

- enzootic staphylococcal infection of lambs in North-West Yorkshire and North-East Lancashire. *Vet. Rec.*, 76, 743-747.
- 1964b Staphylococcal infection in lambs; a study of live and dead lambs from tick-infested farms in North-West Yorkshire and North-East Lancashire. *Vet. Rec.*, 76, 793-797.
- 1964c Infertility in the ram associated with tick-borne fever infection. *Vet. Rec.*, 76, 1131-1136.

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## *The Laccwing-Flies of Lancashire and Cheshire*

by  
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The Lacewings form the order Neuroptera, and the common name refers to the delicate mesh-like venation of the wings. Most species have four wings of nearly equal size and shape, and all are weak flyers. The most familiar is the large green lacewing, *Chrysopa flava*, which has long slender antennae and small but conspicuous golden eyes. Most are beneficial insects since their larvae feed on greenfly and similar insects, and the adults mainly occur on trees or shrubs, some on any kind of tree but others are confined to either conifers or deciduous trees. It is useful to include the related Scorpion-flies in the present account, although these form a separate order, the Mecoptera.

The Neuroptera and Mecoptera of Lancashire and Cheshire have not been adequately recorded and although additional species may be difficult to find, the distribution of the known species in the two counties is by no means well known. They are interesting insects and only 64 British species are known; their identification presents relatively little difficulty when using Fraser (1959), so that entomologists interested in other orders may well spare a little time to study them—in particular lepidopterists are well placed to collect Neuroptera when using a beating tray for caterpillars.

The present account gives the recorded distribution of these insects in the two counties. If three or less records exist for any vice-county, these are given; if more records exist a general statement of the distribution is given. The nomenclature follows Kloet and Hincks (1964); in the few cases where this differs from that used in the Check List of the Fauna of Lancashire and Cheshire (1930), the latter name is given in brackets. The months of occurrence in Lancashire and Cheshire are given using Roman numerals, and a short statement of the habitat is included. Out of the British total of 60 species, 44 species are now recorded. (Goyt Valley is still listed as V.C. 58 in view of the number of records).

## RAPHIDIIDAE

The Snake-flies, distinctive by their long narrow head and very long neck. The larvae are elongated and active, feeding on larvae and other insects in dead and decaying wood. The adults occur on leaves or twigs of trees, etc.

1. *Raphidia maculicollis* (Stephens) V.

Apparently confined to conifers, especially Scots pine and Larch. Only one record exists.

V.C. 58: Cotterill Clough.

2. *R. xanthostigma* Schummel VI.

Usually found on willows.

V.C. 58: Wynbunbury Moss.

V.C. 69: Rusland Moss, Witherslack.

## SIALIDAE

The Alder-flies are found on trees, shrubs, etc., near water, in which the larvae live. These are active, with a broad head and short neck and have a single segmented gill on each side of the abdominal segments, together with a single terminal process. In still water or in the slower parts of streams or rivers.

3. *Sialis fuliginosa* Pictet V. VI.

Widely distributed but less common than *lutaria*, and may be more characteristic of faster flowing water. Recorded from all vice-counties.

4. *S. lutaria* (Linnaeus) V. VI.

Common, and sometimes locally abundant, by rivers and streams and by lakes and ponds throughout the area.

The above species were separated as the order Megaloptera in Kloet and Hincks (1945) whilst the species listed below formed the Neuroptera, but both groups are now combined. The larvae of the species listed below, with the exception of *Osmylus* and *Sisyra*, are terrestrial, occurring mainly on the leaves of trees and shrubs, where they feed on greenfly and similar insects, sucking their prey. Some larvae are brightly coloured and naked, whilst others cover their bodies with the dried skins of their prey.

## CONIOPTERYGIDAE

Small species, characterised by having their wings and bodies covered with a white or grey powder.

5. *Conwentzia psociformis* (Curtis) (= *pineticola* Enderlein)

V. VI. VIII. IX.

On deciduous trees or on evergreens. Widely distributed and recorded from all vice-counties ; somewhat local.

6. *Semiadalis aleyrodiformis* (Stephens) VI. VII.

On both deciduous and evergreen trees. Widely distributed in Cheshire.

V.C. 59: Stretford ; Ainsworth.

[*Parasemiadalis annae* Enderlein

Recorded from V.C. 59 (Barton Moss) and from Goyt Valley (formerly V.C. 58). The latter specimen, in the Manchester Museum, is a specimen of *Semiadalia aleyrodiformis*, so that the former record may also be an error.]

7. *Coniopteryx pygmaeus* Enderlein V.

On conifers, apparently local.

V.C. 58: Delamere ; Wilmslow.

V.C. 59: Freshfield.

8. *C. tineiformis* Curtis V.

In woods and hedgerows, on almost any kind of tree ; scarce.

V.C. 58 : Marple.

V.C. 69: Grange.

#### OSMYLIDAE

The great lacewing, distinctive in its dark colouration and spotted wings ; the larvae occur in wet mosses, etc., bordering streams.

9. *Osmylus fulvicephalus* (Scopoli) (= *maculatus* Fabricius) V. VI.

Frequent throughout the area in suitable habitats, mainly along wooded streams and rivers.

#### SISYRIDAE

Small brown lacewings, found near water ; the larvae occur in fresh-water sponges.

10. *Sisyra fuscata* (Fabricius) VI. VII.

Frequent throughout the area near lakes, ponds, or rivers, in which fresh-water sponges occur.

#### HEMEROBIIDAE

The brown lacewings, smaller in size than the green lacewings.

11. *Hemerobius atrifrons* McLachlan V. VI. IX.  
 On Larch, sometimes other conifers ; double-brooded, most common in the first brood.  
 V.C. 58: Goyt Valley.  
 V.C. 60: Blaze Moss ; Silverdale.
12. *H. humulinus* Linnaeus V-IX.  
 On deciduous trees and undergrowth , common throughout the area.
13. *H. lutescens* Fabricius V-VIII. X.  
 On deciduous trees ; common throughout the area.
14. *H. marginatus* Stephens VIII.  
 On deciduous trees ; somewhat sporadic but not uncommon throughout the area.
15. *H. micans* Olivier IV-IX.  
 On deciduous trees ; there appear to be several broods during the summer ; common throughout the area.
16. *H. nitidulus* Fabricius V. VII.  
 On conifers, especially Scots pine ; several broods occur during the summer ; common throughout the area.
17. *H. pini* Stephens VI. IX.  
 On conifers, especially Spruce and Larch ; apparently local.  
 V.C. 58: Goyt Valley (spruce).  
 V.C. 59: Silverdale.
18. *H. simulans* Walker (= *orotypus* Wallengren) V. VII. IX. X.  
 Usually on Larch or Spruce ; double brooded ; widely distributed.  
 V.C. 58: Goyt Valley ; Delamere.  
 V.C. 59: Longridge ; Chat Moss.  
 V.C. 60: Silverdale.  
 V.C. 69: Grange ; Coniston.
19. *H. stigma* Stephens I. III. V. VII. VIII. IX.  
 On conifers ; hibernates as adult ; apparently most common in Cheshire.  
 V.C. 59: Chat Moss ; Freshfield.  
 V.C. 60: Silverdale.  
 V.C. 69: Grange.

20. *Symphorobius elegans* (Stephens) VII.  
 On deciduous trees ; local, not common.  
 V.C. 58: Cotterill Clough ; Ashley Ponds.  
 V.C. 59: Manchester.
21. *S. fuscescens* (Wallengren) VI.  
 On conifers, especially Scots pine ; local, not common.  
 V.C. 58: Goyt Valley (pines) ; Delamere.  
 V.C. 59: Freshfield (pines).
22. *S. pygmaeus* (Rambur) V.  
 On oaks ; only one record exists.  
 V.C. 58: Cotterill Clough.
23. *Psectra diptera* (Burmeister) VIII.  
 On low vegetation ; widely distributed in the country as a whole but more common in Scotland ; only one record exists for the area.  
 V.C. 69: Cark.
24. *Kimminsia betulina* (Stroem) V. VIII. IX.  
 On deciduous trees ; widely distributed and frequent throughout the area.
25. *K. subnebulosa* (Stephens) V. VII. VIII. IX.  
 On deciduous trees or rank vegetation ; widely distributed and common throughout the area.
26. *Micromus angulatus* (Stephens) V.  
 On herbage below young trees or shrubs, especially birch ; only one record exists.  
 V.C. 69: Holker.
27. *M. paganus* (Linnaeus) V.-VII.  
 On deciduous trees or herbage ; common and widely distributed in the two counties.
28. *M. variegatus* (Fabricius) VI. VIII.  
 On rank herbage ; common and found throughout the area.
29. *Drepanopteryx phalaenoides* (Linnaeus) IV.  
 On deciduous trees, mainly oak ; a northern species mainly found in Autumn ; only one record exists, although the species has been taken at Witherslack, near Grange (V.C. 69).  
 V.C. 69: Grange, 19-IV-1943 (on window).  
 This date is unusual and suggests hibernation as adult.

30. *Wesmaelius concinnus* (Stephens) VI. VII. VIII.

On conifers, especially Scots pine ; local, but not uncommon in Cheshire.

V.C. 59: Freshfield (common).

31. *W. quadrifasciata* (Reuter) V. VIII.

On conifers, especially Larch ; more widely distributed than *concinnus* in the area.

V.C. 58: Delamere ; Taxal.

V.C. 59: Nelson.

V.C. 60: Silverdale.

V.C. 69: Grange ; Bore Treen Tarn.

#### CHRYSOPIDAE

The green lacewings.

32. *Chrysopa abbreviata* Curtis V.

On sand dunes ; local but frequent where found : the Bowdon record is old and may be an error.

V.C. 58: Bowdon ; New Brighton.

V.C. 59: Freshfield.

33. *C. albolineata* Killington (= *tenella* Schneider) VI. VII. IX.

On deciduous trees or undergrowth ; frequent through Cheshire and south Lancashire.

V.C. 69: Grange.

34. *C. carnea* Stephens (= *vulgaris* Schneider) II. III. VII. VIII, IX, XI.

On deciduous trees or rank undergrowth ; hibernates as an adult ; common and widely distributed throughout the area.

35. *C. ciliata* Wesmael (= *alba* of authors, not Linnaeus) VI. VII.

In deciduous woodlands ; widely distributed in Cheshire, less well recorded in Lancashire.

V.C. 59: Ainsdale.

V.C. 60: Hawes Water.

V.C. 69: Grange.

36. *C. dorsalis* Burmeister V. VII.

On conifers ; given in Fraser (1959) as confined to the south and east counties of England, but common at Freshfield ; this species may be a new arrival.

V.C. 59: Freshfield.

37. *C. flava* (Scopoli) V.-IX.  
 In deciduous woods, especially around oaks. Common throughout the area.
38. *C. flavifrons* Brauer IX. (larva) XI.  
 Mainly on conifers or deciduous trees near conifers. Possibly local.  
 V.C. 58: Hale Barns ; Sinderland ; Torkington.  
 V.C. 59: Ainsdale.
39. *C. perla* (Linnaeus) V.-VII.  
 On deciduous trees, and saplings or undergrowth, often frequent amongst young birches. Frequent throughout the area.
40. *C. phyllochroma* Wesmael VII. VIII.  
 In lush vegetation ; not common.  
 V.C. 58: Goosehey.  
 V.C. 59: Withington ; Freshfield.
41. *C. septempunctata* Wesmael VII. IX.  
 On deciduous trees ; apparently more common in southern England ; scarce.  
 V.C. 58 Chester (moth trap) ; Bowdon.  
 V.C. 59 Old Trafford, Manchester.
42. *C. ventralis* Curtis VIII.  
 On conifers and deciduous trees ; not common.  
 V.C. 58: Abbots Moss.
43. *C. vittata* Wesmael VII.  
 On deciduous trees ; few records exist but it is probably much more widely distributed.  
 V.C. 58: Delamere.  
 V.C. 59: Bacup.
44. *Nathanica capitata* (Fabricius) VII. VIII.  
 The two species of this genus, only one of which is recorded, differ from the species of *Chrysopa* in being darker coloured, and somewhat reddish. On conifers, widely distributed but not common.  
 V.C. 58: Delamere ; Abbots Moss.  
 V.C. 59: Freshfield.  
 V.C. 60: Hawes Water.

## MECOPTERA

Most Scorpion-flies are similar in general appearance to the lacewings, but are larger and more robust; the wings are narrower and the head has a distinctive "snout". The common name refers to the shape of the male abdomen, which is swollen at the tip and this is curved dorsally like the tail of a Scorpion; the swollen part is the genitalia and the insects are perfectly harmless. The larvae are like caterpillars in appearance and occur in soil.

Except for *Boreus*, the adults occur amongst herbage in hedgerows, woods, etc., and the flight, although slow and short, is stronger than that of the lacewings. All four British species are recorded.

1. *Panorpa cognata* Rambur VI.-VIII.

Widely distributed but much less common than either of the other two species.

V.C. 58: Carrington Moss.

V.C. 59: Didsbury.

V.C. 60: Silverdale; Hawes Water.

2. *P. communis* Linnaeus V.-VIII.

Fairly common throughout the area.

3. *P. germanica* Linnaeus V.-VII.

Common throughout the area.

4. *Boreus hyemalis* (Linnaeus) XI.

A small, apterous species, probably mainly overlooked; found in moss or soil in which the larvae live; has been found on snow.

V.C. 58: Delamere: Taxal.

### REFERENCES

- Kloet, G. S., and Hincks, W. D., 1945, *A Check List of British Insects* Stockport.  
Kloet, G. S., and Hincks, W. D., 1964. *A Check List of British Insects* (second edition, Part I), *Handbk. Ident. Br. Insects* XI (1) pp. 119.  
Fraser, F. C., 1959, *Handbk. Ident. Br. Insects* 1 (12, 13) pp. 40.