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As I am sure most readers will know, the new edition of **British Hoverflies**, previewed by Stuart Ball in the last newsletter, has now been published. Congratulations to all who were involved in the production of this superb book, especially it has appeared in print so soon after the Larger Brachycera book.

The previous newsletter also gave notice of the Second International Symposium on the Syrphidae. The dates of this symposium are 16 – 19 June 2003, and it will take place at the University of Alicante in Spain. Details can be found on the website **www.syrphidae.ua.es**.

My thanks to all who have sent contributions to this newsletter either in the form of articles or recent records. With effect from this issue I have dispensed with the formal tabulation employed in the past in the "Interesting Recent Records" feature in order to allow more scope for free-flow comments. Copy for **Hoverfly Newsletter No. 36** (which is expected to be issued in August 2003) should be sent to me: **David Iliff, Green Willows, Station Road, Woodmancote, Cheltenham, Glos, GL52 9HN**, Email **davidiliff@talk21.com**, to reach me by 20 June.

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COLOUR FORMS OF *VOLUCELLA BOMBYLANS* (L.) ON THE ISLE OF MAN, INCLUDING PALE FORM.

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On page 323 of **British Hoverflies** mention is made of a rare colour form of *Volucella bombylans* which is known from Ireland. An example is illustrated on plate 8. The form is entirely pale brown-haired unlike the two common forms, form *bombylans* (black haired on thorax and base of abdomen with orange-red haired tail), and form *plumata* (yellow haired around the sides of the thorax but with black hairs on top and on the pleura, the front corners of abdomen are yellow haired with a white haired tail). It now appears that this pale brown form occurs on the Isle of Man but with a series of intermediate forms between it and *plumata*.

On 12 July 2002 MT wrote to SC enquiring whether SC had taken any examples of the rare pale form of *V. bombylans*. MT had visited the Island during July 1998 when he had taken four specimens of the fly at Perwick Bay, Port St Mary. Amongst them were 2 or 3 specimens that matched the appearance of the pale form. MT made a return visit during the early part of July 2002 when he was to see a further unsexed example of the pale form in the same general area as the 1998 specimens.

A detailed examination of the four specimens shows the following:

M0036, Male taken 17 July. All dorsal, thoracic and abdominal hairs pale yellowish shading to pale orange-brown. There are eight long black bristles along each side of the thorax just above the wing attachment point extending anteriorly and posteriorly to the attachment point. Thorax below the wing attachment point yellow haired. There are two or three long black bristles below and forward of the wing attachment point. Abdominal sternites centrally pale yellow haired but substantially black haired laterally.

M0042, Female taken 17 July. All dorsal and ventral, thoracic and abdominal hairs pale yellowish/shading to mid-brown in the central part of the thoracic dorsum. There are three or four long dark brown bristles along each side of the thorax just above and forward of the wing attachment point. Thorax below the wing attachment with mixed black and yellow hairs. There are two or three long brown bristles below and forward of the wing attachment point. Ventral abdominal hairs predominantly silvery white narrowly laterally margined with black hairs.

M0068, Female taken 18 July. Thoracic hairs yellowish/light orange except in the central part of the dorsum where they are mid brown in colour. There are six or seven long black bristles along each side of the thorax just above the wing attachment point extending anteriorly and posteriorly to the attachment point. There are two or three long black bristles below and forward of the wing attachment point. Dorsal abdominal hairs on tergites 2 & 3 yellowish/light orange at the sides shading through dark orange/brown towards the centre, a dozen or so anterior hairs on tergite 2 forming a narrow central triangle of black hairs. Posteriorly progressively through tergite 3 dorsal hairs change to silvery white, hair colour remaining the same up to the posterior end of the abdomen. Ventral abdominal hairs predominantly silvery white save for black hairs along the sides and on the tip of the last sternite before the genitalia. The anterior part of the posterior sternite golden yellow haired anteriorly to the black terminal hairs.

M0069, Male taken 18 July. Dorsal thoracic hairs yellowish/light orange except in the central part of the dorsum where they become progressively medium to dark brown through to a central patch of black hairs. There are ten long black bristles along each side of the thorax just above the wing attachment point extending anteriorly and posteriorly to the attachment point. Thoracic hairs black below the level of the wing attachment point, except for about a dozen or so long fine golden-yellow hairs on the centre of the ventral surface between the attachment points of the anterior and median legs. A few long fine golden-yellow hairs on the upper anterior surface of the mesopleuron. Abdomen dorsally yellow haired becoming progressively paler in colour posteriorly. A conspicuous patch of black hairs centred on the interface between tergites 2 & 3 extending laterally across 90% of the width of tergite 3. The posterior half of tergite 3 and posterior tergites pale-yellow haired. Median one third of the sternites fine pale-yellow haired, lateral thirds black haired. Lateral margin of tergite 4 black haired. Ventral surfaces of genitalia predominantly black haired with a few wispy pale golden hairs posterio-laterally.

SC checked his collection of fourteen specimens to find the following forms: -

i) form *bombylans* – 2 specimens (male and female)
ii) form *plumata* – 5 specimens (4 males and a female)
iii) pale form – 1 specimen like M0036 and 2 like M0068 (all female)

There are four specimens that do not fit into these three forms. Two female specimens have the abdominal pattern of *plumata* but the thoracic dorsum is entirely yellow haired while the pleura have a mix of yellow and black hairs. And just to complicate things further, there is one female specimen that is very close to the pale form when viewed with a microscope but appears to have the black haired abdominal band when viewed with the naked eye. In fact, brown hairs have replaced the black band and laterally on the base of tergite three there are small patches of black hairs. The final specimen, a female, has the abdomen of *plumata* but the black hair patch on the thoracic dorsum is reduced to a few hairs, the remainder of the patch being a ginger-brown. The hairs on the pleura are black.

SC was also able to examine four specimens in the collection of his neighbour, Mr G. Wilson. There was one male *plumata*, one male pale form (like M0068) and a male and a female matching SC's final specimen in which the black patch on the thorax is replaced with a ginger-brown one. But even these two differ in the extent of the black hair band on the abdomen. On the male the black hair extends almost to tergite 4 while on the female the black hairs cover only the basal fifth of tergite 3.

Based on the evidence of a small number of specimens, it appears that on the Isle of Man there is a spectrum of colour forms between form *plumata* at one end and the pale form at the other. There is no evidence yet of such variation between *plumata* and *bombylans*. We understand that on mainland Britain there is almost no variability outside the two main colour forms and that the pale colour form is absent. We do not know if there is such variation amongst Irish specimens where the pale form is present but we presume in small numbers. It is interesting to speculate that interbreeding between *plumata* and the pale form is responsible for this variety but why is there no sign that interbreeding between *plumata* and *bombylans* produces intermediate colour forms? We would be interested to hear from recipients of this newsletter of any variability amongst their specimens of *V. bombylans*. We would be grateful to receive any additional information about the genetics underlying these colour forms.

MORTALITY OF *MELANOSTOMA SCALARE* ON A HYBRID WICHURAIANA ROSE

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Last autumn I was asked to examine a single bloom of the modern hybrid wichuraiana rambler rose 'Red New Dawn' on which were a number of dead hoverflies distributed on and between the petals. The mature bloom had been cut from this rose on the previous day, 23 September, and was one of two blooms that had appeared on this immature plant. The first had been cut in full bloom about a fortnight before the other had opened and had no flies attached.

The rose, double and rounded in shape, about 8 cm across and light crimson in colour, consisted of numerous even sized, curved and overlapping petals. These were removed singly with forceps and those with attached hoverflies fixed in 70% alcohol to minimise disintegration of the latter before microscopy. A total of seventeen hoverflies were recovered - all *Melanostoma scalare* comprising 14 males and 3 females. The majority were attached to the surface of the petals by the labella at the end of the proboscis, one or more

tarsi and in some cases a wing surface. The preservation was good except for some occasional damage to the thorax and detached legs consistent with breakage of a partially dried specimen. Prior to fixation in alcohol a transparent film appeared to surround the attached proboscis and also over the tarsi in direct contact with the petal surface.

There was no sign of gross fungal infection but microscopically all showed to varying degrees fungal conidiophores on the surface of the integument between and along the sides of the abdominal segments. In addition seven had fragments of white fungal growth ventrally in the neck region. The thoracic and abdominal cavities were not swollen with fungal structures as is typically found in hosts infected with the more frequent fungal pathogens. Clearly the *Melanostoma* were attracted to the rose by its scent or some other factor. Were they then trapped on the surface of the petals by a secretion, and after death became invaded by saprophytic fungi? This was the initial possibility considered based on the lack of the usual signs of entomophthoralean fungus infection, and the apparent transparent film at the points of attachment to the petals. An alternative explanation is that the hoverflies may have been infected with a species of fungus that gives no external indication that the host has succumbed to a pathogenic infection, other than the usual posture adopted by infected flies of attachment to vegetation by the proboscis and tarsi with wings outspread. Eilenberg (2000) in a review of entomophthorales on diptera refers to several species from the genera *Conidiobolus* and *Eryniopsis* (Entomophthoracea) which show no visible signs on the hosts of fungal infection other than attachment to vegetation by their legs. Dipteran families so far shown by spore analysis to be infected by these species are in the Nematocera - Tipulidae, Limoniidae and Ptychopteridae. The dead hoverflies on the ‘Red New Dawn’ rose accumulated over about a week, and during this period and the following week only three dead flies were found on the blooms of other rose varieties and none on the foliage.One of these was another *Melanostoma scalare* but in contrast to the other *Melanostoma* it showed gross signs of infection with swollen abdomen covered in fungus similar to those caused by the fungal pathogen *Entomophthora muscae* widespread in the autumn on a range of flies.

The identity of the attractant on the single bloom of the hybrid wichuraiana rose ‘Red New Dawn’ to a cluster of hoverflies of a single species remains unsolved. The strong scent of this particular variety often associated with pinkish red roses is obviously the first choice but on the same pole was a similarly scented, light crimson, climbing rose ‘General MacArthur’. No dead flies were noticed on this variety over a long flowering period. Also ‘New Dawn,’ one of the parents of ‘Red New Dawn’, and other related roses were growing in close proximity without obviously attracting flies. The other parent of ‘Red New Dawn’ was an unnamed seedling, ancestry unknown. Perhaps the scent of ‘Red New Dawn’ contains a chemical scent molecule which mimics a species specific pheromonal attractant involved in group formation in *Melanostoma scalare*. It will be interesting to discover later in the year if the next batch of roses on this particular hybrid attracts *Melanostoma* and whether they are infected by a pathogenic fungus.

I am indebted to Robin and Sarah Menneer for allowing me to examine the cluster of flies on this hybrid rose from their garden near Land's End, Cornwall, and for the details of the history of this rose and other varieties in their garden

Reference:
Eilenberg, J. (2000) Entomophthorales on Diptera.Vol.1, pages 519-533, *in* Papp, L. and Darvas, B. (eds): *Contributions to a Manual of Palaearctic Diptera - General and Applied Dipterology.* Science Herald, Budapest.
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VOLUCELLA INANIS REACHES WORCESTERSHIRE

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While looking for hoverflies in Tiddesley Wood, near Pershore, Worestershire, on 4 August 2002 HG & BW were fortunate to see one *Volucella inanis* visiting ragwort flowers growing by the side of woodland rides near the centre of the wood (SO930454). Despite further searches no others were seen until KM caught a female visiting devil's-bit scabious flowers on 1 September (SO930455) and HG caught another female on 4 September (SO929458). As far as we know these are the first records for modern Worcestershire and, according to David Iliff, the first for the 100 km square SO. Elsewhere in the old vice-county of Worcestershire (VC37) Mike Bloxham has recently reported *Volucella inanis* from Moseley around SP0881, now firmly in the West Midlands! (*Worcestershire Record* No 13 November 2002). Meanwhile we wait for *Volucella zonaria* which David Iliff tells us has been seen at Buckland, near Broadway, just over the border into Gloucestershire.

Incidentally it is worth noting that devil's-bit scabious has been steadily increasing and spreading along ride sides in Tiddesley Wood in the last few years and the late flowers (which continue into October) are very attractive to many hoverflies (especially *Eristalis* spp.) and other insects.

VARIATIONS IN *PIPIZA AUSTRIACA* MALES IN GLOUCESTERSHIRE

David Iliff
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During May 2002 Martin Matthews collected three male *Pipiza* in Gloucestershire. Although all three key to the species *P. austriaca*, none is a typical example. Each of the three specimens was determined as *P. austriaca* on the basis of the expanded rear femora, and the presence of white hairs at the margins of tergite 1 and of black ones at the margins of the pregenital segment. However *P. austriaca* normally has a strong wing cloud (stronger than that of any other British *Pipiza* species except for *P. lugubris*), and an absence of pale spots on tergite 2. None of the three males taken by Martin possessed both these characters, and one of them had neither.

A male taken by Martin at the Mythe, near Tewkesbury, on 4 May had a wing cloud so faint that a hand lens was required to discern it; a male which he took , also at the Mythe, on 24 May had a normal wing cloud, but had a pair of distinct yellow spots (similar to those of several other *Pipiza* species), on tergite 2; most surprising of the three was the male that Martin collected at Ashchurch on 16 May: this example also had distinct paired yellow spots on tergite 2 and absolutely no trace of a wing cloud.

This genus *Pipiza* is of course notorious for the variability of some of its species, though *P. austriaca* is usually one of the more straightforward ones to identify. **British Hoverflies** does point out that occasionally this species may have spots on tergite 2; however what seems particularly surprising is that the two examples found with this character were male, since in those other species where these spots may be present or absent it is usually the female that has the spots.

OBSERVATIONS ON THE HOVERING HABITS OF SOME SYRPHID SPECIES

David Iliff
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Most hoverflies hover - I have seen hovering by species that reportedly do not do so - though not all are alike in their hovering behaviour. For example *Eristalis pertinax* and *Epistrophe eligans* can often be seen hovering a metre or so above the ground well away from any vegetation. *Episyrphus balteatus and Syrphus* spp. are frequently encountered hovering under trees in woodland. *Volucella pellucens* also hovers in woodland but often at a higher altitude. *Epistrophe grossulariae* habitually feeds at flowers while hovering, rather in the manner of a humming bird.

One of the best-documented examples of an individual type of hovering behaviour is the courtship ritual of *Eristalis interruptus*, where the male hovers above a resting female; this activity has often been photographed, for example by Ken Merrifield for the frontispiece and cover of the first edition of **British Hoverflies**. In 1987 at Tenby I saw a male hovering in this manner, but the subject of his attentions was not a female *E. interruptus* but a worker honeybee. This was described in **Hoverfly Newsletter No. 7**(1988).

On occasion more than one *E. interruptus* male at a time will exhibit an interest in this way in a single female. On 25 August 2002 at Runnymede I watched two males hovering above a female, the uppermost male hovering at about the same height above the lower male as the latter was hovering above the female. When the female flew to a different perch, both males followed and resumed hovering above her in the same relative positions and with the same height differential. This happened several times.

Although the hovering courtship display of *Eristalis interruptus* appears to be exclusive to that species, on two occasions during 2002 I saw what appeared to be the *Eristalis tenax* version of courtship hovering, the difference being that in the case of this species the male hovered alongside rather than above the female. When the female moved to a different position the male followed immediately, and resumed hovering alongside her. I do not recall seeing this behaviour before nor have I read about it.

On the afternoon of 5 May 2002 I visited the garden of Cinderdine Cottage near Dymock in Gloucestershire. The day was dry but mostly overcast with occasional sunny spells, and somewhat chilly, though when the sun appeared the breeze dropped and the temperature rose immediately. Among the few hoverflies that I could see in the garden were four or five *Rhingia campestris* males which were resting on foliage in various parts of the garden. When the first sunny spell occurred since my arrival I noticed that all these *R. campestris* simultaneously took to the air and hovered, their hovering continuing until the sun disappeared again behind the clouds, whereupon the insects alighted again on the foliage. I continued to observe them to see if this activity would be repeated when the sun next came out, but although there were several further sunny spells, they remained where they had perched. I was left wondering what had stimulated all of these *R. campestris* to hover at the same time on the first occasion and not to do it again thereafter.

NEWS FROM THE SOUTHERN REGION

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2002 was quite a good year for hoverflies, though no new species were recorded. In Dorset 129 species were seen during the year and 45 sites visited. Study areas were Garston Wood RSPB and the Glanvilles Wooton area. Garston Wood was visited 30 times and 75 species were recorded,

whilst 9 visits were made to Glanvilles Wooton which yielded 60 species. In Somerset 95 species were found during the year at the 34 sites visited. Records were received from David Gibbs, Mick Parker, Tony Liebert and David Westbrook, and more records would be most welcome. The following records are of special interest:

Dorset

Brachypalpus laphriformis	Girdlers Coppice DWT 4 May 2002.
Callicera aurata	Garston Wood RSPB 28 June 2002 [4th County Record].
Chrysotoxum festivum	Binnegar Quarry 15 August 2002.
Criorhina asilica	Garston Wood 4 May 2002; Scrubbity Burrows 18 May 2002
Criorhina floccosa	Garston Wood 12 April 2002; Scrubbity Burrows 18 May 2002; Heath Bottom 23 June 2002.
Criorhina ranunculi	Spyway 22/29 March 2002; Oakers Wood 7 April 2002; Garston Wood [4 dates].
Epistrophe diaphana	Charlton Down 13 July 2002; Garston Wood 13 July 2002.
Eumerus ornatus	Garston Wood 12 May 2002; Scrubbity Burrows 18 May 2002; Heath Bottom 13 June 2002.
Ferdinandea ruficornis	Owermoigne 13 /16 June 2002, Malaise Trap: J. Hunnisett [4th County Record].
Melangyna labiatarum	Glanvilles Wooton 28 August 2002
Pipiza lugubris	Glanvilles Wooton 28 August 2002.
Pipizella virens	Binnegar Quarry 21 St July 2002.
Platycheirus immarginatus	Newton Bay 20 July 2002. Very scarce and local
Rhingia rostrata	Garston Wood [3 July records].
Sphaerophoria taeniata	Garston Wood 27 July and 5 August 2002.
Xanthandrus comtus	Garston Wood 2 August 2002; Bracketts Copse 10 September 2002.
Xanthogramma citrofasciatum	Heath Bottom 15 June 2002.

Somerset

Criorhina asilica	Marston Wood 18 June 2002.
Criorhina floccosa	Bickham Wood SWT 4 April 2002.
Criorhina ranunculi	Lords Wood 9 April 2002.
Eristalis abusivus	West Sedgemoor RSPB 29 June 2002.
Neoascia geniculata	West Sedgemoor RSPB 29 June 2002 [6th Locality Record].
Platycheirus occultus	Max Bog 24 June 2002 [3rd Locality Record].
Volucella zonaria	Taunton 23 September 2002 [6th Locality Record and the first for VC 5].
Xanthandrus comtus	Crowcombe Heathfield 14 October 2002 [Reared by Tony Liebert].
Xylota abiens	Otterhead Lakes SWT 19 July 2002.
Xylota florum	Lords Wood 25 June 2002
Xylota jakutorum	Marston Wood 18 June 2002 [7th Locality Record].

Wiltshire [Five visits to Chickengrove Bottom WWT]

Criorhina floccosa	16 May 2002.	*Epistrophe diaphana*	21 June 2002.
Eumerus ornatus	16 May 2002.	*Sphaerophoria taeniata*	26 May 2002
Volucella inflata	19 May 2002	*Xanthogramma citrofasciatum*	19 May 2002.

INTERESTING RECENT RECORDS

Anasimyia lineata: Dilke Lagoon, Glos, 17 July 2002, Kensley Lagoon, Glos, 18 July 2002 (John Phillips) Both sites in Forest of Dean. There are few Gloucestershire records of this species.

Arctophila superbiens: Trewrickle, Cornwall, 23 August 2002 (Leon Truscott). Seen before at this site in 1995.

Arctophila superbiens: Gotherington Wood, Gloucestershire, 2-19 September 2002 (David Iliff & Martin Matthews). Seen on several dates in this period. First records for site.

Callicera aurata: Common Meadow, Hants, 28 Jul 2002 (Richard Dickson). At rest on low foliage in sun.

Cheilosia ranunculi: The Mythe, Glos, 23 April 2002 & 5 May 2002 (Martin Matthews), 8 May 2002 (David Gibbs), Elmbridge Court, Glos, 20 May 2002 (Martin Matthews). First identified records of this species in the county

Criorhina ranunculi : Seaton Valley, Cornwall, 19 June 2002 (Leon Truscott). A new species for this site.

Pipiza lugubris: Flaxley Flushes, Glos (David Gibbs). Female; first county record.

Platycheirus ramsarensis: Cwm Cywion, Gwynnedd, 6 July 2002 (John Bratton). Numerous, swept from *Carex rostrata* and *Eriophorum* around a lake outflow.

Platycheirus splendidus: Ashchurch, Glos, 5 April 2002 and Elmbridge Court, 25 April 2002 (Martin Matthews). First identified examples of this newly-described species for the county.

Volucella zonaria: Torpoint, Cornwall, 12 August 2002 *et seq.*(Leon Truscott). Still present in recorder's garden throughout August.

Xanthandrus comtus: Torpoint, Cornwall, 14 August 2002, (Leon Truscott). Male and female on a *Hebe* bush in recorder's garden.

Xanthandrus comtus: Swanwick Nature Reserve, Hants,11 June 2002 (David Appleton). 4 + on rose flowers