Nature in Cambridgeshire
No. 25 1982

Published by the Cambridgeshire and Isle of Ely Naturalists’ Trust Ltd
THE HOVERFLIES (DIPTERA: SYRPHIDAE) OF HAYLEY WOOD

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The Syrphididae 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 obovatum_ (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)

_Dasyusyrphus albostriatus_ 25.viii; 18.ix. 2 records.

_Dasyusyrphus lunulatus_ 4.vi; 12.vi. 2 records.
Flowers: _Ranunculus repens_ (P)
The second Cambridgeshire record for this mainly northern species.

_Dasyusyrphus tricinctus_ 20.v. 1 record.


_Leucozona lucorum_ 8.v-22.vii. 26 records.
Flowers: _Taraxacum obovatum_ (P), _Rubus sp.(P)

_Melangyna labiatarum_ 25.viii. 2 records.

_Melangyna umbellatarum_ 19.viii. 1 record.

_Meliscaeva auricollis_ 25.viii. 1 record.


_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 obovatum_ (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), Centaurium 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), Centaurium sp.(P), Circaea lutetiana (N)

Platycheirus clypeatus 25.v-19.viii. 7 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)

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 austriae 28.v-22.vii. 40 records.
Flowers: Ranunculus repens (P,N)

Pipiza lutetiaris 25.v; 13.vi. 2 records.

Pipiza noctula 20.v. 1 record.

Pipizella virens 12.vi. 1 record.
Flowers: Rubus sp.(P)

Cheilosia albitarsis 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)
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.

Neoascia 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 sylvanum 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.

Syritta pipiens 18.iv-4.ix. 17 records.
Flowers: Ranunculus repens (N), Rosa arvensis (P), Rubus sp.(P,N), Leontodon autumnalis (N)

Criophila berberina var. oxyacanthae 12.vi. 1 record.
Flowers: Rubus sp.(N)

Criophila 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)

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)

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

Eristalinus sepulchralis 18.vi. 1 record.

Myriatropa florea 27.v-25.viii. 29 records.
Flowers: Crataegus monogyna (N), Rubus sp.(P,N)

Species expected to occur in Hayley Wood
Epistrophus grossulariae, Scaeva pyraustri, Parasyrphus punctulatus, Melangyna lasiophthalma, Sphegina eluinipes, Cheilosis albipila, Orthonevra splendens, Eumerus stirgatus, Merodon equestris

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References

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.