

Sciomyzidae Recording Scheme News #6

July 2010

In what seems to be a generally lean year for finding adult Sciomyzidae, we have news of an exciting forthcoming publication on Sciomyzidae and Phaeomyiidae, some identification tips for separating our two *Limnia* species and an update on progress with extracting data from Sciomyzidae and Phaeomyiidae in the British Collection at The Natural History Museum, London.

Forthcoming publication

The well-known Sciomyzidae specialists Lloyd Knutson and Jean-Claude Vala have prepared a global review of the biology of Sciomyzidae, to be published by Cambridge University Press in November 2010. *Biology of Snail-Killing Sciomyzidae Flies* is to be a hardback of 584 pages and will be priced at £85. An accompanying DVD will include Clifford Berg's classic film on the biology of Sciomyzidae and biological control of snails. This is the first comprehensive world review of the biology of Sciomyzidae (Snail-killing Flies) and Phaeomyiidae (whose known larval biology is feeding on Millipedes).

Contents (taken from the CUP website) are: Foreword by Benjamin A. Foote; Foreword by Rudolf Rozkošný; Preface; Avant propos; About the authors; Acknowledgements; 1. Introduction; 2. Natural enemies of Mollusca; 3. Malacophagy in Diptera; 4. Life cycles; 5. Host/prey ranges and preferences; 6. Host/prey finding; 7. Feeding behavior; 8. Competition; 9. Phenology, reproduction, and development; 10. Macrohabitats and microhabitats, guild structures and associations, threatened species, and bioindicators; 11. Natural enemies; 12. Defense mechanisms; 13. Population dynamics; 14. Morphological, physiological/behavioral, and genetics and related aspects; 15. Systematics and related topics; 16. Zoogeography; 17. Evolutionary considerations; 18. Biological control; 19. History of research on Sciomyzidae; 20. Methods; 21. World checklist of Sciomyzidae and Phaeomyiidae; Index.

Undoubtedly, this will be a major milestone in the study of Sciomyzidae and Phaeomyiidae globally and should do much to increase interest in these families of flies and understanding of their life histories and biology. With publication scheduled before Christmas 2010, some dipterists will know what to ask Santa for this year....

The separation of female *Limnia*

The identification of females of the two British species of *Limnia* is continuing to give problems for some recorders, particularly in the absence of named voucher specimens for comparison. This note is intended to help by including photos of the top of the female thorax of both species to show the colour differences discovered by Rozkošný. These patterns are easily to see, but not so straightforward to interpret from written descriptions. Diagrams of the shape of the ventral sclerite at the tip of the female abdomen are also included, which should help with material preserved in alcohol.

Limnia paludicola Elberg



Female thorax with brown central stripe

Limnia unguicornis Scopoli



Female thorax with yellow central stripe flanked by a brown line each side



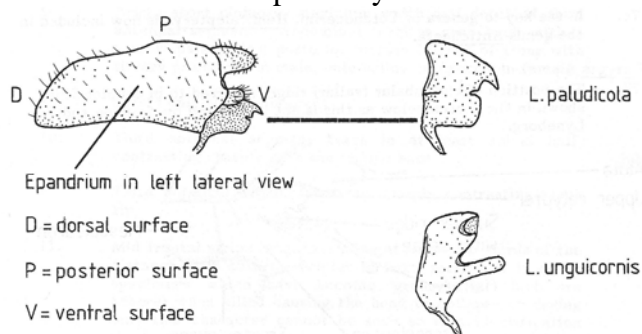
Hairs on ventral sclerite in a triangular shape pointed anteriorly away from the cerci [hairs not shown on cerci]



Hairs on ventral sclerite in a square shape

The thorax colour characters apply only to females, not males, and are suitable for dry preserved material or specimens extracted from alcohol using critical point drying or using Hexamethyldisilazene, HMDS. The pattern of hairs on the ventral sclerite can be easily seen in material preserved in alcohol, so this saves time when sorting material from traps because it is not necessary to dry out adult females. The ventral sclerite should be manipulated so as to be seen at a right angle to its surface by placing the tip of the abdomen under a coverslip and gently compressing the segments, or with practice by using fine forceps to extend the tip to reveal the shape of the haired sclerite.

The male genitalia of *Limnia* species are reliable for identifying this sex, they are illustrated in the European key works and a sketch of these structures is given below.



Progress with data abstraction

The extensive British collection of Sciomyzidae at the Natural History Museum contains many valuable records and I have started to abstract the data for the Recording Scheme. This will be a lengthy task, but should be completed by the end of 2010. At the same time as data are abstracted from specimen labels the collection is being re-curated into unit trays to improve future access and handling of these species.

There is much interesting historical material in the collection, with important early specimens collected by Verrall and Yerbury, followed by such noteworthy dipterists as F.C. Adams, Sir Christopher Andrewes, C.N. Colyer, J. Cowley, E.A. Fonseca, C.G. Lamb, L. Parmenter, C.J. Wainwright and J.H. Wood. The collection was checked some years ago by Lloyd Knutson, but there have been numerous accessions since and the identifications of these are being checked.

When completed the coverage of the Recording Scheme will be enhanced considerably and the data from the collection will be made available for others to access and use.

Submitting data to the Recording Scheme

Valuable data continue to be submitted to the Scheme, mostly as Excel spreadsheets, which are straightforward to import into Recorder 6. If you have records of Sciomyzidae or Phaeomyiidae from anywhere in Britain, whether many or few, please get in touch and I will be delighted to discuss the best way of importing your data. Use of my E-mail (ianmclean@waitrose.com) is generally the best way to make contact, or otherwise you can get in touch by post to either of the addresses below.

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