

PRELIMINARY ATLAS
OF THE
HOVERFLIES
(DIPTERA: SYRPHIDAE)
OF THE
BRITISH ISLES

EDITED BY
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The Biological Records Centre is operated by the Institute of Terrestrial Ecology. (Natural Environment Research Council) and receives financial support from the Nature Conservancy Council. It seeks to help naturalists and research biologists to co-ordinate their efforts in studying the occurrence of plants and animals in the British Isles, and to make the results of these studies available to others.

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HOVERFLY MAPS

1. Situation Map (all maps below combined)
2. *Arctophila fulva*
3. *Callicera* (*aenea* + *rufa* + *spinolae*)
4. *Cheilosia chrysocoma*
5. *C. nasutula*
6. *Chrysotoxum arcuatum*
7. *C. bicinctum*
8. *C. cautum*
9. *C. elegans*
10. *C. festivum*.
11. *C. octomaculatum*
12. *C. vernale*
13. *C. verralli*
14. *Eriozona syrphoides*
15. *Eristalis rupium*
16. *Eumerus sabulonum*
17. *Lejogaster splendida*
18. *Leucozona glaucius*
19. *L. laternarius*
20. *L. lucorum*
21. *Microdon eggeri*
22. *Myolepta* (*luteola* + *potens*)
23. *Platycheirus melanopsis*
24. *Tropidia scita*
25. *Volucella bombylans*
26. *V. inanis*
27. *V. inflata*
28. *V. pellucens*
29. *V. zonaria*
30. *Xylota coeruleiventris* + *florum*

The Hoverfly Recording Scheme started in 1980 but has been deliberately keeping a low profile until a new key work was available.

The British Entomological and Natural History Society are publishing British Hoverflies: an illustrated identification guide to, scheduled to be available in autumn 1983. The recording scheme will then be able to operate with full effect.

In order to stimulate an interest in recording hoverflies, it has been felt that an atlas, however preliminary, would be welcomed by recorders. The maps are based upon data received by the Hoverfly Recording Scheme organiser, Philip Entwistle and supplemented by some other data collated by Alan Stubbs.

It is possible that a few records will need re-assessment when the guide is available but the distribution patterns accord with the basis of reliable data. In a few instances records have been omitted pending vetting; these concern misfit geographic areas for species where difficulties in identification could apply.

With an allocation of 30 maps, the purpose has been to illustrate various types of distribution patterns which have emerged so far. Some relatively common species are included so everyone should feel able to contribute to the recording scheme. However, it will be noticed that even some of the species with restricted distribution may be frequent in certain districts. Conversely some widespread species are seemingly absent from areas where their occurrence might have been expected. This is one of the interests of distribution mapping, that pre-conceptions about the status of species are replaced by some surprises when everyone's individual experience is combined. The longer term objective is to interpret the reasons for differences in distribution patterns.

COMMENTS ON DISTRIBUTION PATTERNS

The genus Callicera shows the interesting manner in which the three species have a different range (map 3). A purely Scottish Highland, and in particular a purely East Anglian distribution are relatively infrequent in our hoverfly fauna. Map 22 shows a similar separation of the two Myolepta species, with M. potens being confined to a small area in the south-west.

Chrysotoxum (maps 6-13) is a particularly interesting genus containing 8 species, including a high proportion of localised species. Thus arcuatum is northern. C. elegans, festivum and bicinctum represent a sequence of widespread southern species which reach different northern limits, the latter species in fact being the only truly widespread member of the genus. C. cautum does not seem as frequent as might have been expected. There are three very localised species, each with a different pattern. C. verralli is very much a species of London and the east of England, octomaculatum occurs on heathland in central southern England whilst vernale is restricted to the coastal belt of S.W. England.

Leucozona (maps 18-20) includes two very widespread species, laternarius and lucorum, but C. glaucius (map 18) has an abrupt north south boundary, to the east of which it is seemingly absent.

Volucella (maps 25-29) contains two easy-to-record widespread species, bombylans and pellucens. V. inflata is proving far more widespread in the south than expected. The maps of inanis and zonaria emphasise that these are very local species, with London as a major focus.

Map 30 shows a most intriguing species pair with mutually exclusive distribution. Thus coeruleiventris is northern and florum is southern. Is this curious pattern (which also occurs in some other insects) true or false? Will an overlap be found? Will the 'fronts' of distribution move with time?

Eriozona syrphoides (Map 14) is a new colonist in Britain, occupying conifer plantations. There will be great interest in plotting the spread of this attractive hoverfly.

Microdon eggeri has a disjunct distribution, occurring in a restricted area of southern England and also in the Scottish Highlands. Such a distribution is known to occur in various other insects so this may well be a true pattern - but its up to recorders to check whether or not the gap is real.

Coastal species are represented by Eumerus sabulorum (map 16) which lives on sand dunes (but is it really absent from the east coast?) and Lejogaster splendida (Map 17) which occurs at the freshwater end of a transition to brackish marsh. However, note that E. sabulorum has been found inland at a sandy locality and one wonders whether some former inland records of L. splendida may be correct. We need to ascertain the normal habitat for species but this in turn highlights the special significance of looking out for and recognising the occasion when a hoverfly is found living in an unexpected place.

We have very few true mountain species. Platycheirus melanopsis (map 23) is very inadequately known, occurring on relatively high ground, near or above the tree line. However, most of our upland species are confined to valley bottoms or at least lush places which normally occur at low altitude, as is the case with Eristalis rupium (map 15).

A more generalised northern and western distribution is illustrated by Arctophila fulva (map 2), Cheilosia chrysocoma (map 4) and C. nasutula (map 5). A loose easterly distribution is represented by Tropidia scita (map 24), though this fenland and marsh species occurs sparingly in the north and west as well.

FUTURE RECORDING

Clearly, the coverage of recording needs to be far more comprehensive. The time scale for developing more detailed maps

depends on recorders gaining the necessary data but it is hoped that these preliminary maps at least give an insight into the possibilities of firming up on some interesting distribution patterns. There may be plenty more species with equally interesting patterns and, a point which needs to be emphasised, the so called common species are worth recording (as well as the rare ones) since curious anomalies can emerge even in the most unexpected areas.

The Hoverfly Recording Scheme is concerned with promoting all aspects in the study of hoverflies, so please do not view 10Km square maps as the sole objective. If records have date, habitat and site name (with a grid reference down to eight figures if possible (ie --/-- ----)) then the data can be interpreted more fully. If you have an opinion as to whether a species is likely to be breeding or is a stray, then this is worth noting. Also if you have specifically searched for a species, and failed to find it, this also is worth knowing as negative information (but this must be done in such a way as to be unambiguous).

The scheme is also concerned to encourage the study of the biology and early stages of species, since the more we know about the ecology of a species, the more practical the possibility of interpreting presence or absence (or declines or new colonisation) in sites or districts. There is also a continuing need to improve taxonomic knowledge.

SYMBOLS ON MAPS

- = record dated 1961 onwards
- = record dated 1960 or earlier
- * = published record (not verified).

ACKNOWLEDGEMENTS

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