

***Polemochartus melas* (Giraud) (Hymenoptera: Braconidae, Alysiinae) new to Britain**

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The small Palaearctic genus *Polemochartus* Schulz (Alysiinae, Dacnusiini) is well known to be exclusively parasitic upon chloropid flies of the genus *Lipara* Meigen, which cause galls on *Phragmites*, ovipositing into the host's egg and killing it at the puparium stage (Maetô, 1983). Hitherto, the only one of the four European species (cf. Achterberg & Falcó, 2001) which has been found in Britain is *Polemochartus liparae* (Giraud), a large reddish and black braconid that is widespread in reed-beds in the southern half of mainland Britain and commonly reared from the large cigar-like galls of its regular host, *Lipara lucens* Meigen.

Here we report the presence in England of a second species, *P. melas* (Giraud), which is a known parasitoid of *Lipara rufitarsis* Loew (Chvála *et al.*, 1974; Maetô, 1983). On 18.i.2004, one of us (MTJ) collected a few stems of *Phragmites australis* galled by *Lipara rufitarsis* from the RSPB reserve at Rye House, Hoddesdon, Hertfordshire. The site has extensive reed-beds but the galls were all collected from a dry ditch adjacent to a public path. The galled stems were kept in a well-shaded and ventilated garden shed and on 8.vii.2004 a female *P. melas* emerged. No adult *Lipara* resulted from this collection and, in order to rule out the possibility of a different species of *Lipara* having been the host, a larger sample of galls was collected from the same site the following year, on 17.iii.2005. From these galls a good series of *Lipara rufitarsis* emerged between 21.v and 2.vii.2005, and adults of *P. melas* hatched on 10.vi.2005 (1 ♂), 18.vi.2005 (1 ♂) and 21.vi.2005 (1 ♀). A host puparium clearly associated with the first male was compared with the puparium recovered with the 2004 female and found to be identical and to correspond to those from which undoubted adult *L. rufitarsis* had emerged (cf. Chvála *et al.*, 1974). *Lipara rufitarsis* galls are notoriously variable in size and there has been speculation that additional *Lipara* species close to *L. rufitarsis* might be overlooked, the uncertainty concerning especially specimens emerging from the larger galls (J. W. Ismay, pers. comm.). However, at least two of the four *P. melas* detailed above came from the small (slender) galls typical of unquestionable *L. rufitarsis* and, even if other *Lipara* species (aside from the distinctive and irrelevant *L. lucens*) were present at that site (for which there is no particular evidence), it is beyond doubt that *L. rufitarsis* was the host of at least some of the *P. melas* reared. *Stenomalina liparae* Giraud (Hymenoptera: Pteromalidae) was also reared, but this is a common parasitoid of several

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Lipara species. *Polemochartus melas* is widespread in the Palaearctic region (east to Japan), with records in Europe from Austria, 'Czechoslovakia', France, Germany, Hungary, Italy, Netherlands, Russia and Switzerland, so its occurrence in England is unsurprising. However, interestingly it has not been reared from extensive collections of *L. rufitarsis* made elsewhere in Britain, for example at several sites in Kent (MTJ), Cambridgeshire (MRS), Norfolk (MRS) and Oxfordshire (J. W. Ismay – associated parasitoids seen by MRS). Whether it is confined to the ditch at Rye House or occurs also in the open reed-beds, perhaps more typical of the habitats from which many of the above samples would have been taken, is yet to be tested. One further British specimen, a non-reared female, has recently been identified in the course of sorting specimens in the National Museums of Scotland (NMS) collection: Hants: Greywell, by river Whitewater, 20.vi.2002 (*P. ♀. Chandler*), but none appears to have resulted from fairly extensive Malaise trapping at Chippenham Fen (Cambridgeshire) and the Norfolk Broads.

The genus *Polemochartus* is set in context and admirably characterised by Maetô (1983). The following simplified features would allow even non-reared specimens to be distinguished from other Braconidae:

Mandibles not meeting when closed, the tips turning outwards (= Alysini); forewing vein 2rs-m (*in* Shaw & Huddleston, 1991 = r-m in Achterberg, 1993) absent (i.e. second and third submarginal cells fused) (= Dacnusiini); tarsal claws large and their tips spatulate (= *Polemochartus*). Additional features (not necessarily unique to the genus) are: tridentate mandible dominated by large central tooth; female with apex of metasoma laterally compressed; ovipositor short (sheath less than length of 3rd segment of hind tarsus); 2nd tergite of metasoma completely sculptured (more or less striate or rugulose); head widest behind the eyes; relatively large size (body length *ca* 6 mm in *P. melas*; up to as much as *ca* 10 mm in *P. liparae*).

Achterberg & Falcó (2001) key the European species of *Polemochartus*; Maetô's (1983) key can also be used to separate *P. melas* from *P. liparae*. In fact the two can be reliably separated on body colour and size alone (as well as being larger and more robust, *P. liparae* has an extensively reddish metasoma, while that of *P. melas* is entirely black), but using the following couplet for confirmation would be wise:

- Width of head (dorsal view) 1.3–1.5 times its length, temples subparallel; vein SR of hind wing directed to wing apex; vein m-cu of hind wing absent; length of forewing less than 5 mm; forewing with vein m-cu subinterstitial (only shortly antefurcal); hind tibia (except basally) predominantly brown or blackish
 *melas* (Giraud)
- Width of head 1.5–1.6 times its length, temples strongly bulging; vein SR of hindwing directed well short of wing apex; vein m-cu of hindwing present; length of forewing *ca* 5.0–7.0 mm; forewing with vein m-cu strongly antefurcal; hind tibia at least mostly red (sometimes apically infusate)
 *liparae* (Giraud)

All five of the above specimens of *P. melas* are deposited in NMS.

Acknowledgments

We are grateful to Joan Childs (RSPB) and English Nature (now Natural England) for permission to collect at Rye House, to Laurence Clemons for assistance with the identification of *L. rufitarsis*, to John Ismay for additional information, and to Peter Chandler for his regular donation of specimens to NMS. Sarah Martin kindly typed the manuscript and Gavin Broad provided information from Taxapad.

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