

***Paracraspedothrix montivaga* Villeneuve and *Carcelia bombylans* Robineau-Desvoidy (Diptera: Tachinidae) new to Britain**

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Summary

The first British records for *Paracraspedothrix montivaga* Villeneuve and *Carcelia bombylans* Robineau-Desvoidy are given, together with notes on their current British distribution.

Article

In the autumn of 2001 CMR (co-organiser of the Tachinid Recording Scheme) was asked to help with the identification of some difficult tachinids. After having problems running them through the standard British key (Belshaw 1993) and the Central European key (Tschorsnig and Herting 1994) it was decided to send them to Hans-Peter Tschorsnig, the foremost expert on Palaearctic Tachinidae. The identification of the first specimen came back as *Carcelia bombylans* Robineau-Desvoidy and the second group of specimens came back as *Paracraspedothrix montivaga* Villeneuve.

Carcelia bombylans has been recorded on the British list in the days of van Emden (1954) but this was corrected by Belshaw (1993) and the species was removed because it was discovered that the specimens had been misidentified. The species now returns to the British list based upon a specimen taken by DG at Tucking Mill (ST 7661) in Somerset (VC 6) on 16 July 2001. The site is an Avon Wildlife Trust reserve consisting of two small herb-rich meadows on the Jurassic limestone. *C. bombylans* is found throughout Europe north to Finland and the hosts seem to be larvae of Arctiidae - warm, dry localities are favoured (Tschorsnig and Herting 1994).

Paracraspedothrix montivaga has never been recorded from the British Isles but is locally frequent throughout temperate Europe to northern Scandinavia. This species is added to the British list based on a group of specimens collected in a Malaise trap run jointly by Jim Brock (Horniman Museum) and John Pontin on Horsell Common, Surrey during 2000 and processed by GAC in 2001. It is hardly ever taken outside Malaise trap surveys and the host is unknown (Tschorsnig and Herting 1994). Subsequently we have found material from several other sites in central and southern England – see below.

Specimens of *Paracraspedothrix montivaga* have been donated to the BENHS collection at Dinton Pastures. The single *Carcelia bombylans* is in DG's collection. It is suggested that both species provisionally be given RDBK status until more is known about their distribution.

The Tachinid Recording Scheme database and recording cards have been updated to reflect these changes and are available on-line at <http://www.tachinidae.org.uk>

Updates to Belshaw, 1993

The genus *Carcelia* is difficult to key because the key features seem to be quite variable so we intend to produce a completely revised key to the British *Carcelia* in due course. In the mean time *Carcelia bombylans* can be added by modifying couplet 5 on page 43. The existing couplet 5 should be renumbered 5b and the following couplet should be inserted above it:

5a	Postpronotal lobe (seen from the side, under the dusting) completely or predominantly yellow. Frons 0.53 - 0.61x as wide as one eye, 0.63 - 0.71x in females. Dusting yellowish-grey to golden yellow.	<i>Carcelia bombylans</i>
-	Postpronotal lobe totally or predominantly black (at least in its anterior half). Frons in males and females either narrower or wider than the measurements given above. Dusting grey to yellowish-grey	5b

Paracraspedothrix montivaga can be added by modifying couplet 149 on page 34:

149a	Scutellum with the most apical pair of marginal bristles arranged parallel to each other or diverging (fig. 129)	149b
-	Scutellum with the most apical pair of marginal bristles crossed	150
149b	Scutellum with two pairs of marginal bristles – apicals and basals. [Abdominal tergites 1+2 with only one pair of median marginal bristles. Grey brown species usually with orange spots on the side of the abdomen]	Solieria (p. 57)
-	Scutellum with three pairs of marginal bristles – long apicals and basals with a smaller subapical pair between them. [Abdominal tergites 1+2 with a row of small marginal bristles, difficult to distinguish from the hairs around them. Dark coloured species with partial, faint grey dusted bands across the tergites.]	Paracraspedothrix montivaga

***Paracraspedothrix montivaga* Villeneuve confirmatory characters**

Body Length: 2.0 - 3.5 mm.

Head: Eye bare. Arista bare, second aristomere only slightly longer than wide. Parafacial area (cheeks) bare. Frons about as wide as an eye. Back of head with some pale hairs in lower half (not easy to see!). Mouth-edge pulled forwards, visible from the side. Palp dark brown/black. Facial ridge with only a few bristles above vibrissa. Antennae in male strongly triangular, apical width 10 times width of parafacial area at mid-height.

Thorax: Prosternum hairy at edges. Acrostichal bristles scarcely distinguished from hairs, except for a fairly obvious prescutellar pair. Two pairs of presutural dorsocentrals, the anterior one not much more than half the length of the posterior one. Three pairs of postsutural dorsocentrals. Three pairs of scutellar bristles; subapical scutellar bristles long and strong, parallel, close together at base, apicals absent or hair-like. Prealar bristle shorter and weaker than second notopleural.

Wings: Veins bare of bristles; except radio-cubital node, which has 2-3 bristles of similar length (about as long as cross-vein r-m). Wing without a petiole (medial vein separate from R₄₊₅ at wing margin). M gently angled, rather rounded, about 150°; the final section straight. Cross-vein m-cu at least as long as final abscissa of Cu; right-angled to Cu. Halteres pale yellow, almost luminous

Legs: Black. Mid-tibia with one antero-dorsal bristle.

Abdomen: Tergite 1+2 excavated to middle. Tergites 1+2, 3 and 4 each with a pair of median marginal bristles; those on 1+2 weaker than the others and less easily distinguishable from surrounding hairs. No discal bristles on T3 or T4. Shiny black, tergites with narrow, interrupted, band of dusting on anterior edge.

Similar species: *Phytomyptera cingulata* (Robineau-Desvoidy, 1830) is another small black fly with narrow, interrupted, bands of dusting on the tergites. It differs from *Paracraspedothrix* in that the mouth-edge does not project forwards beyond the base of the vibrissae, the second aristomere is about four times as long as wide, cross-vein m-cu is shorter than the final abscissa of Cu and the bend in M is a distinct and sharp angle with the final section curving away from the costa. The radio-cubital node has a single long bristle, about twice as long as cross-vein r-m, occasionally with a much smaller second one (these may, of course, be lost in Malaise caught material).

***Paracraspedothrix* records**

Horsell Common, Surrey (TQ007608): 6-14.viii.2000 1x female (may have been more); 14-21.viii.2000 1x male, 2x females; 21-28.viii.2000 2x females; 11-18.ix.2000 1x male.

Shotover Hill Reserve, Oxfordshire (SP562060): 24.vii - 18.viii.2000 1 female; 18.viii - 25.x.2000 1x female. Collected by Ivan Wright, determiner CMR and GAC.

Wolford Wood, Warwickshire (SP239335): 11.x.2001; Shirley, Solihull, Warwickshire (SP111781): 13.xi.2001 and (SP104779) 24.v.2001. Collected by Mike Pugh, determined by CMR

Speen Reservoir, Berkshire (SU4667): 14.viii.2001, collector Martin Townsend, determiner CMR and GAC.

Kew Gardens, Richmond, Surrey (TQ177764): 20-27.vii.2001 1x female, Malaise trap. Operator David (D.W.) Baldock, determiner GAC (and CMR).

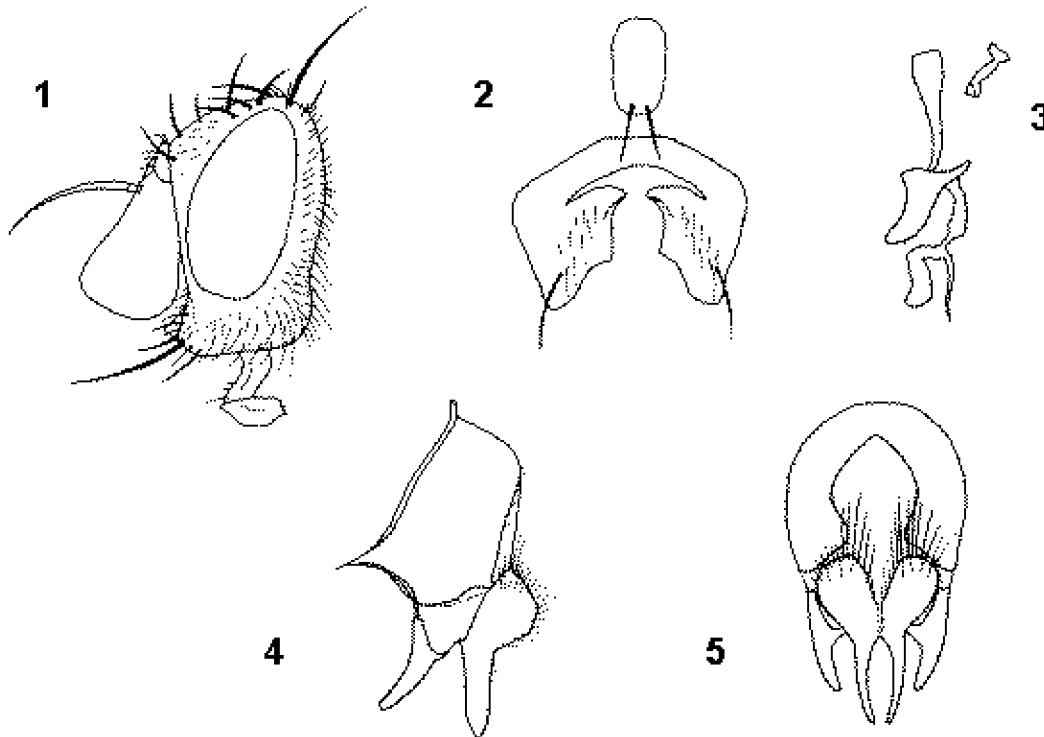
Acknowledgements

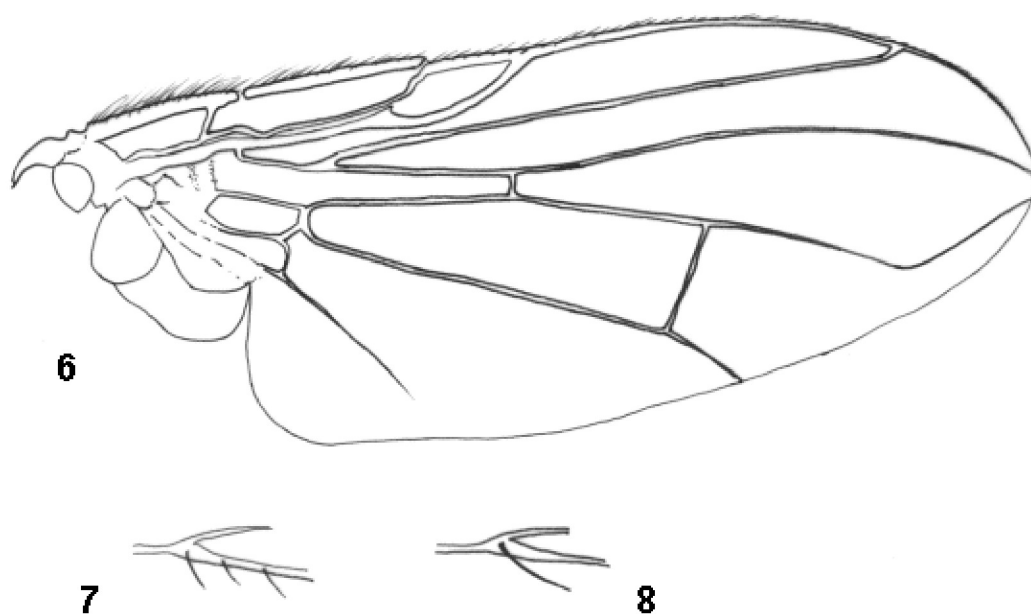
The authors would like to thank Hans-Peter Tschorsnig for determining the specimens and for allowing us to use some couplets from his keys. GAC would also like to thank Jim Brock at the Horniman Museum and John Pontin for access to the Malaise trap catches that yielded the original *Paracraspedothrix*. DG would like to thank the Avon Wildlife Trust for commissioning the work at Tucking Mill. CMR would like to thank all collectors for submitting their records to the scheme and, in particular, Thames Water for allowing us to publish their record.

References

Belshaw, R. 1993. Tachinid flies. Diptera: Tachinidae. *Handbooks for the identification of British Insects*. **10** 4a(i). 169pp. Royal Entomological Society, London .

Tschorsnig, H.P. and B. Herting. 1994. Die Raupenfliegen (Diptera: Tachinidae) Mitteleuropas: Bestimmungstabellen und Angaben zur Verbreitung und Ökologie der einzelnen Arten. *Stuttgarter Beiträge zur Naturkunde. Serie A (Biologie)* **506**, 170 pp.





Figs 1 - 8. *Paracraspedothrix montivaga* 1, head of male (lateral view); 2, sternite 4 and 5; 3-5, male genitalia, 3, aedeagus (lateral), 4 & 5, epandrium, cercus and surstylus (4, lateral, 5, ventral); 6, wing (underside); 7, few scattered hairs from the node r_{4+5} ; *Phytomyptera cingulata* 8, single bristle on node r_{4+5}