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THE HOVERFLIES (DIPTERA: SYRPHIDAE) OF HAYLEY WOOD

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The Syrphidae comprise a well-defined family of the Diptera, the two-winged flies. There are about 250 species recorded in Britain, with new additions to the list being made fairly frequently; one species not yet officially on the British list, *Cheilosia zetterstedti*, has been taken at Hayley. Adult hoverflies are strong fliers and are well known for their habit of hovering with their bodies almost motionless in the air; they are also some of the most characteristic visitors to flowers, from which they obtain food in the form of nectar or pollen. Most species can be satisfactorily identified using the key in Coe (1953).

The larvae of hoverflies are astonishingly diverse in their feeding habits: a great many species have larvae that feed on aphids, but there are also those that feed on plant tissue, fungi, compost, dung, solids suspended in water, sap and rotting wood. Two groups have larvae that live in the nests of ants or bees, eating waste material. The life histories of most species have yet to be discovered, and little is known about even the commonest species beyond a few basic facts.

Hayley Wood is an ancient deciduous wood, growing on boulder clay soil, and covers 122 acres: its recorded history stretches back over 700 years. A good deal is known of the history and botanical ecology of the wood (Rackham, 1975), but little is known of the insect fauna. Ancient woodland is probably the habitat in which hoverflies first evolved, and most British species are associated with woodland habitats of one sort or another (Speight, Chandler and Nash, 1975). In Cambridgeshire, much early collecting was done by Verrall and Collin in Woodditton Wood, which became noted for its rarities: Woodditton Wood has now been largely destroyed by the planting of conifers, leaving Hayley Wood as the largest surviving ancient wood in the county. *Platycheirus tarsalis*, a rare hoverfly, is recorded here for Hayley Wood. It has only previously been recorded in the county from Woodditton Wood, where it was taken by Collin from 1926 to 1936. *Cheilosia zetterstedti* (see above) has only been taken at Lode, Woodditton Wood and Hayley; *Criorhina berberina* has also been taken only once outside these two woods. These records emphasise the importance of Hayley Wood as a habitat for hoverflies, particularly now that Woodditton Wood has disappeared; indeed Hayley Wood is at present the most important site for these insects known in the county.

The data presented here are the results of a systematic survey of the hoverflies of the wood undertaken during 1980, supplemented by records from occasional visits of previous years. There are some interesting distributions within the wood: for instance, male *Syrphus ribesii* hover in groups under the trees of the Triangle (by far the youngest area of the wood, dating from the 1920s), but rarely elsewhere. The inclusion of flower records in this report, with pollen (P) and nectar (N) visits separately noted, demonstrates the overwhelming importance of certain plants as sources of food. These plants, particularly *Ranunculus* and *Rubus* species in the rides, seem to form the major part of the diet of many hoverflies; management practices which affect the flora of the rides should be undertaken with the knowledge of their likely effect on the diversity of flower-visiting insects.

In all, 61 species were recorded, and a further nine are expected to occur. This total compares favourably with the list of about 75 species which probably occurred

in Woodditton Wood. Other woods that have been surveyed in other counties often have higher totals recorded; for example, in Wharncliffe Wood near Sheffield 96 species have been captured (Brackenbury and Whiteley, 1981).

The nomenclature and order of species in the list follow Kloet and Hincks (1976).

Syrphus ribesii 27.v-26.ix. 153 records.

Flowers: *Ranunculus repens* (P), *Rosa arvensis* (P), *Rubus* sp. (P), *Filipendula ulmaria* (P), *Hypericum hirsutum* (P), *Taraxacum oblongatum* (P), *Cirsium palustre* (P), *Ulmus minor* (honeydew), *Heracleum sphondylium* (P,N), *Centaurea nigra* (P), *Senecio jacobaea* (P)

Syrphus vitripennis 15.vii-4.ix. 6 records.

Flowers: *Sonchus* sp.(P), *Rubus* sp.(P), *Rosa arvensis* (P)

Epistrophe eligans 13.vi; 25.v.

Metasyrphus corollae 30.vi-11.viii. 6 records.

Flowers: *Hypericum hirsutum* (P), *Filipendula ulmaria* (N)

Metasyrphus luniger 15.vii-4.ix. 3 records.

Flowers: *Rubus* sp.(P)

Dasyrphus albostrigatus 25.viii; 18.ix. 2 records.

Dasyrphus lunulatus 4.vi; 12.vi. 2 records.

Flowers: *Ranunculus repens* (P)

The second Cambridgeshire record for this mainly northern species.

Dasyrphus tricinctus 20.v. 1 record.

Dasyrphus venustus 16.v-13.vi. 13 records.

Leucozona lucorum 8.v-22.vii. 26 records.

Flowers: *Taraxacum oblongatum* (P), *Rubus* sp.(P)

Melangyna labiatarum 25.viii. 2 records.

Melangyna umbellatarum 19.viii. 1 record.

Meliscaeva auricollis 25.viii. 1 record.

Meliscaeva cinctella 19.viii-4.ix. 13 records.

Episyrphus balteatus 12.vi-3.x. 419 records.

Flowers: *Ranunculus repens* (P), *Rosa arvensis* (P), *Rubus* sp.(P), *Lythrum salicaria* (P), *Hypericum hirsutum* (P), *Taraxacum oblongatum* (P), *Cirsium palustre* (P), *Lychnis flos-cuculi* (P), *Bryonia dioica* (P), *Sonchus* sp.(P), *Centaurea nigra* (P)

Sphaerophoria scripta 13.vi-4.ix. 4 records.

Flowers: *Rubus* sp.(N)

Chrysotoxum bicinctum 15.vii. 1 record.

Flowers: *Rosa arvensis* (P)

Chrysotoxum cautum 12.vi. 1 record.

Baccha elongata 3.vi; 1.viii. 5 records.

Baccha obscuripennis 25.v-26.ix. 50 records.

All fifty records were of females.

Melanostoma mellinum 22.vii-4.ix. 30 records.

Flowers: *Rubus* sp.(P), *Lotus corniculatus* (P)

- Melanostoma scalare* 27.v-3.x. 437 records.
Flowers: *Hypericum hirsutum* (P), *Ranunculus repens* (P), *Brachypodium sylvaticum* (P), *Arrhenatherum elatius* (P), *Rubus* sp.(P), *Cirsium palustre* (P), *Centaureum* sp.(P), *Geranium robertianum* (P), *Lapsana communis* (P)
- Platycheirus albimanus* 27.v-26.ix. 128 records.
Flowers: *Ranunculus repens* (P,N), *Rosa arvensis* (P), *Rubus* sp.(P,N), *Prunella vulgaris* (P), *Brachypodium sylvaticum* (P), *Centaureum* sp.(P), *Circaea lutetiana* (N)
- Platycheirus clypeatus* 25.v-19.viii. 7 records.
- Platycheirus manicatus* 4.v-26.ix. 286 records.
Flowers: *Stellaria holostea* (P,N), *Veronica chamaedrys* (P,N), *Ranunculus repens* (P,N), *Geranium robertianum* (N), *Rubus* sp.(P,N), *Rosa arvensis* (P), *Circaea lutetiana* (N)
- Platycheirus peltatus* 16.v-26.ix. 264 records.
Flowers: *Endymion non-scriptus* (P), *Ranunculus repens* (P,N), *Lychnis flos-cuculi* (P), *Rubus* sp.(P,N), *Lythrum salicaria* (P,N), Gramineae (P), *Sonchus* sp.(N), *Cirsium palustre* (P), *Taraxacum* sp.(N), *Centaurea nigra* (P)
- Platycheirus scutatus* 10.v-4.ix. 42 records.
Flowers: *Lychnis flos-cuculi* (P), *Ranunculus repens* (P), *Rubus* sp.(P), *Cirsium palustre* (N)
- Platycheirus tarsalis* 8.v-4.vi. 6 records.
Flowers: *Ranunculus ficaria*
- Pyrophaena granditarsa* 13.vi. 1 record.
- Pipiza austriaca* 28.v-22.vii. 40 records.
Flowers: *Ranunculus repens* (P,N)
- Pipiza luteitarsis* 25.v; 13.vi. 2 records.
- Pipiza noctiluca* 20.v. 1 record.
- Pipizella virens* 12.vi. 1 record.
Flowers: *Rubus* sp.(P)
- Cheilosia albicans* 27.v-13.vi. 7 records.
Flowers: *Ranunculus repens* (P)
- Cheilosia grossa* 18.iv. 1 record.
- Cheilosia illustrata* 18.vi. 1 record.
- Cheilosia paganus* 18.iv-4.ix. 29 records.
Flowers: *Ranunculus repens* (P,N), *Geum urbanum* (P)
- Cheilosia proxima* 22.vii. 2 records.
Flowers: *Ranunculus repens* (P)
- Cheilosia variabilis* 25.v-12.vi. 4 records.
- Cheilosia vernalis* 16.v-25.viii. 6 records.
Flowers: *Ranunculus repens* (P), *Leontodon autumnalis* (N)
- Cheilosia zetterstedti* 25.v; 13.vi. 3 records.
Flowers: *Heracleum sphondylium*
Not yet officially on the British list; found in Hayley Lane.
- Rhingia campestris* 24.v-3.vi; 11.viii-4.ix. 22 records.
Flowers: *Veronica chamaedrys* (N), *Endymion non-scriptus* (P,N), *Geranium robertianum* (N), *Prunella vulgaris* (N), *Lythrum salicaria* (N), *Centaurea nigra* (N)

Ferdinandea cuprea 25.v-30.vi; 19.viii-4.ix. 22 records.

Flowers: *Ranunculus repens* (P), *Rubus* sp.(P), *Cirsium palustre* (P)

Brachyopa scutellaris 18.vi. 1 record.

The species of this genus are difficult to recognise as hoverflies, looking more like muscids; the individual recorded from the wood was flying underneath the foliage of a small sapling in the main ride.

Neoscia podagrica 27.v; 25.viii-26.ix. 6 records.

Flowers: *Circaea lutetiana* (P), *Rubus* sp.(N)

Volucella bombylans 27.v-22.vii. 18 records.

Flowers: *Rubus* sp.(N), *Rosa arvensis* (N), *Filipendula ulmaria* (P,N)

Volucella pellucens 30.vi-22.vii. 4 records.

Flowers: *Rubus* sp.(N)

Xylota segnis 24.v-25.viii. 110 records.

Flowers: *Rubus* sp.(N?)

Xylota sylvarum 4.vi-1.viii. 33 records.

The two *Xylota* species are common in the wood. Almost invariably they are to be found systematically collecting food from the surface of leaves, rarely visiting flowers at all.

Syrilla pipiens 18.iv-4.ix. 17 records.

Flowers: *Ranunculus repens* (N), *Rosa arvensis* (P), *Rubus* sp.(P,N), *Leontodon autumnalis* (N)

Criorhina berberina var. *oxyacanthae* 12.vi. 1 record.

Flowers: *Rubus* sp.(N)

Criorhina floccosa 22.v. 1 record.

Helophilus pendulus 27.v-26.ix. 31 records.

Flowers: *Rubus* sp.(P,N), *Sonchus* sp. (P), *Taraxacum oblongatum* (N), *Centaurea nigra* (N)

Parhelophilus versicolor 22.v. 1 record.

Eristalis arbustorum 27.v-4.ix. 26 records.

Flowers: *Crataegus monogyna* (N), *Rosa arvensis* (P), *Rubus* sp.(P,N), *Cirsium palustre* (P)

Eristalis intricarius 8.v; 22.vii. 2 records.

Flowers: *Rubus* sp.(P,N)

Eristalis nemorum 3.vi-22.vii. 14 records.

Flowers: *Ranunculus repens* (P), *Rubus* sp.(N)

Eristalis pertinax 8.v-26.ix. 40 records.

Flowers: *Heracleum sphondylium* (P,N), *Rubus* sp.(P,N), *Filipendula ulmaria*, *Cirsium palustre* (P)

Eristalis tenax 18.iv-4.ix. 14 records.

Flowers: *Rosa arvensis* (P,N), *Rubus* sp.(N), *Ranunculus repens* (P), *Cirsium palustre* (N), *Centaurea nigra* (N)

Eristalinus sepulchralis 18.vi. 1 record.

Myiatropa florea 27.v-25.viii. 29 records.

Flowers: *Crataegus monogyna* (N), *Rubus* sp.(P,N)

Species expected to occur in Hayley Wood

Epistrophe grossulariae, *Scaeva pyrastris*, *Parasyrphus punctulatus*, *Melangyna lasiophthalma*, *Sphegina clunipes*, *Cheilosia albipila*, *Orthonevra splendens*, *Eumerus strigatus*, *Merodon equestris*

References

- Brackenbury, A., and Whiteley, D. (1981). Hoverflies (Diptera, Syrphidae) of Wharnccliffe Wood. *The Sorby Record*, **19**: 4–17.
- Coe, R. L. (1953). Diptera: Syrphidae. *Royal Entomological Society Handbooks on the Identification of British Insects*, **10**: 1–98.
- Kloet, G. S., and Hincks, W. D. (1976). *A Checklist of British Insects, 5: Diptera and Siphonaptera*. (2nd edition).
- Rackham, O. (1975). *Hayley Wood: its history and ecology*. CAMBIENT.
- Speight, M. C. D., Chandler, P. J., and Nash, R. (1975). Irish Syrphidae (Diptera): notes on the species and an account of their known distribution. *Proceedings of the Royal Irish Academy*, **75B**: 1–80.

BLACK POPLARS IN CAMBRIDGESHIRE

Graham Easy

With the loss of the majority of our magnificent elms, especially *Ulmus glabra* Hudson and *U. procera* Salisb., poplars have taken on a more important role in the Cambridgeshire landscape. Elms have given botanists problems in identification in the past, and these poplars are likely to provide even more headaches in the future. A wide selection of hybrid poplars is offered by horticultural merchants and certainly a confusing range of these vigorous young trees is becoming conspicuous in plantations, in gardens and by roadsides. Most have a simple, erect habit that provides a helpful pointer for recognising them (see Figure 4: H). I have not attempted to record or separate this wide range of hybrids in my search for poplar trees in Cambridgeshire, nor have I taken into account the long-established white poplar *Populus alba* L., the aspen *P. tremula* L. and their hybrids, one of which, the grey poplar, *P. canescens* (Aiton) Sm., was considered a separate species until recently and is widely distributed across the county.

The recent national survey of the black poplar *Populus nigra* L. has also brought to light some unexpected problems in identification. A major feature suggested in *A Flora of Cambridgeshire* (Perring *et al.*, 1964) and elsewhere to separate the true black poplar from the hybrid *P. × canadensis* Moench (= *P. × euramericana* (Dode) Guinier) is the conspicuously bossed appearance of *P. nigra*. Generally the literature available is confused over the emphasis of features distinguishing *P. nigra* and its hybrids from the American species *P. deltoides* Marsh. Reference to material collected in herbaria usually helps clear up any such confusion between similar plant species, but in this case vital information on the age and appearance of the trees from which the preserved leaves and twigs came has often gone unrecorded.

I have not investigated the most numerous of the mature “black poplars” – the Lombardy poplar (the fastigiate cultivar of *P. nigra*, ‘Italica’: see Figure 4: D, E, e), which is especially common in South Cambridgeshire. Nevertheless, it seems worth mentioning that two similar forms of “Lombardy poplar” are to be found, one with glabrous and the other with pubescent leaf-stalks and young twigs; unravelling the distribution of these seems a worthwhile future project.