

**KEY TO THE GENUS *MOLOPHILUS* by ALAN STUBBS**  
**Revised by John Kramer 2016**

**Introduction**

*Molophilus* comprises 23 known British species; one of the largest genera amongst the short-palped crane flies. They are a major component amongst the smallest crane flies, typically of a wing length of 5-6mm (range 3-7mm). Most of the species are yellow or orange-brown, and a few are blackish, so they tend to be fairly obvious amongst small species. Despite their small size and setae, the males are often readily distinguished by the externally visible characters of the genitalia; hence making this an easy genus for anybody with a microscope (or often, even a good hand lens).

The wing venation is fairly basic for a member of the Chioneinae and lacks a discal cell. The veins are densely hairy, making the venation difficult to discern unless these hairs have become detached.

The sister genus is *Tasiocera* which differs in having a densely hairy abdomen, a hairy postnotum, (dorsal part of the thorax behind the scutellum) and much simpler genitalia. Also, these species are tiny, much smaller than *Molophilus*, with medium to dark brown bodies.

Female *Molophilus* are readily identified in the very dark species but for the most part the species are difficult or impossible to determine in this sex.

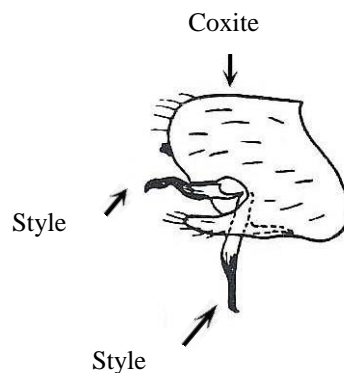
There are far more species known in Europe and it is quite likely that more will be found in Britain.

The majority of species of *Molophilus* occur in moist or wet, wooded situations. Some are calcareous (*corniger*, possibly *variispinus* and *bifidus*) or acidic (*flavus*) indicators. A few are associated with clay soils (*lackschewitzianus*) or sand (*propinquus*). Others prefer stream margins (*curvatus*, *niger*, *pusillus*). *M. bihamatus* is a swamp, alder carr specialist. A few occur in more open habitats on moorland (*ater*), bog (*occultus*), open fen (*obscurus*) and brackish marsh (*pleuralis*), or along hedgerows. They are generally otherwise absent from open habitats and on the whole avoid dry soils even if wooded.

There is a long flight season for the genus as a whole but the main species-rich period is in June and July. *M. ater* and *M. niger* only appear early in the season, usually in May. There are no autumn emergers, indeed in most seasons it is unusual to find any species as late as October.




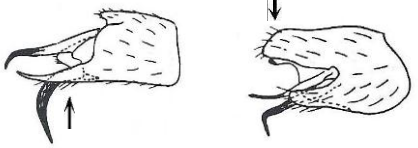
A number of our species would appear to be scarce in Europe, including *czizeki* and *niger*. *M. pusillus* is apparently endemic, being only known from Great Britain and Ireland.

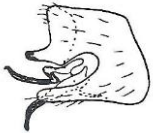

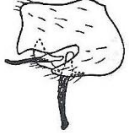
The illustrations are modified from those of Edwards (1938, J. Soc. Br. Ent.) also used by Coe (1950 Roy. Ent. Soc. Handbook) plus a few by myself (Ref. Journal of the British Entomological and Natural History Society). The terminal segments are viewed laterally with the styles illustrated from one side only. They are attached inside the coxite, which forms a hood over them.




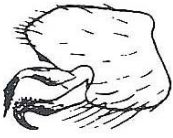
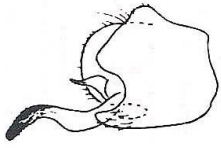
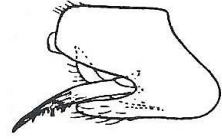
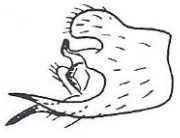
## Genus *Molophilus*



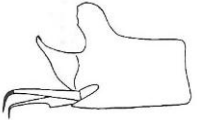

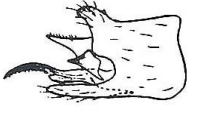
### Key to Groups




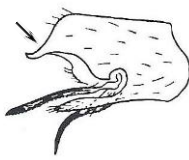
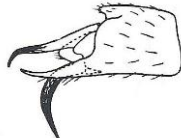
1	Body all black, even scutellum and male genitalia.	Group A
-	At least scutellum partly yellow.	2
2.	Body dark brown with partly or entirely yellow scutellum	(obscurus) Group B
-	Body mainly orange, brown or yellow.	3
3.	Exceptionally small, anaemic pale-brown species (wl 3-5mm) . Females known only.	( <i>pusillus</i> ) Group C
-	Normally larger and stronger coloured.	4
4.	Male terminalia with a pair of dorsal projecting thumb-like lobes.	 Group D.
-	Male genitalia without distinct thumbs, both edges fairly straight or only a slight bulge.	5
5.	Only one pair of well-developed styles. (NB. The aedeagus is a single central structure.)	 Group E.
-	Two pairs of well-developed styles.	 6
6.	Coxite elongate, at least on one side.	 Group F
-	Coxite not elongate, even on one side.	7

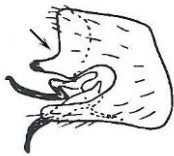

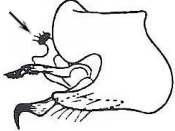

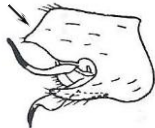
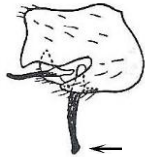
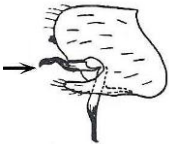
7.	One pair of styles with a double loop bend.	 <p style="text-align: right;">Group G</p>
-	No styles with such a loop.	8
8.	One style strongly hooked.	 <p style="text-align: right;">Group H</p>
-	Neither style hooked. ( <i>flavus</i> has a small hook . See p1).	 <p style="text-align: right;">Group I</p>

**Keys to species**

	<p><b>Group A (both sexes)</b> Body entirely blackish, including scutellum</p>	
1.	Wings abbreviated, flightless, in both sexes. Abdomen black haired.	 <p>ater</p>
-	Wings well developed. Abdomen pale-haired.	2
2.	Legs usually entirely dark.	 <p>niger</p>
-	Legs partly pale, at least bases of femora yellow.	3
3.	Femora pale brown, hardly dark even at tips.	 <p>bihamatus</p>
-	Femora only yellow at base, rest dark.	 <p>czizeki</p>
	<p><b>Group B (both sexes)</b></p>	
1.	Only one British species, with dark brown body and yellow scutellum. The pair of small hooks is very distinctive (also in ochraceus , a yellow species in Group D).	 <p>obscurus</p>

	<b>Group C (Female only known)</b>	
1.	Parthenogenetic (females only). A distinctive jizz because of small size and pale anaemic brown colour. [Published wing vein distinctions are not reliable]	pusillus
	<b>Group D</b>	
	A thumb on the edge of the coxite (as in <i>obscurus</i> , Group B).	
1.	Slender coxite, simple, without long styles.	 pleuralis
-	Well-developed styles present.	2
2.	Yellow species.	3
-	Pale brown or orange-brown species.	4
3.	A strong curved process as an extension of the lateral edge of the coxite. A pair of small median hooks (as in <i>obscurus</i> ).	 ochraceus
-	Curved processes are all styles. Apical margin of coxite with a strong obliquely triangular extension.	 lackschewizianus
4.	A pair of strong heron beaked styles and 2 small inner hooks.	 griseus
-	A pair of serrate sickle-hooked styles, and a pointed inner processes.	 occultus

<b>Group E</b>		
1.	Orange-brown species with rather simple styles, the larger one rather wavy (the smaller one often difficult to see).	 undulatus
-	Yellow-brown species with a curved style, and a distinctive process on the median apical edge of the coxite.	 crassipygus
<b>Group F</b>		
Body of coxite elongate, at least on one side.		
1.	Coxite with a double prominence at end, that gives a notched appearance.	 medius
-	Coxite otherwise	2
2.	Coxite with strong apical hook. One pair of the styles straight, stout and serrate.	 corniger
-	Coxite strongly developed on lower (ventral) side, abbreviated on the other. One pair of the styles very strongly hooked (NB smooth on outer edge of hook, serrate in another European species).	 appendiculatus

	<b>Group G</b>	
	One pair of styles is double looped (yellow species)	
1.	Median apical edge of coxite extended by a blunt process at right-angles to apical edge. [In this respect unlike any other British Species]	 <span style="float: right;">serpentiger</span>
-	Median edge of coxite extended by an oblique pointed process.	 <span style="float: right;">variispinus</span>
	<b>Group H</b>	
	One pair of styles strongly hooked (as in occultus, Group D).	
1.	Coxite blunt ended, with a small knob on the inner side.	 <span style="float: right;">propinquus</span>
-	Coxite with an apical median projection.	2
2.	Apical median projection abrupt, slightly hooked. Hooked pair of styles very stout with a bifurcate tip (seen at some angles of view).	 <span style="float: right;">bifidus</span>
-	Apical median projection more generally extended. Hooked pair of styles weaker, pointed, less stout and pale at base.	 <span style="float: right;">curvatus</span>
	<b>Group I</b>	
	Neither pair of styles hooked	
1.	Coxite with a blunt straight apical margin and the larger pair of styles straight with a small blunt clubbed end.	 <span style="float: right;">cinereifrons</span>
-	Horizontal pair of styles wavy, rather long and stout, black. Vertical style with extreme tip bent at right-angles.	 <span style="float: right;">flavus</span>

## Genus MOLOPHILUS

The separation of females among yellow and yellow brown species remains difficult. More material of pairs *in cop.* would help.

**appendiculatus** A common yellow species of wet woods. The long curved styles are distinctive.

**ater** Damp/wet moorland in the spring, especially with *Juncus squarrosus* and sometimes among other *Juncus* including *J. effusus*. Most easily found by sweeping but easily overlooked among small black insects since both sexes have short wings and may not be recognised as crane flies. May-June according to altitude.

**bifidus** A weakly orange-brown species with very compact genitalia; in ventral view the bifid style usually shows up well. Calcareous seepages on cliffs, wet woods etc., local but widespread/

**bihamatus** A black bodied species with rather yellow legs. Scarce but widespread in swamp alder carr, especially around lakes. Mainly May-June.

**cinereifrons.** One of the frequent yellow species. The compact genitalia are very square ended and one style is long, straight and with a slight apical knob. Wet woodland, ditches under hedges etc.

**corniger** A yellow species with rather elongate genitalia with an apical hook, and one of the styles is long, straight, and rather thick. It is a notable species of calcareous carr and seepage woodland, found in mid summer.

**crassipygus** (ex. *ochrescens*) A scarce orange-brown species, the rather square apex with a distinctive dark bulge and a single long curved style. Shaded sandy river and large stream margins.

**curvatus** An orange-brown species with a rather pointed apex to the genitalia, and with both a sickle-like style and a slender curved style. A local species, mainly by shaded streams and ditches.

**czizeki** A black bodied RDB species. few records in uplands. May-early June. Seemingly at streams/waterfalls in woods.

**flavus** A common yellow species in wet acid woods. Genitalia compact, quadrate, with one style with a small apical hook.

**griseus** A common species, often greyish-brown with a conspicuously yellow scutellum. The genitalia are very distinctive because one style is like a heron's head on a curved neck, this style often held curving back under the end of the abdomen. A species characteristically found by sweeping hedges on alluvial flats or marshes where ditches and other wet places are found: also in a wide variety of wet woodland. Long season.

**lackschewitzianus** A rather large yellow species with a large triangular apex to the genitalia. A very local species. Shaded clay, especially mildly calcareous Gault and Weald Clay woods in the SE and on Boulder Clay in Wales and N. England. An early species, May, or into June outside SE.

**medius** One of the commonest yellow species of wet woods and hedgerows. The genitalia are rather elongate, the larger end piece being curiously twinned and one of the two styles is sharply bent to provide a long hook.

**niger** A black RDB species Found by open streams with lush marginal vegetation on the banks. Very short flight peak in April-May.

**obscurus** A widespread dark-brown or blackish species with a yellow scutellum. It is characteristic of calcareous peat or mineral soils, including fens, seepages in meadows and non-acid marsh. It is nearly always in open rather than shaded situations. A long season.



**occultus** An orange-brown species, the genitalia with one long narrow and one short broad apical triangular structure, and a sickle-shaped style. Characteristic of wet acid places, especially 'bogs', wet moorland, acid seepages and less often acid carr. May-August, but adult stage may be short.

**ochraceus** A common yellow species, the genitalia with a thumb-like lobe.

(note some resemblance to the black bodied *obscurus*). Wet woods, wet hedgerows etc, including clay soils.

**pleuralis** The very elongate and relatively simple genitalia are easy to recognise. The body is a weak orange-brown colour or tending to yellow. A Notable species of brackish marsh, including weakly brackish inland situations on the Norfolk Broads etc. A long season but mainly May-June.

**propinquus** A scarce orange-brown species with very compact genitalia, a sickle-like style and an undulating straight style, and a curious inner apical bristly knob. Very elusive and usually in one's and two's. The ecology of this species has yet to be understood but but some sites are ditches on sandy soils.

**pusillus** A tiny, pale yellow-brown species, only known as females (parthenogenetic) and apparently endemic. Very local by sandy streams and rivers, sometimes found swarming in huge numbers in dull weather and evening. mainly mid summer but a long season.

**serpentiger** A common yellow species, sharing with *variispinus* a curious hairpin-looped style. the coxite having a terminal lobe extended at right-angles (very characteristic and often easier to see than the styles). Carr and other wet woods, often in large numbers during spring and late summer peaks.

**undulatus** A brownish yellow species with rather simple genitalia, with one longer slightly undulate style and one very small slender style which is easily overlooked. Shaded river banks, mainly in N and W.

**variispinus** A yellow species very similar to *serpentiger* except that the terminal coxite lobe is more pointed and oblique. A scarce species of limestone woods in the N and W, mainly in upland districts. (Possibly under-recorded.)