshire, and *C. caecutiens* has appeared on occasions. The polytunnels are rich mines for other fly taxa too – for example centurions (*Sargus* spp.), tachinids and muscids.

The end result of all these interesting insects getting caught is that we both spend an inordinate amount of time ensconced in our tunnels, when in the views of our loved ones we might perhaps be doing more useful things with our lives. Such is the lot of the much misunderstood and maligned dipterist!

We would like to thank Roger Morris for suggesting that we write this article, after correspondence on the Hoverfly Recording Scheme website.



The Devon polytunnel (photo: Robert Wolton)

The Bedfordshire polytunnel (photo: John O'Sullivan)

To see or not to see...

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To see...

On 7th June, 2010, I had an interesting encounter with *Microdon mutabilis* in a tiny woodland glade at Middlebarrow Plain, Silverdale, Lancashire (SD 460765). When I entered the glade I spotted four *mutabilis* flying slowly around just above grass height. One of them was showing considerable interest in a small mounded ants' nest, by flying back and forth just a couple of inches above it. As I watched, suddenly I saw a slight disturbance on the roof of the nest and then suddenly from inside the nest out from the top burst another *mutabilis*. Both flies then left the glade together at speed. I collected four of the ants from the nest and these were later identified as *Formica lemani* by Guy Knight, Curator of Entomology at Liverpool Museum, to whom I give my thanks. I wondered if the fly that had left the nest was a female that had been laying eggs inside it, or possibly one that had newly emerged from its puparium and was anxious to get out and fly off. Could the fly patrolling the nest have been a male waiting for a female to emerge having somehow been alerted to its imminent appearance?

Or not to see...

Yealand Hall Allotment, also in the Silverdale area (SD 492761), is well known as a site for *Doros profuges*. I had not seen it since 2006, and, as far as I know, neither had anyone else. I therefore decided to make a determined effort to remedy this during its flight period in June 2010. I searched diligently at different times on a number of days without success. A few other people were also looking out for it, but had no luck. With Martin Wain, of Butterfly Conservation, a *Doros* search day was organised. Martin and I were the only people who turned up! We were not successful.

I have to wonder if *Doros* is now extinct at Yealand Hall Allotment. But it has always been an elusive species and I haven't given up hope and intend to try again in 2011. It could be that *Doros* spends much of its time in the tree canopy and only rarely comes down, the female perhaps when searching for suitable ant nests for egg laying.

Cheilosia caerulescens in Bedfordshire

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At about four in the afternoon of 20th August 2010, I was with Richard Revels, the wildlife photographer, in the back garden of his house in Biggleswade, Bedfordshire (TL1944). Richard was explaining to me how he had planted the garden with insects in mind, when I noticed a *Cheilosia* feeding on marjoram (*Origanum majorana)* next to where I was standing. I casually boxed it and put it in my pocket, expecting it to be something common. However, when I got it home a couple of hours later, I found no similar species in Stubbs & Falk (2002). A male, it was clearly a *Cheilosia* on size, shape and colouration. It had a large and obvious double dark marking at the centre of the wing, but was plainly not the furry *C. illustrata*. On other features, it ran to the *pagana* group in the key in Stubbs & Falk, but it looked completely wrong for anything there, with an obviously projecting lower face, and much of the head brightly shining, though with a broad and strongly marked dust band across the sides of the face. I then remembered a paper I had seen in *Dipterists Digest* (Collins and Halstead, 2008), and looking this up, was quickly convinced that the fly was *Cheilosia caerulescens*. Reference to van Veen (2004) provided further confirmation.

The description given in the *Dipterists Digest* paper was a close fit, except that the Biggleswade specimen had all the bristles on the scutellum pale. The authors referred to such an individual as being among the series they examined at the Natural History Museum, London, but do not seem to allow for this possibility in their proposed amendment to the key in Stubbs & Falk.

This is a mature town garden, long and narrow, in prolonged full sunshine for much of its length, with shrubs and fruit trees at either end, and many nectar/pollen-producing plants. There are no houseleeks (*Sempervivum*, the larval food-plant) in the garden, though there could well be in neighbouring properties, and the area is of generally open aspect.

The next day, I took the living fly to Richard, and he photographed it in his studio. One of the results is included here, and clearly shows the wing markings and the heavily-dusted sides to the projecting face. The specimen was subsequently collected, and I have it in my possession.

The records considered in the original paper were from Surrey in 2006 (South Croydon) and 2008 (Knaphill near Woking, and Wisley). The Hoverfly Recording Scheme has received a further record from Surrey, at Beare Green, Dorking, in 2009 (Stuart Ball *pers. comm.*), and Andrew Halstead showed a 2010 specimen (again from Knaphill) at the BENHS Exhibition in London in November 2010. There appear to be no other records.

The *Dipterists Digest* paper noted that the fly is bivoltine in Europe, with adults peaking in May and July. In Surrey the 2006 and 2010 records were in May, the 2008 records in June, and the 2009 record in July. The Bedfordshire fly, on the wing in late August and looking fresh, was presumably from the second generation of the year.

There are perhaps two most likely ways for this specimen to have appeared in Bedfordshire. One is as a result of natural spread from one of the sites in Surrey. However, these sites are a minimum of seventy kilometres distant from Biggleswade, and one might have expected other reports from areas between. Perhaps more likely is that the fly, or its recent ancestors, came to the Biggleswade area with imported houseleeks. According to the *Dipterists Digest* paper, a garden centre was certainly the source of at least one of the Surrey records, with the imported plants having come from The Netherlands. There are several garden centres, nurseries and other importers/sellers of plants within a few kilometres of Biggleswade.

Cheilosia caerulescens seems not to have spread or increased dramatically in Britain since the first records were made. However, the Bedfordshire record shows that the story is not yet concluded. It will be very interesting to see where and when this hoverfly appears next. Houseleeks, anyone?

Later note: after this article had been submitted for publication, the author was passed an unidentified hoverfly specimen to determine. It proved to be another male *caerulescens* and had been taken by Alan Outen on 2nd September 2010, from *Dahlia* flowers in his garden in Clifton, Bedfordshire (TL1639). This site is some 6.5 kilometres south-west of the first site as the *Cheilosia* flies.

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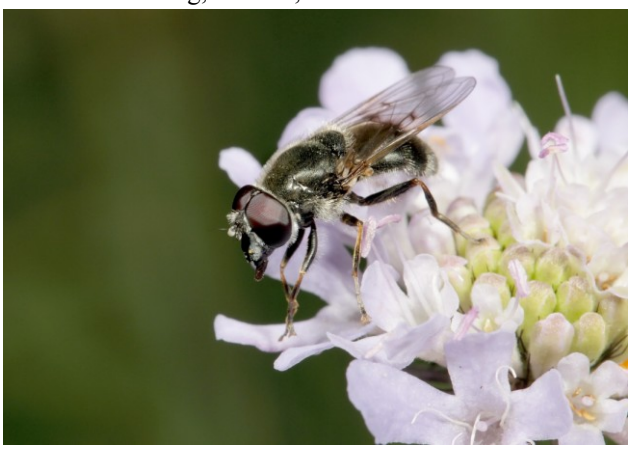

Cheilosia caerulescens male, Biggleswade, Bedfordshire, August 2010 (Photo: copyright Richard Revels, www.richardrevelsphotography.com)

News from East Cornwall

Leon Truscott

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On 15th August 2010 I found a male *Rhingia rostrata* at rest on a bramble leaf in Penlee Battery Cornwall Wildlife Trust Reserve (SX4349). As far as I know, this is the first record for Cornwall. On 12th September 2010 at the same site, I found another, this time at rest on the leaf of a stinging nettle. In both cases I took photographs in situ.

This CWT Reserve has produced several interesting or notable species in recent years, including *Xanthogramma citrofasciatum* which has been recorded annually since 2005. On 11th June 2010 two specimens were noted there. Another "annual" species here is *Chrysotoxum elegans*. I failed to record any here in 2010, but did find three at nearby Tregonhawke Farm Fishing Lake (SX4152) on 16th June as well as a single *Brachypalpoides lentus*.

Microdon myrmicae was found at a new site, Carkeet on Bodmin Moor (SX2172), where four individuals were noted on 5th June.

Volucella zonaria, although established in southeast Cornwall, seems to have declined in the area. I only managed to record two this year (both in my garden in Torpoint SX4354). However, Andy & Shirley Park photographed one on 8th September near Wadebridge (SW9773), so the odd record is still tuning up further west.