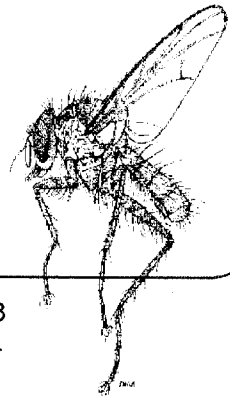


ANTHOMYIIDAE NEWSLETTER



FEBRUARY 1997

NO 3

INTRODUCTION

I have received a number of letters asking when the Anthomyiidae study pack will arrive, and just as I was wondering how I would find out where it is, David Clements wrote to say that he had just sent it off to the next on the list (Jim Jobe). So it still has a little way to go. Please do not hold on to it for longer than it takes to photocopy it. The last name on the list at present is Dr B. R. Laurence (apart from myself for the return of the pack). Whoever is holding the pack on receipt of this newsletter, please add the following name and address after Dr Laurence and before my name: Dr John Deeming, Department of Zoology, National Museum of Wales, Cathays Park, Cardiff CF1 3NP.

There are now approximately 20 members of the Dipterist's Forum who have indicated an interest in the Anthomyiidae. This is very encouraging.

Zaphne proxima Mall. Ivan Perry (and possibly some others) searched in vain for males of this species at Thorne Moors, during the Yorkshire Field Meeting. Anyone living near York, who did not receive Newsletter No 2, including details about this species, and is likely to visit the site, please contact me.

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EARLY SPRING ANTHOMYIIDAE

Two genera of Anthomyiidae are especially associated with early emergence. These are *Egle* and *Phorbia*. Species of the former all breed in catkins of *Salix* species, the adults emerging on the first warm days of spring, and initially they crawl up the trunks of *Salix* and can be pooted from there for a day or two until they have hardened off. They then swarm or hover (sometimes at a great height) between *Salix* trees, floating in the sunshine, becoming very active when warm. Specimens pooted shortly after emergence should be kept alive for some time, otherwise they will shrivel. The very smallest species of *Egle* contain the rarer species (e.g. *subarctica*, *bicaudata*, *steini* and *parvaeformis*; probably locally abundant rather than rare), and it is only by examining a large number of specimens under the microscope, when amongst large samples of the very common species (*minuta*, *parva*) will probably be found a few specimens of the four species previously listed. In this way I have found all the species in some of the smaller Oxfordshire fens. Apart from the large and common *E. ciliata*, (the only anthomyiid species with 4 posterior dorso-central setae) only males can be reliably identified at present. Any pairs in cop should be kept. *Phorbia* species also occur early in the year. They all breed in various species of grasses, the females laying their eggs in the stems, hence the adaptation of the ovipositor (laterally compressed and sclerotised, a condition also found in *Pegomya provecta* and *Botanophila latifrons*, both very uncommon. The males of *Phorbia* generally have a swollen and robust abdomen, with prominent terminalia. Some are extremely local, for example *P. longipilis* (Hunts), *nuditibia* (Som) and *atrogrisea* (originally Warks but has turned up sparingly in other localities).

DMA

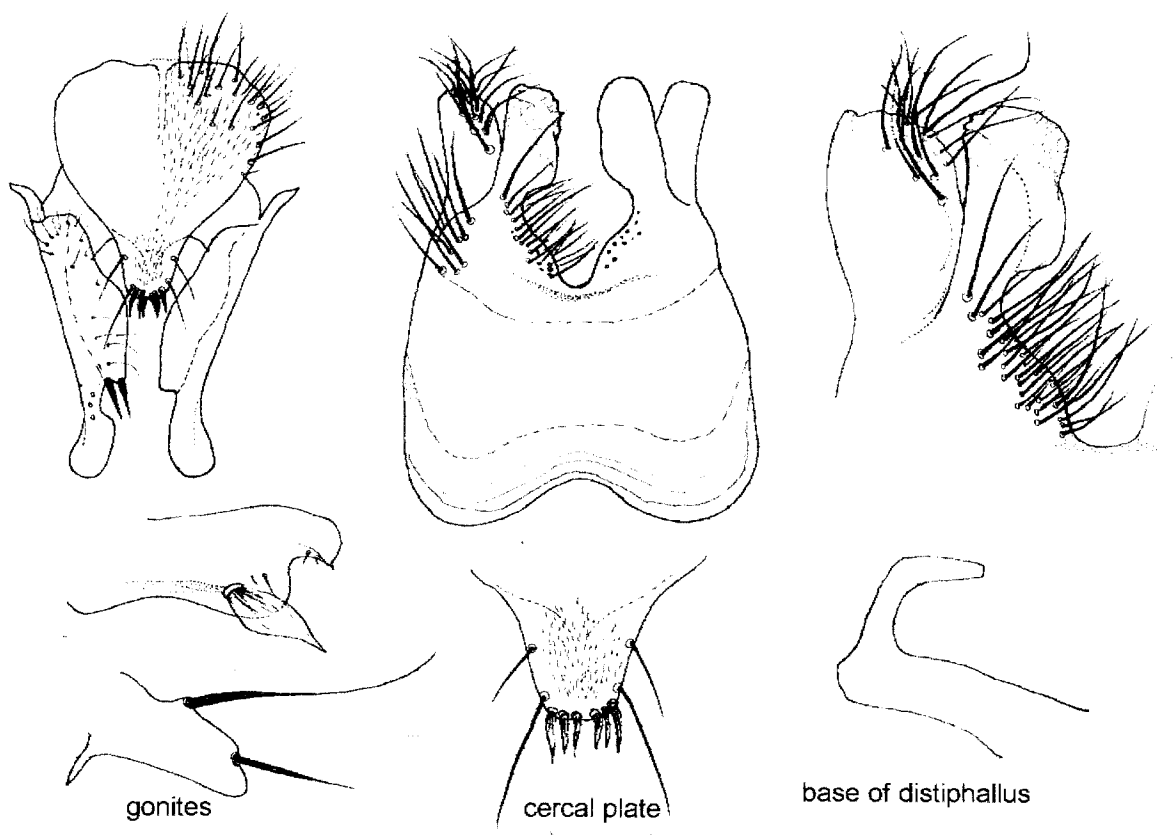
ANTHOMYIA BAZINI SÉGUY

Since Anthomyiidae Newsletter No 2 (November 1996), which included a key to British *Anthomyia* species (black and white patterned species) I have examined a male specimen in the Natural History Museum, identified as *Anthomyia bazini* Séguy, 1929 by Nigel Wyatt. This species was described by Séguy from a single male caught near Paris, and the figures of the genitalia were made from a preparation on a slide, and the structures were somewhat compressed. (Séguy, E. 1929. Etude sur les Diptères à larves commensales ou parasites des Oiseaux de l'Europe Occidentale. Encyclopédie Entomologique, Série B, II, Diptera, 5: 63-82). I have examined the slide preparation made from the NHM specimen, and made figures of the genitalia (see below). They agree very closely with figures given by Verner Michelsen (Michelsen, V. 1980. The *Anthomyia pluvialis* complex in Europe (Diptera, Anthomyiidae). Systematic Entomology 5: 281-290.), which were drawn from the original slide of the type.

The British specimen has the data: WORCS: Alfrick, 5.vii.1941, C. J. Wainwright. It is quite surprising that apparently only 2 males of this species have been found since 1929, but Dr Michelsen, who agreed that this British specimen is *bazini*, informs me (in litt.) that he has caught the species in upland localities in Spain, Greece and Turkey, and it also occurs in Hungary.

In outward appearance it is more or less identical to *A. procellaris*, but the male genitalia differ from *procellaris* as follows: 5th sternite with strongly developed membranous lobes, which project downwards and backwards (it should be possible to see this in dried specimens without dissection), postgonite with an expanded setulae, similar to *pluvialis*, and not like *procellaris*, cercal plate with 4 pairs of modified setulae at apex, basal dorsal process on distal section of aedeagus very near base and directed apically. Because the specimen is mounted on a slide it is not possible to see the profile of the surstyli, or a profile view of the 5th sternite.

I hope that examination of many specimens of apparent *procellaris* will yield further material of *bazini*; it is however probably a rare species. I have not found any further specimens referable to *bazini* in the collections in Oxford or London.



Anthomyia bazini Seguy. WORCS: Alfrick, 5.vii.1941, C. J. Wainwright, 1 male, NHM, det. N. P. Wyatt

Note on the life history of *Anthomyia* species.

Keilin (1924: 153) says: "In spite of their saprophagous mode of life the larvae of *Anthomyia procellaris* live and are found only in the nests of birds. The numerous investigations of the last 40 years on the fauna of other decomposed organic substances have never revealed in them the presence of these larvae. We are dealing here with a case of saprophagous specificity which is analogous to the specificity of parasites." Ivan Perry (in litt.) tells me that he reared *procellaris* from the Musk Thistle, *Carduus mutans* in July 1996, the larvae being in the roots, associated with the borings of the hover-fly larvae of *Cheilosa grossa*. Larvae were collected on July 4 and produced adults on July 22/23. Obviously more work is needed here to establish the range of food of these species. In Africa there are records of *Anthomyia* species breeding in ripe coffee beans, and many other unsubstantiated records of larvae in rotting fruit, vegetable matter etc.

Some references to the life history of British species of Anthomyiidae

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- Beaver, R.A. 1969. Anthomyiid and Muscid flies bred from snails. *Entomologist's mon. Mag.* 105: 25-26.
- Bland, K.P. 1994. *Silene acaulis* (L.) Jacq. (Caryophyllaceae), the larval foodplant of *Delia piliventris* (Pok.) (Diptera: Anthomyiidae). *Br. J. Ent. Nat. Hist.* 7: 77-79.
- Bland, K.P. & Godfray, H.C.J. 1992. New foodplants for two species of leafmining *Pegomya* (Diptera: Anthomyiidae) in Britain. *British Journal of Entomology and natural History* 5(3): 127-128.
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- Collin, J.E. 1936. A note on Anthomyiidae (Diptera) reared from the flowers of *Senecio*. *Scottish Naturalist* 1: 534.
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- Curtis, J. 1843. Observations on the natural history and economy of various insects affecting the turnip-crops, including the surface caterpillars, the turnipgall weevil, and the dipterous flies and rovebeetles infesting Anbury. *J.R. Agric. Soc. England* 4:100-138.
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- Miles, M. 1953. Studies of British Anthomyiid flies, IV. Biology of the spinach stem fly, *Hylemyia echinata* (Séguy). *Bulletin of Entomological Research*, 43(4): 591-596.
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I have written the following notes "off the cuff" to list the common species which occur in nearly all malaise trap material, or may be found in any locality by random sweeping. Of course rare species also occur in malaise traps, but the great majority of specimens in general collections belong to the following list

DMA

Spot characters for some of the most common species of British Anthomyiidae (Males)

Paregle audacula Harris. Mid tibia with a strong av seta, notopleuron with some fine hairs in between the 2 strong setae, mouth margin strongly projecting, arista bare.

PEGOPLATA species have 2+2 more or less paired dorsal (ad and pd) setae on hind tibia. Other Anthomyiidae with this character are some *Pegomya* species with yellow legs.

Pegoplata infirma Meigen Hind tibia with 2+2 dorsal setae, more or less paired (all *Pegoplata* and some *Pegomya*), upper occiput with more than one row of setulae, no av seta on mid tibia, scutum viewed from behind with 3 darker stripes almost touching, upper face without a tubercle.

Pegoplata aestiva Meigen. As *infirma* but with an av seta on mid tibia, and a distinct upper facial swelling and projecting mouth margin; both these species (and other *Pegoplata*) have heart-shaped 5th sternite.

Adia cinerella Fallen. Greyish green dusting, mid tibia with an av setae, mouth margin strongly projecting, 5th sternite with a pair of blunt spines at apex.

Delia radicum L. Hind femur with a dense cluster of ventral hairs at base, notopleuron with a few fine hairs in between setae.

Delia florilega Zett. Hind tibia with a comb-like fringe on pv surface (whole length), mid metatarsus with some long hairs or setulae on dorsal surface

Delia platura Mg. As *florilega* but no mid metatarsus fringe

HYLEMYA and **HYDROPHORIA** species have a long plumose arista.

Hylemya partita Mg. Arista plumose, prst acr setulae widely separated, hind tibia with a pv apical, 5th sternite with short pointed processes.

Hylemya vagans Pz. Arista plumose, lower squama small, not projecting, tibia pale

Hydrophoria lancifer Harris. Arista plumose, lower squama larger than upper, tibia partly pale.

Botanophila fugax Mg. 5th sternite shining on inner margin of processes, mid tibia with a strong ad seta.

LASIOMMA species are very difficult to characterize as a group; the following species are the species generally encountered.

Lasiomma anthomyinum Rond. has long and dense hairs on eyes.

Lasiomma seminitidum Zett. Eyes with indistinct hairs, hind femur with long ventral setae, 4 stpl setae.

Lasiomma strigilatum Zett. Eyes with distinct hairs, hind tibia strongly bristled, outer margins of tergites next to 5th sternite with dense setulae.

CHIROSIA species generally have a pv apical seta on hind tibia: and /or wide frons in male. The key in the study pack works well.

Paradelia intersecta Mg. Hind tibia with 2+3 dorsal setae, 5th sternite with triangular leaf-like appendages.