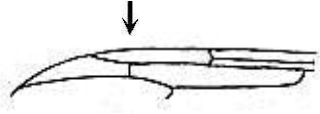
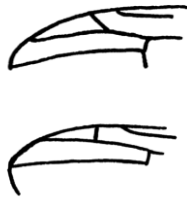


**KEY TO SUBFAMILY LIMONIINAE by ALAN STUBBS 1998**  
**Revised by John Kramer 2016**

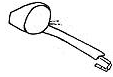



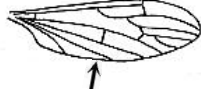
Wing with R2+3 simple (not forked).

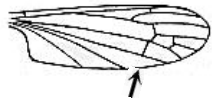


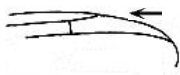
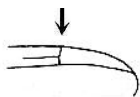
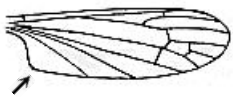
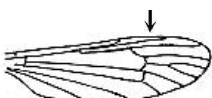

Note: Some Chioneinae can appear to have R2+3 simple when R2 is vertical and thus resembles vein r. The rule is that vein r meets vein R1 before the latter reaches the Costa (marginal vein). If a short vertical vein is situated beyond the apex of R1 and thus meets the Costa, the vein is R2. In some Limoniinae there is no vertical vein.



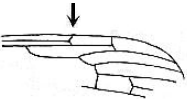

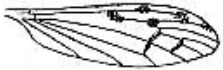
Limoniinae	Chioneinae
	

Additions since Coe (1951) are *Dicranoptycha fuscescens*, (Stubbs and Little, 1974) *Orimarga attenuata* (Mendl 1987) *Dicranomyia frontalis*, *D. halterata* (not to be confused with *D. halterella*), *D. lackschewitzi*, *D. magnicauda*, *D. nigristigma*, and *D. pauli*. In addition, in this key, *D. affinis* Schummel and *D. lutea* Lackschewitz are upgraded to species from varieties of *Dicranomyia mitis* Meigen. Two other forms in the *D. mitis* group have been designated as *D. quadra*, and *D. imbecilla*. (Stary, J, and Stubbs, A.E., 2015).

**KEY TO GENERA AND SUBGENERA**

1.	Head with long rostrum, at least twice as long as the rest of the head.		2
-	Head with short rostrum.		3
2.	Rostrum thick, blunt ended.		Helius (p 6)
-	Rostrum slender, pointed.		Geranomyia (p 6)
3.	Vein m-cu (end of lower basal cell), well before apex of upper basal cell. Discal cell open. Very delicate species.		4

-	Vein m-cu in distal half of wing, close to apex of upper basal cell so basal cells of similar length. Discal cell open or closed.		5
4.	Very small broad winged lemon-yellow species. Legs yellow except femora weakly darkened apically while tibiae are strongly black tipped.	 Thaumastoptera (p 12)	
-	Very narrow winged grey or orange- brown species.	 Orimarga (p 11)	
5.	Vein R1 straight to wing margin. [vein r missing in Eliopectera]		6
-	Vein R1 abruptly upturned at level of vein r.		10
6.	Wing broad and milky, with a very pronounced anal lobe which almost forms a right angle.	 Antocha (p5)	
-	Wing not milky and anal lobe not so pronounced.		7
7.	Vein r missing. Discal cell open. Rs closely parallel with R1. [erroneously recorded in GB but could yet be found]	 [Eliopectera] (p 6)	
-	Vein r present. Discal cell present.		8
8.	An extra cross-vein connecting veins A1 and A2 distally. Wings with ring-markings.	 Discobola (p 5)	
-	No extra cross vein connecting anal veins. Wings with different markings or plain.		9

9.	Wing narrow, discal cell elongate with veins beyond very extended. Wing markings absent.	 Dicranoptycha (p5)
-	Wings broader, discal cell and veins beyond shorter.	 Limonia (p 7)
10.	Sc reaching beyond base of Rs	 11
-	Sc reaches about opposite base of Rs	 Dicranomyia sens.lat. (includes Neolimonia) (p 13)
11.	Wings with markings (additional to stigma).	12
-	Wings without markings (at most stigma coloured).	14
12.	Antennae pectinate (males) or serrate (females). Wings with spots. [If antennae missing, use Dicranomyia key on p14]	Rhipidia (p 12)
-	Antennae not pectinate or serrate.	13
13.	Wings with 5 distinct spots. Frons silvery. Modest sized species (wing length 7-11 mm).	 Achyrolimonia decemmaculata (p 5)
-	Wing markings different. Frons not silvery. Often large (wing length 9-21mm).	Metalimnobia (p 10)
14.	Pleura with a strong dark stripe. Wing with a round pale-brown spot over vein r.	Atypophthalmus inustus (p 5)
-	Pleura without stripes.	15

15.	Wing membrane hairy in distal half. Discal cell closed.	Dicranomyia Sg Numantia fusca (p 20)
-	Wing membrane bare. Discal cell open.	Dicranomyia Sg Sivalimonia aquosa (p 17)

## NOTES AND KEYS TO SPECIES

### Genus **ACHYROLIMONIA**

Very distinctive since each wing anteriorly has 5 conspicuous dark spots (10 in total, hence 10 spotted). The frons is silvery. The thorax is usually dark orange-brown, occasionally orange, on top with a pair of thin widely separated sublateral dark stripes. Woodland, breeds in dead wood. Widespread but generally scarce except some favoured districts. *decemmaculata*

### Genus **ANTOCHA**

A single species with variable thorax coloration and very distinctively shaped wings. Aquatic larva in silken tubes in rivers. Widespread. *vitripennis*

### Genus **ATYPOPHTHALMUS**

Very distinctive orange pleurae with a dark horizontal stripe plus clear wings apart from a round pale-brown spot over vein r. Woodland, breeds in fungi. Formerly thought rare but proving widespread in low numbers. *inustus*

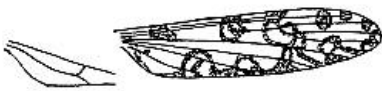
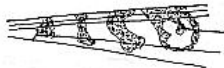
**Genus DICRANOMYIA** (Large genus so placed at end)

### Genus **DICRANOPTYCHA**

A dark greyish-brown species with long clear wings. Only terrestrial limoniine anything like this. Very dry woodland, and scrub in old chalk quarry. Addition by Stubbs & Little 1974. Kent and Essex. *fuscescens*

### Genus **DISCOBOLA**

Long wings with ringed markings (rather like *Epiphragma*): characteristic cross-vein between  $A_1$  and  $A_2$ . Woodland. Scotland. Since *caesarea* is known from both Sweden and the Alps, this is included in the key.

1.	Wing in front with a spot at base and over base of $R_s$ , but no markings in between. Halteres with most of stem blackish.		<i>annulata</i>
-	Wing with two additional markings, between those described above. Halteres entirely yellow-stemmed.		[ <i>caesarea</i> ]

**[Genus ELLIPTERA]**

A dark species with distinctive wing venation, no wing markings. Larvae feed in moss in streams and rocky ditches. British record based on pupal exuviae with large flat pupal horns from dead wood in a stream more likely to refer to *Lipsothrix*. No GB voucher material. [omissa]

**Genus GERANOMYIA (Sea Snouts)**

The long slender pointed snout is very distinctive, rather like a mosquito but pointing down, and easily overlooked. These are estuarine and marine intertidal species.

The genus *Elephantomyia* has a very much longer slender pointed snout. It occurs inland in such situations as beside woodland streams. It is widespread in Europe and could yet be found in Britain, especially in Scotland.

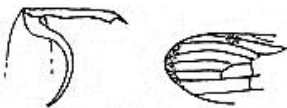

1.	Drab brownish body, top of thorax without strong pattern. Femora fairly uniformly coloured. Wings with 3 small dark spots in front.	unicolor
-	Yellowish body with distinct stripes on top of thorax and brown half-moon markings on sides. Femora with distinct brown apex. Wings almost without markings.	bezzii



*unicolor*: Rocky sea shores, swept from shaded nooks at cliff base. Locally common. Larvae probably feed on intertidal green algae such as *Enteromorpha*, & splash zone lichens. (Saunders, 1930)

*bezzii*: Lagoons on east and south coast. Larvae probably feed on intertidal green algae such as *Enteromorpha* growing on intertidal shingle. Very local.

**Genus HELIUS (Pond Snouts)**

The thick blunt snout is very different from that of *Geranomyia*.

1.	Wing tip darkened. Thorax partly orange. Snout about 3X as long as head. Male styles long, simple.		hispanicus
-	Wing clear, with dark stigma in some species. Thorax yellowish or dark brown. Snout 2X as long as head. Male styles short, often with spines.		2
2.	Stigma practically absent. Abdomen yellowish. Thorax yellowish, on top often with a poorly developed median stripe. Male has larger styles abruptly bent at a right-angle and with strong spines on the outer curve.		flavus

-	Stigma grey or dark brown. Abdomen brown. Thorax brown, on top with three dark stripes.		3
3.	Stigma round, dark brown. Flagellar segments 2-4 about twice as long as broad. Male styles short and fairly simple.		pallirostris
-	Stigma elongate, grey. Flagellar segments 2-4 about as long as broad. Larger male gonostyle rather as flavus but less bent and with only fine spines on outer curve.		longirostris

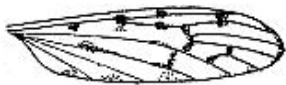

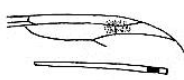
**flavus** Swamp, including carr, and water margins with emergent vegetation. Local.

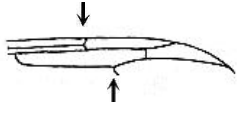
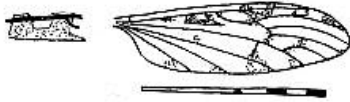
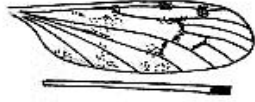
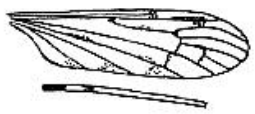
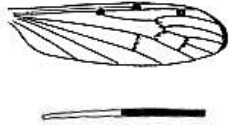
**hispanicus** By small streams on cliffs. Devon. First British record in 1989. Very rare. (Stubbs 1992).

**longirostris** Swamp, including carr, and water margins with emergent vegetation. Common.




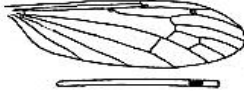

**pallirostris** Pond and lake margins with emergent vegetation. Local.

#### Genus LIMONIA

1.	Top of thorax glossy black (except for some dusting far from mid line).		2
-	Top of thorax partly orange or brown.		3
2.	Wing with some mottling on hind margin and in basal third. Abdomen partly clear orange.		maculipennis
-	Wing clear on hind margin and in basal third. Abdomen black, at most hints of dull orange.		nigropunctata 8
3.	Apex of Sc near base of Rs (before half way to level of distal fork of Rs). Wing clear except for grey stigma. Femora with a subapical dark ring (as phragmitidis).		macrostigma

-	Apex of Sc nearer level of distal fork of Rs. Wing usually with some markings apart from the stigma.		4
4.	Body drab (abdomen can be banded). Wing well patterned, or at least with some mottling along hind margin in addition to anterior spots.		5
-	Body partly orange or yellow. Wing without mottling along hind edge and no markings in basal third.		7
5.	Femora with 3 dark rings (unique in crane-fly fauna of British Isles.). Wing with a distinctive angular loop marking as indicated.		nubeculosa
-	Femora with only 1 or 2 dark rings. Wing markings different.		6
6.	Wing broad, well patterned, including large round spots. Postnotum (behind scutellum) with unique finger-print ridges. Femora with only an apical dark ring.		flavipes
-	Wing narrower and more parallel sided, markings faint. Postnotum smooth. Front femora normally with a faint second ring in addition to the apical one.		dilutior
7.	Brightly coloured species with glossy thorax. Wings with 3 strong black spots by front margin and wing tip narrowly black. Abdomen extensively black.		8
-	Yellow or yellow-brown species, thorax not extra-glossy. Wings with 2 or 3 small dark spots by front margin but no other markings.		9
8.	Front femora black in apical half. Thorax orange with a black dorsal stripe.		nigropunctata



-	Front femora black at apex only. Thorax entirely black		nigropunctata s.sp masoni
-	Thorax intermediate in colour pattern. Front femora of either type.		nigropunctata
9.	Top of thorax with 3 dorsal dark stripes (median and 2 sub median). Head dark grey (as phragmitidis). Femora usually with a weak apical ring. A rather drab yellow species. [Some macrostigma look very similar but that has the femora with a subapical dark ring and the abdomen is normally ringed].		trivittata
-	Top of thorax with a partial narrow median dark stripe (can be absent).		10
10.	Head grey. Femora with a subapical dark ring (or ring long, extending to apex). Front of wing with 3 spots		phragmitidis
-	Head yellowish. Femora with a dark apical ring. Front of wing normally with at the most 2 dark spots, often tiny and inconspicuous.		stigma

This genus is one of the most typical of terrestrial woodland and especially of damp woods.




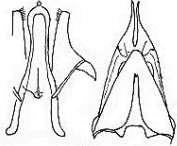
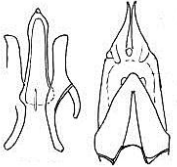
**In dryish woodland** *L.nubeculosa* occurs throughout the season, being most abundant in spring and autumn, especially by sweeping about dark nooks at the base of tree trunks and along the shaded side of walls. *L. flavipes* is common in spring and early summer in calcareous woods. In mid summer *stigma* occurs as a rarity. Both *L. nigropunctata* and *L. nigropunctata ssp masoni* occur locally in calcareous woods but the latter is confined largely to the East Midlands and the Peak District.

**In hedgerows** *L. maculipennis* is confined to eastern England where *L.nigropunctata* may also occur.

**Wet woods** may have *L. nubeculosa* but *L. macrostigma* is a typical species of carr and swamp where it is often abundant. *L. trivittata* lives in moist calcareous woods. *L. phragmitidis* is most plentiful in moist woods but can sometimes be plentiful in fairly dry situations.

## Genus METALIMNOBIA

These are larger than *Dicranomyia*, indeed *M. quadrimaculata* could easily be mistaken for a large species of *Tipula*. The claws are strong with a strongly toothed comb of spines.

1.	Body bright shining orange, top of thorax with a pair of dark stripes. Wing short, broad, strongly yellowish with a narrow dark bar across wing below the stigma.	 bifasciata
-	Body brown, thorax with 4 well developed dark stripes. Wing with pattern of widespread spots.	2
2.	Front femora with apical and subapical dark rings. Wing rather elongate. Some specimens very large (wing length up to 21 mm).	 quadrimaculata
-	Front femora with an apical dark ring only. Wing rather shorter relative to width, typically with a row of spots near the base (also typical of <i>zetterstedti</i> ). Wing length up to 15 mm.	 3
3.	Male: parameres with hair fringe along inside apex: aedeagus more bulbous near apex. Female genitalia: view of the inside ventral part of cerci and last tergite, showing membranous flap and a median rod.	 [zetterstedti]
-	Male: parameres and aedeagus more simple. Female genitalia with shorter flap, and basal area to rod somewhat different. [female separation difficult]	 quadrinotata

### **bifasciata**

Widespread in woodland though usually in low numbers. Larva in fungi. Peak August-Sept.

### **quadrimaculata**

Rare. Ancient forest. Larvae in large bracket fungi: Mainly *Inonotus bispidus* on beech, also *Polyporus schweinitzii*.

### **quadrinotata**

Common in woodland though usually in low numbers. Larvae in toadstools. June & August-September.

### [zetterstedti]

Not GB but could occur, especially in Scotland. Can only be separated on genitalia, most easily in the male.

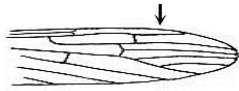
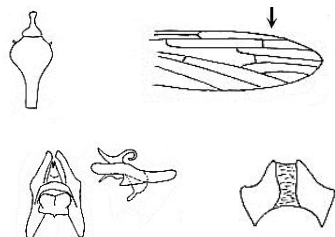
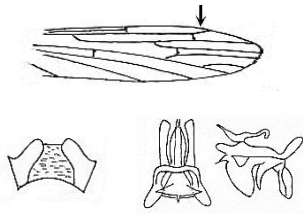
## Genus NEOLIMONIA

Very distinctive orange pleurae with a dark horizontal stripe plus wings with two main dark spots on each wing. Woodland, larvae feeding in dead wood. Widespread and locally common.

**dumetorum**

## Genus ORIMARGA

These are delicate elongate insects with very narrow milky wings. They are rare, specialising in certain types of seepages.

1.	Scutellum and parts of pleurae with a rusty tinge. Apical part of R1 very long (measured from r).	 virgo
-	Thorax black, covered in pale grey dust. Apical part of R1 usually shorter.	2
2.	Apical part of R1 at least twice as long as r. Male: from above apical part of aedeagus conical (side view distinctive). Last sternite with parallel-sided median membranous gap, sclerotised parts either side pointed. Female apodeme as shown. To find this structure, open gap between cerci and sternal valves.	 attenuata
-	Apical part of R1 less than twice as long as r. From above apical part of aedeagus bulbous before tapering (and very distinctive in side view). Last sternite with converging sides to median membranous gap, sclerotised parts either side broadly rounded. Female vulva as shown.	 juvenilis


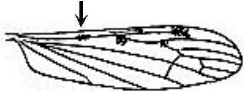

**attenuata** Currently only from Ireland where it was recently discovered. Possibly overlooked in GB within *juvenilis*.

**juvenilis** A rare species at base rich bare ground seepages on southern heaths and in upland districts. [as *antennuata* in Coe]

**virgo** Rare. Seepage rock faces on limestone cliffs and in quarries.

## Genus RHIPIDIA

The strongly pectinate male antennae are reminiscent of *Ctenophora*, but these are much smaller drab flies. The females have slightly serrate antennae. If the antennae are missing, the wing venation, similar to *Dicranomyia*, may cause confusion. *D. goritiensis* has much narrower wings with a row of spots on vein Cu. The other two species of *Rhipidia* could cause difficulties so are repeated in the *Dicranomyia* key. The commonest species is *maculata*, with peppered wings

1.	Wing membrane peppered with small spots in cells.		maculata
-	Wings with some small spots on veins, plus brown stigma, but no peppering within cells.		2
2.	Femur of fore-leg with black tips. Near front margin of wing, there is a spot basal to the spot over the base of Rs.		ctenophora
-	Femur of fore-leg black in apical half. Wing without a spot basal to the spot over the base of Rs.		uniseriata

**ctenophora** A very rare species. Larvae feed in rotting wood.

**maculata** A common widespread species in open habitats hedgerows, and woods. Larvae in cow dung, rotting vegetation etc.

**uniseriata** A rare species. Larvae feed in rotting wood.

## Genus THAUMASTOPTERA

A small delicate pale yellow species with black tips to the femora and tibiae. It most resembles *Cheilotrichia imbuta* but this species is in the sub-family Chioneinae, the wing venation is entirely different.

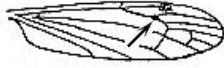

**calceata** Confined to moist and seepage carr, the larvae making flat caddis-like cases out of pieces of dead leaves. Widespread but very localised.

## Genus DICRANOMYIA and similar genera

In Coe (1951) *Dicranomyia* is a large subgenus within *Limonia*. Since then some species have been split off into separate genera and *Dicranomyia* has been given generic rank with some subgenera of its own. The remaining species in the subgenus *Dicranomyia* will probably be further split in the future.

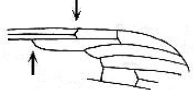
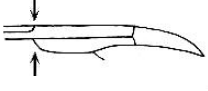


In some species, males and females are equally identifiable on shared characters. For the rest, the sexes are keyed separately.


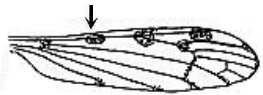


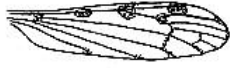
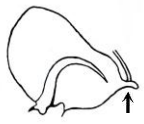
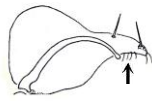
**Key to DICRANOMYIA and other medium sized species with R1 upturned at r.**

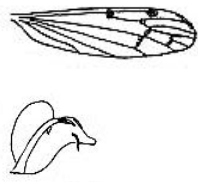



1.	Wings with markings other than stigma. Normally includes at least one end of Rs.		GROUP 1 (p13)
-	Wings clear, though a coloured stigma may be present.		2
2.	Wings with discal cell absent. (an open discal cell.)		GROUP 2 (p16)
-	Wings with a closed (complete) discal cell.		3
3.	Top of thorax glossy black.		GROUP 6 (p24) sg Melanolimonia
-	Top of thorax yellow, brown or dull black, not glossy black		GROUP 3 (p17)

**GROUP 1 (with wing markings, other than stigma)**

Normally includes at least a spot at one end of Rs, or more obvious markings.

1.	Vein Sc ends well beyond the base of Rs, often reaching at least half way to tip of R1.		2
-	Vein Sc ends at or only slightly beyond the base of Rs.		3
2.	Wing with 5 spots and posterior lobe weakly developed, without any spots basal to the base of Rs. Top of thorax semi-shining. Abdomen with black hairs. Frons silvery. Antennal segments simple.		 Achyrolimonia decemmaculata (p5)

-	Posterior lobe of wing pronounced, spots of ctenophora as above, other species with spots basal to base of Rs. Top of thorax matt dusted. Abdomen with white hairs. frons not silver. Antennae strongly pectinate in male, weakly so in female.		Rhipidia (p12)
3.	Wing elongate, with a spot between the base of Rs and the base of the wing.		4
-	Wing without an obvious spot half way between the wing base and the base of Rs.		6
4.	Costa, Sc and R1 yellow between markings. Vein Cu1 with a row of many dark dots.		goritiensis
-	Costal vein entirely dark, Vein Cu1 without a row of many dark dots.		5
5.	Tibia yellow with joints darkened distally. Style as shown, with spines adjacent on beak. (rostrum).		didyma
-	Tibia brown. Style as shown, with spines on beak well separated.		consimilis

6.	Thorax shining orange often with 3 dorsal stripes. Pleura with dark horizontal stripe at the top, and a pale dust stripe just below. Legs yellow with darker tips to femora. Abdomen banded black and yellow.		Neolimonia dumetorum (p 10)
-	Sides of thorax, if orange, without a continuous dark stripe.		7
7.	Wing tip broadly darkened, and large spots on the front margin. Very smart species with a shining thorax.		8
-	Wing tip clear or certainly not entirely darkened, wing spots often small, including a spot at the apex of Rs. Not especially smart, thorax dull or only partly shining on top.		GROUP 4 (p20)
8.	Thorax shining blackish. Legs yellow. Vein m-cu well basal to discal cell.		ornata
-	Thorax shining orange, with a black median band on top and a few other black spots. Femora black tipped. Vein m-cu at base of discal cell.		lucida

For *Achyrolimonia*, *Neolimonia* and *Rhipidia* see genera above.

**consimilis** Streams in woodland, Scottish Highlands. Rare. (Voucher specimen needed.)







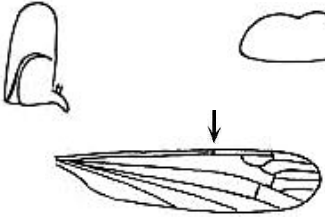

**didyma** Streams and rivers, especially at mossy sluices or where there are mossy rocks along the waters edge.

**goritiensis** Wet grass-tuft-overhangs on coastal cliffs. Local.

**lucida** Seepages and other wet ground in woodland, especially where Hemlock Water-dropwort grows. Mid summer. Local.

**ornata** In butterbur beds in early June. Larvae in rotting petioles of butterbur in the autumn. Local.

**GROUP 2 (Wing with open discal cell.)**

1.	Sc ends at base of Rs. Female sternal valves at base with a black triangle.		2
-	Sc ends well before or well beyond base of Rs. Female sternal valves without colour contrast.		3
2.	Thorax mainly with orange tinge, on top with three distinct rather shining dark stripes. Flagellum with elongate segments.		 omissinervis
-	Thorax dark, drab and without obvious dark stripes on top. Flagellum with short segments, little longer than wide. Male last tergite more deeply notched and beak with short spines.		 frontalis
3.	Sc ends well beyond base of Rs. Top of thorax blackish, rather shining. Wing brown tinted with dark veins; stigma dark. Wing length 5-7 mm.		sg <i>Sivalimonia aquosa</i> (p 17)
-	Rs short so Sc ends well before Rs. Thorax dark, greyish dusted. No dark stigma. Particularly weak small species, veins somewhat pale, wing length 4-5mm.		  <i>aperta</i> (p 17)

**aperta** Boggy seepages in August and September, Northern. Rare. Associated with Grass of Parnassus.

**aquosa** Wet rock faces by streams in woodland and on sea cliffs. Northern and western. Scarce.



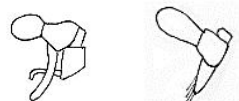

**frontalis** Ecology uncertain, seemingly moist meadows. SW Midlands and Cambs. Rare.


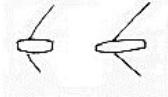

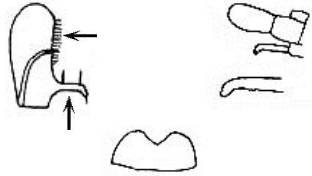



**omissinervis** Sandy river banks, Northern and western. Scarce.


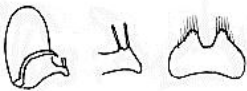



**GROUP 3**

Wings without markings (but stigma may be coloured), discal cell closed.

1.	Top of thorax glossy black.		GROUP 6 Sg Melanolimonia (p 24)
-	Top of thorax, if black, not mainly glossy (at most a central stripe).		2
2.	Thorax orange, sides with a horizontal dark stripe. Wing with a pale brown spot over r (but stigma colourless). Styles as shown.		Atypophthalmus inustus (p 5)
-	Not as above.		3
3.	Wing surface covered in hairs in outer half. A dark bodied species.		sg Numantia fusca (p 20)
-	Wing with any hairs confined to veins.		4
4.	MALES		5
-	FEMALES		Keys p25
5.	Males, mostly of Group 3.		
	Each gonocoxite with a long conspicuous downward pointing process.		6
-	Gonocoxites without such a process. (May have an inward-facing short thumb).		7
6.	Greyish-black species, the top of the thorax with 3 shining stripes. Gonocoxite with ventral process long, curved and slender. Style orange.		sg Glochina sericata (p 20)





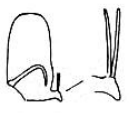
-	- Usually drab orange-brown, occasionally dark brown. Top of thorax with only vague stripes. Each gonocoxite with straight, dagger-like ventral process, appearing pointed because of hairs. Beak long, bent, with spines half way along.spines.		autumnalis
7.	Genitalia very complicated, including long horizontal processes beneath. Stigma black in two species.		Sg Idiopyga GROUP 5 (p 22)
-	Genitalia simpler, lacking long processes beneath either side of aedeagus. Stigma brown to colourless, [if doubtful, key here]		8
8.	Flagellar segments elongate in distal half. [if antennae are missing, eliminate the species on characters given.]		9
-	Flagellum with all segments compact, scarcely longer than wide (only apical segment may be longer).		11
9.	Main style longish, inflated, on inner side with dense black hairs; beak long with two widely separated spines. Aedeagus in side view of uniform width, short blunt downcurved apex.		modesta
-	Main style shorter, without dense black hairs on inner side. Aedeagus different.		10
10.	Palps with only 2 segments. Main style very short, the beak with two widely spaced spines. Aedeagus tapering downcurved.		ventralis
-	Palps with 4 segments as usual. Main style larger, the beak with two crossed spines at apex. Aedeagus with apex more hooked.		sg Glochina pauli (p19)
11.	Genitalia with narrow coxites and narrow styles forming a hollow rhomboid shape. Last tergite with strong V-shaped notch. Often a yellow species but can be dark.		sera

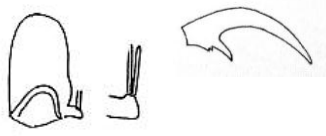

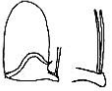
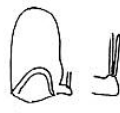

-	Genitalia more compact		12
12.	Genitalia with less swollen main style. Body dark- brown or dusted pleurae partly yellowish. Wings narrowish, uniformly brown tinged with a medium-brown stigma. Aedeagus abruptly pointed at apex (side view).		halterata
-	Genitalia with swollen main style. Wings mainly colourless.		13
13.	Body uniformly blackish, covered in dark grey dusting. Wings very pale. Last tergite deeply notched. Main style with a long beak, half way along with two well-spaced spines.		distendens
-	Body yellow, or orange brown. Last tergite not conspicuously notched. Main style somewhat similar but the spines are closer together.		GROUP 4 (p 20)

- autumnalis** Marshes, fens and other wet ground. Common.
- distendens** Boggy areas in uplands and more rarely lowland. Frequent in some districts, otherwise rare. Late June-early August.
- halterata** Saltmarsh. Scotland, rare. (Voucher specimen needed.)
- modesta** Marshes, fens and other wet ground. Common.
- sera** Saltmarsh, high zone, with *Juncus gerardi* rush. Local, widespread.
- ventralis** Pond and ditch margins. Very local, scarce.
- D. (Glochina)**
- pauli** Dry lowland limestone woodland. NW England. Very rare. (Voucher specimen needed.)
- sericata** Scrub grassland on limestone and calcareous clay. Local. May-early June.
- D. (Numantia)**
- fusca** Common. Streams and woodland seepages.

**GROUP 4 Both sexes (mitis/chorea group: small spot at apex of Rs, or absent)**

Wings with few if any markings, those with markings in addition to the stigma have the minimum of a spot over the apex of vein Rs. Main style inflated, often elongate, the beak short with a closely spaced pair of spines near apex (some species in other groups are rather similar).

1.	Femora narrowly black at apex. Abdomen often strongly banded. Male main style compact, beak short with spines short (about as long as from their base to the beak apex).		chorea
-	Femora with apical marking different or absent.		2
2.	Femora with a subapical dark ring, sometimes darkened to apex resulting in a long dark apex. Wings normally with some dark markings, at least over the apex of Rs. Sc distally with hairs near apex. (as <i>chorea</i> )		3
-	Femora often only vaguely darkened at apex. Wings often without even a dark mark over the apex of Rs. Sc without hairs.		4
3.	Pleura blue-grey dusted, propleuron dark. Top of thorax dusted but often with a shining black median line. Beak of male gonostyle with both spines equidistant from apex.		affinis
-	Pleura yellow-grey dusted, propleuron yellow. Top of thorax dull dusted. Male style beak with spines oblique or in line from apex.		mitis
4.	MALES		5
-	FEMALES		7

5.	Smaller species without stigma. Tarsal segments 4 & 5 very short, 5 flattened (as chorea). Claw shown.	 <p style="text-align: right;">imbecilla</p>
-	Tarsal segments 4 & 5 normal, elongate cylindrical. Claw with several teeth.	 <p style="text-align: right;">6</p>
6.	Yellow species. Stigma pale or absent. Main style very elongate when dry (sometimes less so fresh), spines very long and adpressed together. Wing less elongate (see female)	 <p style="text-align: right;">lutea</p>
-	Stigma dark. Main style fairly elongate, Rostral spines shorter and obviously separated. Wing longer and narrower (see female).	 <p style="text-align: right;">quadra</p>
7.	Females: Stigma and spot over apex of Rs usually dark and obvious. [Stream margins but may disperse away.] [Separation of this and the next 2 species can be very difficult in females].	 <p style="text-align: right;">quadra</p>
-	Stigma and spot over apex of Rs usually faint or absent.	8
8.	Wing slightly longer. Bright yellow when alive. [Calcareous, terrestrial but can occur with <i>D. quadra</i> by streams].	lutea
-	Wing slightly shorter, weaker slightly smaller species. Weaker yellow when alive though colour stronger when dry. [calcareous seepages]	imbecilla

Note a substantial revision of *mitis*, splitting it into five species. (Stary, J. & Stubbs, A.E., 2015)


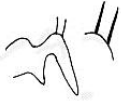

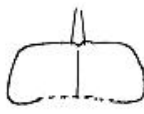
<b>affinis</b>	Scarce. Mainly heathland and moorland.
<b>chorea</b>	Common, even in gardens. May be swept from tree foliage or evening swarms. Subject to varieties from all yellow to very dark, and abdomen not always banded. Some forms occur in unusual situations. Most abundant in early spring and autumn.
<b>lutea</b>	Common in some districts. Swept from tree and bush foliage on dry calcareous soils, including Chalk. Can occur with Species A where streams present. A yellow species, but sometimes darker.
<b>mitis</b>	Common in some districts. Moist woodland soils, calcareous to neutral. Spring, rarely later to autumn. [note new strict definition]
<b>quadra</b>	Common in west and north. By woodland streams, including ravines. Mainly spring and summer. Top of thorax likely to be partly darker than in <i>lutea</i> but both species variable. [within <i>mitis</i> var <i>lutea</i> of Coe]
<b>imbecilla</b>	Rare. Northern and western. Calcareous seepages on rock faces or other rather bare surfaces. Shaded in woodland, or within ravine or tall herbage by waterfall splash zone. Summer.

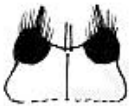
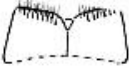
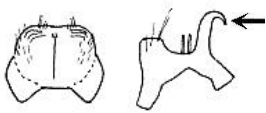
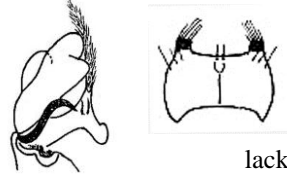
**GROUP 5 Males (sg. Idiopyga).** Females mainly Group 8, also 7 & 10.

The males of this group have exceptionally complicated genitalia. Some have a highly distinctive deep blackish stigma.

Females are within Group 3 females at end (p25). Two species with a dark stigma. Some have exceptionally short cerci (rare outside group).

All these species have specialised habitat needs and generally are not likely to be met unless specifically searched for. Most are very scarce species.






1.	Stigma black. Tergite 9 with posterior corners extended as thumb-like process (rather as in <i>lackschewitzi</i> , a more yellow species without a stigma).		2
-	Stigma pale or colourless. Tergite 9 not extended in above fashion.		3
2.	Thorax entirely black. Main style with a long bent beak, with two well spaced spines.		<i>stigmatica</i>
-	Thorax partly dull orange, especially over most of the pleurae. Can be strongly grey dusted. Beak with a small pale tufted rod between the two spines. (This usually lies at right angles to the spines so great care needed in focusing.)		<i>nigristigma</i>
3.	Delicate pale brown species with narrow wings. Tergite 9 smooth oval, with a median pair of slender tufts of long hairs.		<i>halterella</i>
-	Tergite 9 different.		5

4.	Tergite 9 with swollen black posterior corners with a tuft of black hairs (can look like a spine).		<i>danica</i>
-	Tergite 9 more plain.		6
5.	Tergite 9 rather rectangular with a simple fringe of hairs. A compact darkish species. Wings rather short, scarcely extending beyond end of hind femora. Femora thick distally.		<i>melleicauda</i>
-	Tergite 9 different. Not unduly compact species. Femora slender as normal.		7
6.	Tergite 9 largely swollen into a dome, rounded apically, adpressed hairs near posterior corners. Genitalia huge. Beak complex, including large hook.		<i>magnicauda</i>
-	Tergite 9 with hind corners extended, rectangular, darkened (but can be difficult to see). Genitalia greatly complex (included beak with haired finger like crest). A delicate yellowish species.		<i>lackschewitzi</i>



- danica** Mildly brackish marsh on coastal levels and the Broads, sometimes in districts further inland. Rare.
- halterella** By wooded streams with boggy edges. Scottish Highland. Rare. August-September.
- lackschewitzi** Coastal landslips, seepages over mud with sparse mosses. Isle of Wight. Rare. European very rare.
- magnicauda** Floating rafts of grass, and other plants in basin mires (Care! Very dangerous to walk on). NW Wales and South Scotland. Rare. Late July-early August
- melleicauda sub-species complicata** Freshwater seepages onto saltmarsh. Rare.
- nigristigma** Calcareous seepages and wet areas in woods, northern. rare. Early August.
- stigmatica** Wet woods, non-calcareous. Northern. Scarce.

**GROUP 6 Both sexes (sg. Melanolimonia)**

The top of the thorax is almost entirely glossy black, in contrast to the dusted sides. The wings are clear, with a generally colourless stigma. All species are rather small for the genus. This is one of the easiest subgenera to recognise.

1.	1. Abdomen light reddish-yellow. Male tergite 9 with only a shallow indentation on hind margin.		rufiventris
-	Abdomen entirely black at least dorsally.		2
2.	Males.		3
-	Females		unidentifiable
3.	Tergite 9 with apical processes wide apart (depth of notch wider than long). Sternites usually yellow posteriorly (sometimes entirely black).		4
-	Apical processes much closer together (depth of notch as deep or deeper than wide). Abdomen entirely black.		5
4.	Tergite 9 with broad cusped indentation on hind margin, with corners somewhat incurved.		morio
-	Tergite 9 with finger-like projections at hind corners, wide apart.		occidua




5.	Tergite 9 with a narrow horse-shoe shaped cusp on hind margin [compare with morio].		caledonica
-	Tergite 9 with long finger-like processes which are fairly close together.		stylifera

- caledonica** Scarce. Scotland.  
**morio** Widespread but low numbers. Wet places including ditches.  
**rufiventris** Rare. Scotland. Boggy ground.  
**occidua** Scarce. Northern and western. Calcareous springs and very wet seepages.  
**stylifera** Scarce. Rushy hillsides with seepages on calcareous soils.



### GROUP 3 FEMALES (Clear winged, stigma dark or pale, and closed discal cell)

Note that the first part of Group 3 (p17) has already keyed out:-

- sg. Numantia [fusca] dark sp., wing membrane hairy in apical half.  
g. Atyophthalmus [inusta] orange pleurae with dark horizontal stripe.



1.	Wing with blackish stigma.		GROUP 7 (p24)
-	Wing with pale brown or colourless stigma.		2
2.	Sternal valve with a black triangular mark at base.		GROUP 8 (p24)
-	Sternal valve without such a mark.		3
3.	Flagellum (of antennae) with elongate segments in middle or at least several segments about apex. [NB. should be 14 segments in flagellum]		GROUP 9 (p27)
-	Flagellum with compact segments (or only apical one elongate).		GROUP 10 (p28)


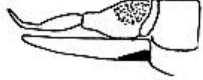


**Group 7 (Females with a dark stigma)**

1.	Stigma nearly twice as long as wide. Cerci short and rather curved. [exceptional specimens of a pale/clear stigma species]	 autumnalis
-	Stigma almost square. Cerci long and much straighter.	 2
2.	Thorax entirely black.	sg Idiopyga stigmatica
-	Thorax partly dull orange, especially over most of the pleurae.	sg. Idiopyga nigristigma

**GROUP 8 (Females with black triangle at base of sternal valve)**

Note that two species with an open discal cell, *omissinervis* and *frontalis*, have the same sternal valve character.



1.	Discal cell open.	GROUP 2 (p16)
-	Discal cell closed.	2
2.	Body grey dusted, top of thorax with 3 shining dark brown stripes. Cerci slender, straight until upturned apex.	 sg. Glochina sericata (p20)
-	Thorax without above pattern and cerci different.	3
3.	Cerci extremely short, swollen at base before short apical thorn. Tip of sternal valve well beyond apex of cerci.	 sg. Idiopyga magnicauda
-	Cerci may be short, but less extreme. Apex of sternal valve not reaching beyond apex of cerci.	4

4.	Dark grey species. Front and mid femora thickened towards apex. Cerci very short.		sg. <i>Idiopyga melleicauda</i>
-	Thorax often pale at least on sides but can be dark brownish. All femora slender. Cerci not so extremely short.		5
5.	Last tergite partly blackish at base in contrast adjacent areas. Cerci upcurved towards apex. Rather orange species with a banded abdomen.		sg. <i>Idiopyga danica</i>
-	Last tergites without above pattern. Cerci different in detail. Orange or dark body, abdomen not banded.		6
6.	Cerci longer and gently curved.		<i>halterata</i>
-	Cerci shorter, strongly upcurved.		<i>sera</i>

GROUP 9 Females (flagellum with elongate segments)

Clearly the presence of the flagellum is necessary to arrive at this point.

If the flagellum is missing, look also at group 10. *D. ventralis* and *halterella* both have the anal lobe of the wing weakly developed: *ventralis* only has a 2-segmented palp (not 4-) and the wing is not so narrow. The separation of common *autumnalis* and *modesta* will be the main problem. A species with an open discal cell, *frontalis*, has a similar flagellum.

1.	Palps with only 2 segments. Wing with anal lobe poorly developed, base of Rs little over half way along wing.		<i>ventralis</i>
-	Palps with 4 segments. Wing with better developed anal lobe and base of Rs rather more towards apex.		2
2.	Palps with 4 segments. Wing with better developed anal lobe and base of Rs rather more towards apex.		<i>modesta</i>
-	Exceedingly rare. No British specimen.		sg. <i>Glochina pauli</i> (p20)





**GROUP 10** Females (remnant)

*D. (Glochina) sericata* is repeated here. It is in Group 8 since there is black triangle at the base of the sternal valve but this is not distinct in some specimens.

Providing the antennae are present (flagellum with short segments) there should be no problem. However, if the antennae are missing, females of *autumnalis* and *modesta* are almost impossible to separate. *D. lutea/imbecilla* will also cause problems but the latter is a rarity with specialised habitat.

Apart from *D. sericata*, the cerci are gently curved, slender.

**NB.** Female *D. (Idiopyga) lackschewitzi* Edwards 1928 is omitted. This is a very rare species of coastal landslips on the Isle of Wight.

1.	Thorax blackish, covered in grey dust.		2
-	Thorax brown or yellowish.		3
2.	Top of thorax with 3 shining black stripes. Cerci of female straight till upcurved at apex.		sg. <i>Glochina sericata</i> (p20)
-	Top of thorax entirely dusted.		<i>distendens</i>
3.	Wing narrowish, anal lobe very little developed.		sg. <i>Idiopyga halterella</i>
-	Anal lobe better developed.		4
4.	Anal lobe strongly developed. Thorax usually entirely yellowish, sometimes a bit darkened on top.		<b>GROUP 4</b> <i>lutea/imbecilla</i>
-	Anal lobe less developed but still obvious. Usually more brownish with dark stripes on top of thorax.		5
5.	Flagellum with all segments short.		<i>autumnalis</i>
-	Flagellum with segments in distal half elongate, but if missing, inseparable from <i>autumnalis</i> .		<i>modesta</i>