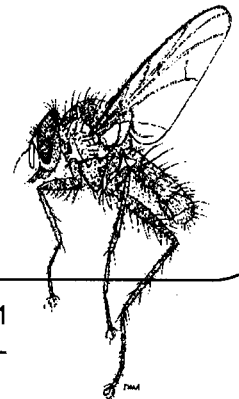


ANTHOMYIIDAE NEWSLETTER



DECEMBER 1995

NO 1

INTRODUCTION

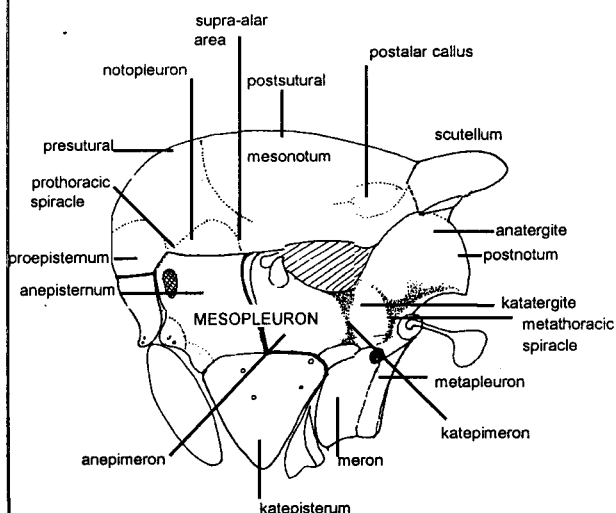
As promised at the Dipterist's Annual meeting, I have assembled a set of drawings of British Anthomyiidae (males), and identification keys to most of the species. Eight people expressed an interest in receiving this first instalment. Their names and addresses are to be found in this newsletter. I did not set out to maximize the number involved initially, because of the time scale in passing on the information. This is intended as a trial run. Eventually there is no reason why the group should not be extended. My reasons for proposing this idea are: a) the discipline of having to revise and alter existing keys for others to use is going to speed up the process of improving them; b) the distribution of many species is very little known, addition records are therefore going to be valuable; c) the Anthomyiidae have an undeserved reputation of being 'difficult'; d) existing keys and information are scattered through the literature; the major recent work on the European fauna by Hennig, which is in German, is very expensive and not widely available. Because of c) above, many people have been dissuaded from collecting and identifying Anthomyiidae. Because of the history of attempting to classify and construct identification keys using mainly chaetotactic characters, (at least prior to 1960) it was very difficult to reach a satisfactory result when using many of the existing keys. This was especially true with generic keys. With the advent

of the extensive publishing of figures of genitalia drawings by Hockett, Hennig, Suwa, Michelsen and Griffiths it was possible to be fairly certain of the identify of many male Anthomyiidae. This was particularly true when examination of the types of earlier names had been undertaken. Identification keys therefore should be considered as only one tool in the process of arriving at a name for a specimen. But this has always been true for many groups of Diptera, and the Anthomyiidae actually have very distinctive species specific male genitalia.

The genitalia drawings which will be initially distributed are all original drawings. The keys are a mixture of original Collin MS keys, which were updated by Fonseca, and have been slightly altered by me (names updated); Fonseca original keys; translations of Hennig's keys, and in a few cases (*Chirosia*, *Eutrichota*, *Hydrophoria* etc) they are my own. So you will have to take them as you find them. I have included an updated check list, so that you can correct any names which I may have omitted to update.

Future manuscripts which I hope to send out will include: 1) a generic diagnosis; 2) notes on the distribution and recognition of some little known and rare species; 3) spot characters for many of the most common species; 4) figures of all the female ovipositors (!); 5) keys to females; 6) new keys for genera not included in the first batch, i.e. *Anthomyia* in its new wider sense.

Michael Ackland



Lateral view of thorax of an Anthomyiid showing the current names for the pleurites etc, based on McAlpine, Nearctic Diptera

SOME NOTES ON VERY RARE ANTHOMYIIDAE

The following species are known only from one specimen, or only a very few collected at one locality. *Botanophila apiciseta* Ringdahl: 1 ♂, VC 95, Aviemore, 30.v.1959, J.E. Collin. *Botanophila flavisquama* Stein: 1 ♂, VC 89, Killekrankie Pass, in 1964, W. Hennig, [on Congress coach tour, Hennig got off bus, swept net around, caught this !]. *Delia flavogrisea* Ringdahl, 1 ♂, VC 41, Kenfig NNR, 13.v.1941, H.W. Andrews. *Delia kullensis* Ringdahl, 1 ♂, VC 26, Tuddenhan, 2.v.1952, S. Wakely. *Delia penicillaris* Rond. ? locality [Scotland] in BMNH, Wainwright. *Eutrichota pilimana* Ringdahl, 1 ♂, VC 96, Loch Ness, 21.v.1983, D. Horsfield. [not yet published]. *Paregle atrisquama* Ringdahl, 1 ♂, VC 48, Cwm Pydew, 44.vii.1987, J. Cole. *Pegomya argyrocephala* Meigen, 1 ♂, VC 11, Whitsbury, 25.iv.1958, C.H. Andrewes. *Pegomya depressiventris* Zett. VC 6, Craigendorrach, bred Solidago, 30.iv.1957, K. Bland. *Phorbia nuditibia* Fonseca, 2 ♂, 2 ♀, VC 6, Leigh Woods, in 1956-7, Assis-Fonseca. I will supply details of these flies at a later date. I have visited most of these sites, but have not found them, though I have collected several of the species in Abisko, Sweden, so I can suggest the likely type of habitat.

IDENTIFICATION OF ANTHOMYIIDAE

The first major specialist of the Anthomyiidae was Stein, who published works on the world fauna between 1895 and 1920. He instigated a system of classifying the setae, especially of the legs. He did not examine any genitalia but had a remarkable eye for recognising different species by small characters. More or less contemporary with Stein was Schnabl, (with Dziedzicki) who examined and figured some male genitalia. The next anthomyiid specialist was Ringdahl (who also worked on the Muscidae and several other families). He examined male genitalia, and figured them. These figures were however rather poor, and are not detailed enough to be able to recognise closely related species. Malloch also published many papers on world Anthomyiidae, though he rarely examined male genitalia. The first dipterists to adequately figure anthomyiid genitalia were Collin (1921) and Hockett (1924). The Finnish dipterist, Tiensuu, should also be mentioned. He only wrote a few papers in the 1930's. but they were of a high standard, with excellent drawings.

As a result of this failure to realise the importance of the male genitalia both in classification and identification, many generic keys were produced with the 'generic' characters being, for example, the possession of an anteroventral seta on the mid tibia, or a produced mouth margin. Also such characters as arista length was considered to be of value in characterizing groups. Even the width of the frons in the male sex formed the basis of some 'tribes' or subfamilies.

Even when it was realised that many obviously monophyletic taxa included species with and without (for example) an av seta on the mid tibia, the keys produced for the identification of the genera and species were still based on these chaetotactic characters. Consequently keys to genera became increasingly fragmented, with groups of species running out in different places. This was especially a problem in the two large genera *Delia* and *Botanophila* which were, as late as 1965, treated as subgenera of a large composite genus (*Hylemya*). Even with a small discrete fauna such as we have in Britain, it is impossible to state an all embracing non-genitalic character for their separation. On the basis however of the very different structure of the hypandrium, gonites and distal section of the aedeagus (for example) their separation cannot have been a very recent event in the evolution of the Anthomyiidae

Because of these difficulties it will probably be necessary to create some combined keys for *Delia* and *Botanophila* species in which the groups of species with easily recognised non-genitalic characters will be keyed out regardless of which genus they belong to. This completely artificial arrangement should make identification easier. It will still be necessary to confirm many species by examining their genitalia. In large collections of unidentified material it is always a great help (and saves time) if the male genitalia are pulled out when pinning, so that it is generally more convenient to pin the specimens sideways on a small pin, and insert another fine pin between the surstyli and the 5th sternite with the former pulled backwards. With practice this can be done quickly, and the specimens can be identified rapidly.

Addresses

P. Chandler 43 Eastfields Road Burnham Slough Berks SL1 7EL

I. Perry 27 Mill Road, Lode Cambridge CB5 9EN

J.H. Cole 2 Lenton Close Brampton Huntingdon Cambs PE18 8TR

P. Skidmore 2 Clos Rhymini Cwmrhydyceirw Swansea SA6 6RB

R.W.J. Uffen 4 Mardley Avenue Welwyn Herts AL6 0UD

M.G. Bloxham 1 St. John's Close Sandwell Valley West Bromwich West Midlands B70 6TH

A. Godfrey 11 William Street Wellgate Rotherham South Yorks S60 2NG

S. Falk 56 Gretna Road Green Lane Coventry CV3 6DP

D.M. Ackland 24 The Moors Kidlington Oxon OX5 2AJ

When you have photocopied any of the keys or drawings you require please tick your name on the address list which will come with the parcel, and post it to the next one on the list. This list is just for reference.

If any of the details here are incorrect please let me know. I will be sending out the manuscripts in January 1996

D.M. Ackland December 1995