

Key to the UK genera and species of Heleomyzidae

Duncan Sivell, Alan Stubbs and Ian Andrews (October 2026)

Draft key to Heleomyzidae

This draft key covers the known British species of Heleomyzidae and distinguishes them from other British Diptera with spiny costal veins. Heleomyzids can exhibit a certain amount of variability in their morphology and it is not unusual to come across specimens that do not quite fit the expected characters. Collecting a short series of flies is recommended, where possible, unless there are concerns this would adversely deplete the local population. We recommend that male genitalia are hinged out when specimens are set, even though genitalia are not covered thoroughly in this version of the key.

Heleomyzids are prone to "greasing" where lipids rise to the surface and obscure colour patterns and setae, hindering accurate identification. Specimens that are greased can usually be cleaned very well by immersing them in ethyl acetate for a few hours or longer.

The terminology used in this key follows the most recent update in the Afrotopical Manual. The main change to be aware of is the outer crossvein on the wing, usually referred to as dm-cu, is now called dm-m. A full account of the terminology can be found here:

> Cumming, J.M. & Wood, D.M. 2017. Adult morphology and terminology in Kirk-Spriggs, A.H. & Sinclair, B.J. (eds). Manual of Afrotropical Diptera. Volume 1. South African National Biodiversity Institute, Pretoria.

Two unusual *Suillia* taxa, named after the locations where they were found, Bedford Purlieus and Broadwater Warren, have not been included in the illustrated key. The status of these taxa is unclear and any unusual *Suillia* or other heleomyzids should be retained as vouchers. *Suillia dawnae* is on the British checklist but its status as a valid species has been questioned and here we consider it to be a form of *Suillia parva*.

A Heteromyzine, apparently a *Tephrochlamys*, which would key to the coastal *Tephrochlaena oraria,* has turned up several times from inland sites recently and any such should be retained for further consideration.

Heteromyza atricornis has been included in the key because there are photos online, taken in Britain, purporting to be this species. We are not aware of any voucher specimens to confirm or deny the presence of this species in Britain, however.

There is one heleomyzid on the British list that lacks costal spines, *Oldenbergiella brumalis* (Heleomyzinae). This is a small species found in native pine forest in the Cairngorms and is associated with carrion and possibly mammal burrows. An appropriate key to Diptera families would recognise this species as a heleomyzid.

If you search for images online to support your identifications remember to use websites that are reliable. General browsing can easily lead you to photos that are misidentified. A good place to start is the Dipterists forum website…https://dipterists.org.uk/heleomyzid-scheme/home

It is intended that a future version of this key will cover all British species of spiny-winged flies. Until then the following papers can be used to identify the Campichoetidae, Diastatidae and Trixoscelididae.

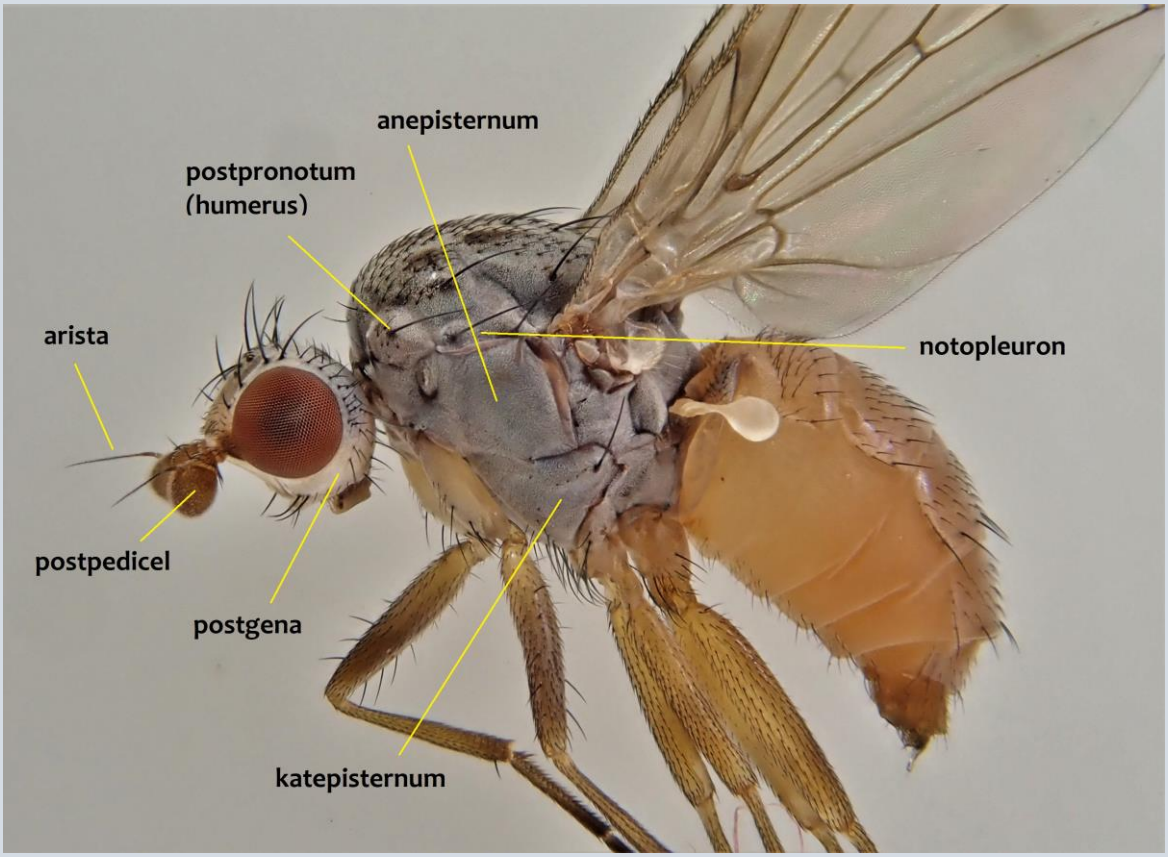
> Chandler, P.J. 1986. The British species of Diastata Meigen and Campichoeta Macquart (Diptera: Drosophiloidea). Proceedings and Transactions of the British Entomological and Natural History Society 19: 9-16.
> Chandler, P.J. & Drake, C.M. 2015. Trixoscelis canescens (Loew) (Diptera, Trixoscelididae) in Britain. Dipterists Digest 22 (2): 147-153.

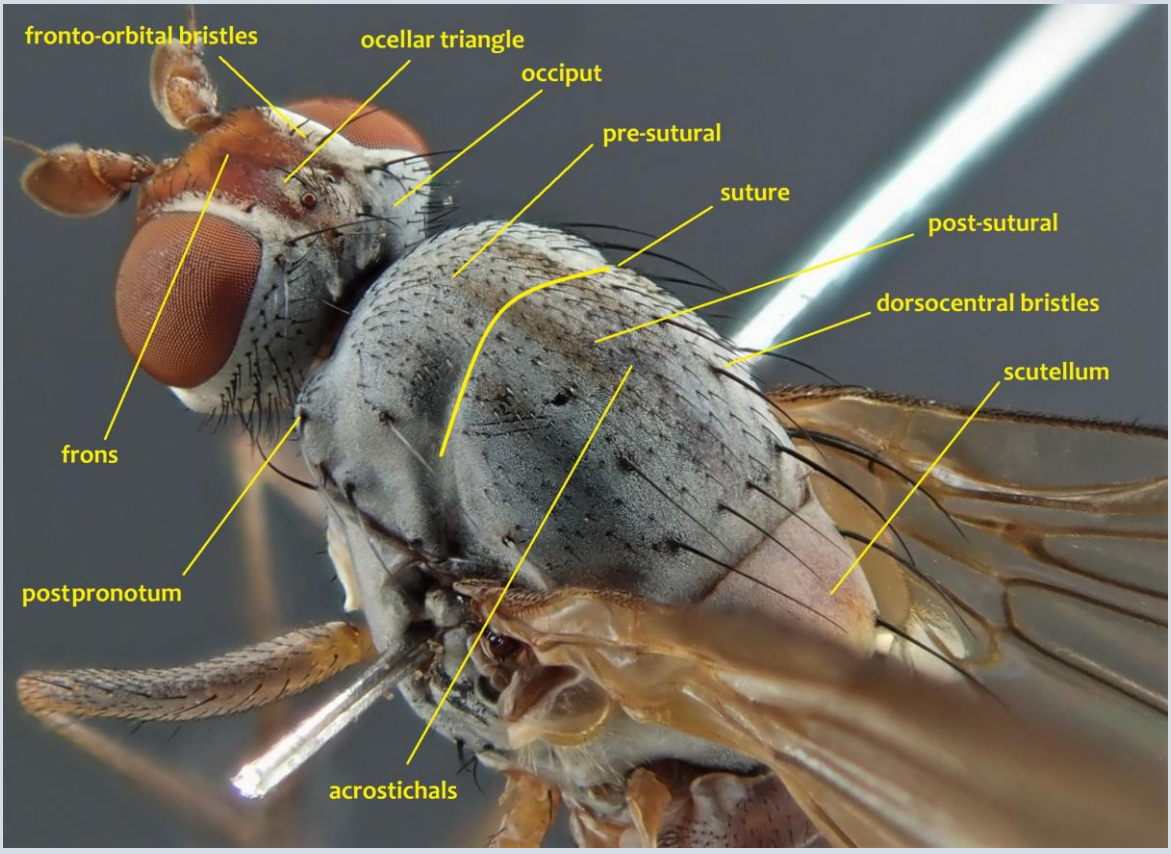
Comments or feedback on the key should be sent to Ian Andrews syrphus@hotmail.co.uk

Please submit your records to the Heleomyzidae Recording Scheme; more information can be found on the scheme website: https://www.dipterists.org.uk/heleomyzid-scheme/home

FAMILIES OF SPINY-WINGED FLIES

1.	Small to large species, wing length 3.5 – 9.5 mm.	**2**
—	Small to tiny species, wing length 1.2 – 3.0 mm.	**5**
2.	Frontorbital plates present, either fixed to eye margin or inclined inwards.	**HELEOMYZIDAE**
—	Frontorbital plates absent, frons undifferentiated across its width.	**3**
3.	Shining orange species with strong dark markings on the wing. Frons free of setae. No preapical bristles on tibiae.	**NEOTTIOPHILUM** praeustum
—	Dull yellow-brown or grey-brown species without strong wing markings. Short dark setae scattered across frons. Preapical bristles present on tibiae.	**4**
4.	Medium species, wing length less than 4.5 mm. Face strongly concave, mouth protruding forward under antennae. Costal spines short, sciomyzina subequal to costa.	**MALACOMYIA**
—	Large species, wing length 7 mm or more. Face not strongly concave, much paler than frons. Costal spines long, 2-3x width of costal vein. Ustulata	**HELCOMYZA**
5.	Frontorbital bristles close together and crossed, the posterior directed forwards and the anterior directed backwards. 2 katepisternal bristles, the anterior clearly higher than the posterior.	**6**
—	Frontorbital bristles widely spaced and not crossed. 1 or 2 katepisternal bristles; if 2 these are at similar height on the katepisternum.	**7**
6.	Anepisternum with bristles, at least on the hind margin. Dark spot at base of wing (cell c dark brown). Posterior crossvein (DM-Cu) about its own length from wing margin. Costal spines just beyond R1 at least twice as long as width of costa.	**DIASTATIDAE**
—	Anepisternum bare. Cell c at base of wing clear or tinged yellow. Posterior crossvein (DM-Cu) about twice its length from wing margin. Costal spines just beyond R1 less than twice as long as width of costa.	**CAMPICHOETIDAE**
7.	Costal spines distinct, spines just beyond R1 more than twice as long as costal vein is wide. Anepisternum with single large bristle on hind margin, shorter setae may also be present. Wing veins dark, membrane may be clear or marked.	**TRIXOSCELIDIDAE**
—	Costal spines just beyond R1 about as long as width of costal vein, may be difficult to see as angled ventrally. Anepisternum without bristles or setae. Costal vein dark, but other veins very pale. Wing membrane clear.	**CHIROPTEROMYZIDAE**





nb: Heleomyzidae do, not uncommonly, throw up bristles where they are not supposed to be, so it is always worth checking on both sides when there is reference in the key to bristles in areas like the anepisternum.

Species accounts

Taxon	Ecology/status	Adult dates on iRecord	Link to NBN map via record total (October 2026)
Eccoptomera longiseta	Association with burrows of rabbits and small mammals. Recorded in burrows of voles of genera Microtus and Clethrionomus (Hackman 1963)	May to October	61
Eccoptomera microps	Association with burrows of moles	May to July	28
Eccoptomera obscura	Probable association with burrows of rabbits and small mammals; known from caves on the continent (Weber&Weber 2013)	October to November	26
Eccoptomera ornata	pNationally Scarce (2016). Association with burrows of rabbits and small mammals. Caves (Weber&Weber 2013)	May to October	17
Eccoptomera pallescens	pNationally Scarce (2016). Known from caves, deciduous forests and dry grassland on the continent (Stuke 2021).	March to July	4
Gymnomus amplicornis	On the continent considered a coprophagous species, occurring often in caves; recorded here from caves also.	April to November	51
Gymnomus caesius	Association with burrows of rabbits and small mammals, with records from deciduous woodland, dry grassland and caves	January to December	122
Gymnomus spectabilis	Swept around streams within dry woodland, incl. forestry plantation; association with caves on the continent	October	16
Heleomyza borealis	Larvae collected from a dead sheep. A northern species known to withstand extremely low temperatures. On Svalbard, found around ornithogenic debris under bird cliffs.	March to June	48
Heleomyza captiosa *[1]	Saprophagous and coprophagous…considered one of the most common species of Brachycera in European caves but with no definite records here.	Unknown	4
Heleomyza serrata	Association with burrows of small mammals, caves, carrion, birds' nests, domestic pet rabbit bedding…etc	February to July	177
Heteromyza commixta	Similar to Heteromyza rotundicornis, but mainly a western and northern species	January to December	219
Heteromyza oculata	Woodland…maybe some association with lignicolous fungi. On the continent considered a saprophagous and coprophagous species.	January to November	153
Heteromyza rotundicornis	Bred from larvae collected below a fallow deer corpse, from the nests of Blue Tit *Cyanistes caeruleus*, Coal Tit *Periparus ater*, Water Vole *Arvicola amphibius* and also from garden compost	January to December	557
Morpholeria dudai	Data deficient (2016). Association with burrows of rabbits and small mammals. Only one recent record known, from Cumbria.	August to October	7
Morpholeria kerteszii	A saprophagous species of woodland	Unknown	2
Morpholeria ruficornis	A common saprophagous species of woodland	May to November	194
Neoleria inscripta	A carrion species of woodland in late spring through to autumn…common on carrion in that period.	April to November	140
Neoleria maritima	Reared from a *Cepaea* snail within coastal sand dunes and found on machair grassland and at lake edges near the sea on Scottish islands, for example.	August to November	55

Neoleria prominens *[2]	pNationally Rare (2016). Off-shore bird colonies…as on St. Kilda. Large numbers can breed in guano beneath the cliffs.	Unknown	6
Neoleria propinqua *[3]	pNear Threatened (2016). A carrion species in woodland in the winter months. Not uncommon, in spite of current status designation.	October to March	77
Neoleria ruficauda	A species of carrion in woodland in the early spring months	February to November	118
Neoleria ruficeps	A woodland species, associated with fungi and possibly carrion.	June to October	35
Oecothea fenestralis	Strong association with rabbit burrows on sandy soil	February to December	67
Oecothea praecox *[4]	pNationally Scarce (2016). Biology unknown; on the continent considered a cave-dweller.	Unknown	23
Oldenbergiella brumalis *[5]	Data deficient (2016). Possible development in carrion or animal burrows	March to September	0
Schroederella iners *[6]	Data deficient (2016). Biology unknown, maybe carrion/animal burrows	December	3
Scoliocentra collini	Puparia bred out from nests of Kestrel and Carrion Crow	March to July	9
Scoliocentra confusa	pNationally Scarce (2016). Association with burrows of rabbits and small mammals	May to October	63
Scoliocentra dupliciseta	Coprophagous and sometimes found in caves.	May to June	15
Scoliocentra flavotestacea	pNationally Scarce (2016). Saprophagous and an association with burrows of rabbits and small mammals. Possibly more common in montane, herb-rich areas of Scotland.	May to September	19
Scoliocentra scutellaris	Near threatened (2016). Likely carrion generally, incl. in animal burrows. An upland/montane species with most records from 400-1000m.	March to July	2
Scoliocentra villosa	Association with burrows of rabbits and small mammals, caves and carrion	February to October	113
Suillia affinis	Shady woodland, often around fungi. Reared from *Lactarius deliciosus*	January to December	990
Suillia atricornis	Shady woodland often around fungi.	April to November	700
Suillia bicolor	Shady woodland often around fungi; polyphagous on agarics, boleti…etc. Also *Hypoxylon, Lycoperdon*	January to December	1392
Suillia dawnae *[7]	*Data deficient (2016). Shady woodland often around fungi.*	*June to September*	13
Suillia dumicola	pNationally Scarce (2016). Shady woodland often around fungi.	June to September	107
Suillia flava	Shady woodland often around fungi.	May to November	101
Suillia flavifrons	Shady woodland often around fungi. Taken also in bait traps with meat in Czech Republic.	March to October	123
Suillia fuscicornis	Shady woodland often around fungi; polyphagous on agarics, boletes…etc. Also *Phallus* and *Cantharellus*	April to December	456
Suillia humilis	Shady woodland often around fungi, incl. *Tuber* sp.	January to December	228
Suillia imberbis	Damp, shaded conditions in woodland	May to October	149
Suillia laevifrons	Damp, shaded conditions in woodland. Bred from puparia within *Luzula* stems, so maybe phytophagous.	March to October	199
Suillia notata	Shady woodland often around fungi.	May to December	566

Suillia oxyphora *[8]	Data deficient (2016). Shady woodland often around fungi?	June to August	7
Suillia pallida	Shady woodland often around fungi, incl. Tuber sp.	March to December	468
Suillia parva	Shady woodland often around fungi.	January to October	78
Suillia ustulata	Shady woodland (especially Beech) often around fungi, incl. *Tuber* sp. Also within stem of Elder.	February to November	132
Suillia vaginata *[9]	pNationally Scarce (2016). Shady woodland often around fungi.	May to November	25
Suillia variegata	Shady woodland often around fungi; polyphagous on agarics, boleti…etc. Also puparia found within syrphid larval damage of Marsh Thistle and within seedheads of Ramsons.	January to December	2539
Tephrochlaena oraria *[10]	Larvae among decaying seaweed along high-water line	April to July	135
Tephrochlamys flavipes	Bred from old birds' nests, grey squirrel dray, fungi incl. agarics and soft polypores, small mammal droppings	January to December	293
Tephrochlamys laeta *[11]	Reported as winter-active on snow in Czech Republic 2022 and from Red-footed Falcon nest box in Hungary 2018	March to December	5
Tephrochlamys rufiventris	Bred from birds' nests, carrion, mammal burrows and wide variety of decaying animal and vegetable matter. Common species around domestic pet rabbits…etc.	January to December	921
Tephrochlamys tarsalis	Larvae in old birds' nests, incl. Rook, Kingfisher. Also nests of Dormouse and Wood Mouse.	January to December	129

Notes:

*1 Doubtfully present in the UK…many *Heleomyza serrata* males can appear to have *captiosa*-like surstyli if viewed from certain angles.

*2 Possible connection with deep guano deposits. Inland records will be misidentifications.

*3 The status needs reviewing. It seems to be widespread on carrion in January to March, but overlooked due to a lack of observers at that time.

*4 Confused with *fenestralis*…records of *praecox* from rabbit burrows will be the former species. On the continent *praecox* is a species of caves and likely the same here, if indeed a UK species. NBN records need reviewing.

*5 A species found only in the Scottish Highlands

*6 One record from Cambridge, over 100 years ago. Only record since from Norfolk 2023.

*7 Now considered to be synonymous with *parva*

*8 Just two old records from the north of Scotland. NBN records need reviewing.

*9 A rare species with only three recent records from highland Scotland. NBN records need reviewing

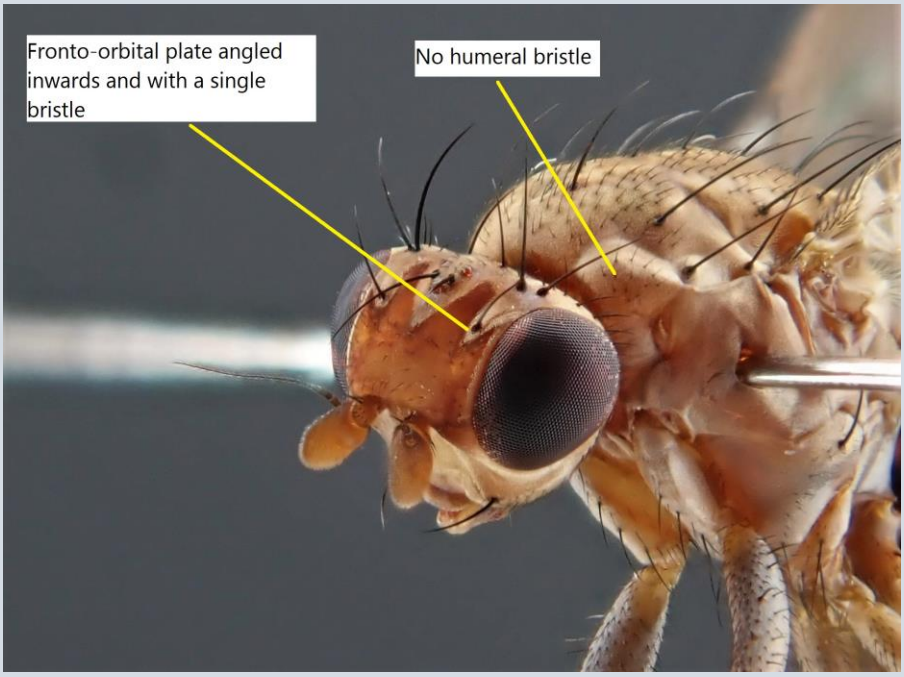
*10 Strictly a coastal species; inland records will be misidentifications. There seems to be a Tephrochlamys species found inland which keys to *Tephrochlaena*, but is clearly different…it is included in the key here. Any such should be retained.

*11 A very rare species with no known, reliable recent records

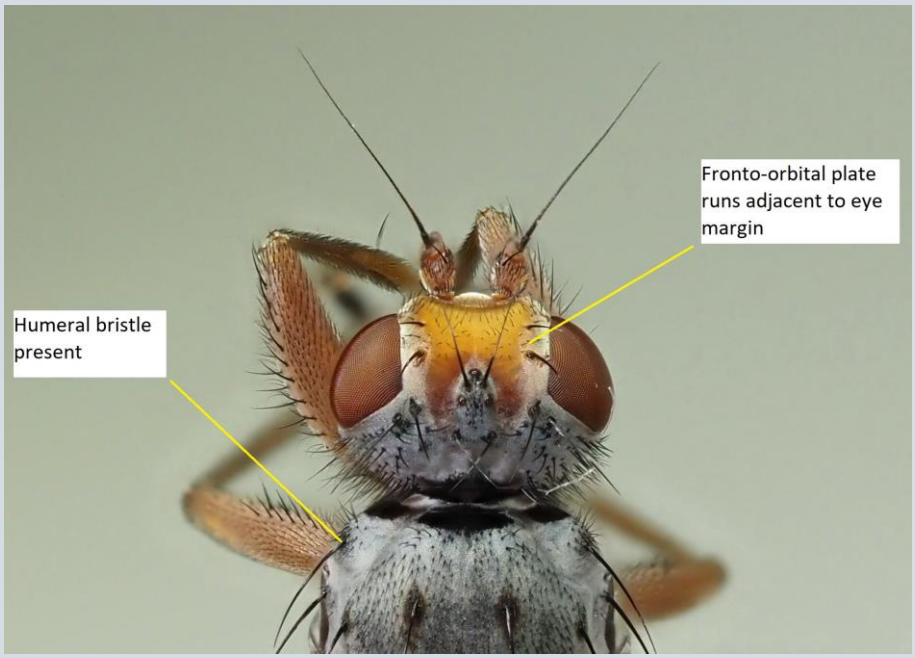
HELEOMYZIDAE

Key to Subfamilies

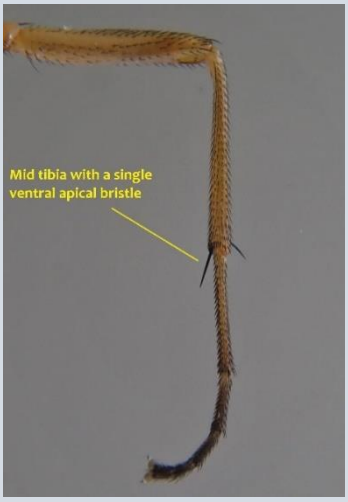
1. Fronto-orbital plate well demarcated and oblique, not fixed against eye margin. Only 1 fronto-orbital bristle. Proepimeral bristle absent. Postpronotal (humeral) bristle absent (except *Suillia atricornis*). **SUILLIINAE**



— Fronto-orbital plate runs adjacent to the eye margin, plate usually but not always sharply defined. Normally 2 fronto-orbital bristles (1 in some Oecotheini species). Proepimeral and postpronotal (humeral) bristles always present. **2**

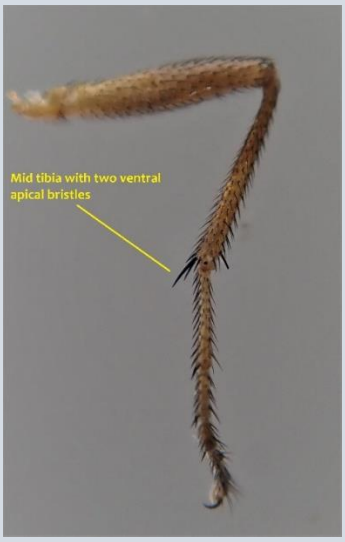


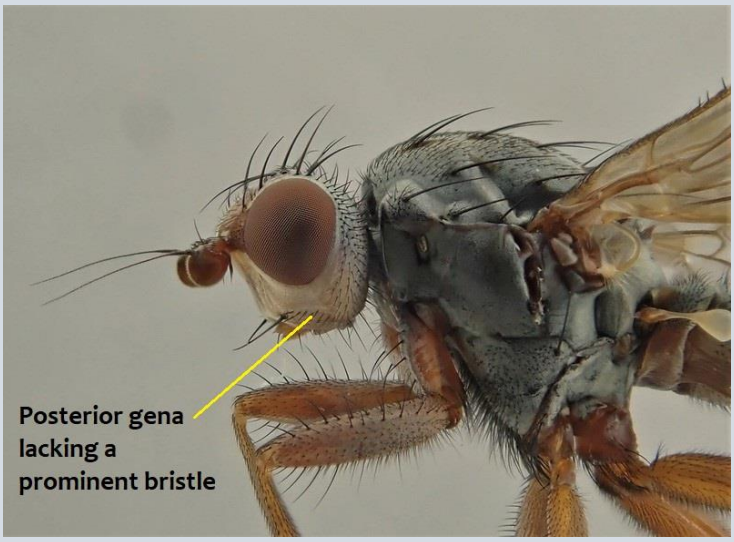
2. Mid tibia with 1 ventral apical bristle. Posterior gena often with a bristle, between eye and lower margin, that is thicker than neighbouring bristles. All British species have grey thorax and +/- yellow abdomen. **HETEROMYZINAE**





– Mid tibia with 2 ventral apical bristles. Any thicker bristles on posterior gena confined to the lower margin. British species have a wider range of colour combinations. **HELEOMYZINAE**



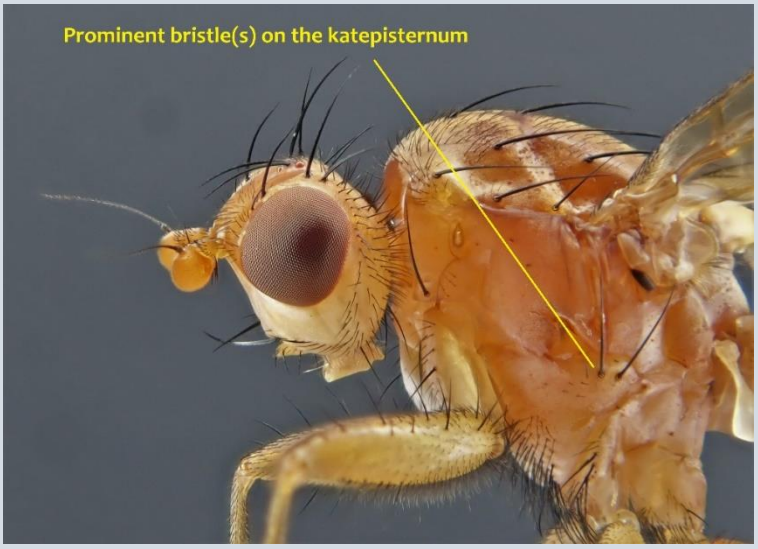


Heleomyzinae

Key to Genera

1. Very small fly, wings elongate, approx. 2.5 mm long. Katepisternum without a bristle. No costal spines. **OLDENBERGIELLA** brumalis

— Medium to large flies, wing length greater than 3.5 mm. Katepisternum with 1 or more strong bristles. Costal spines present. **2**



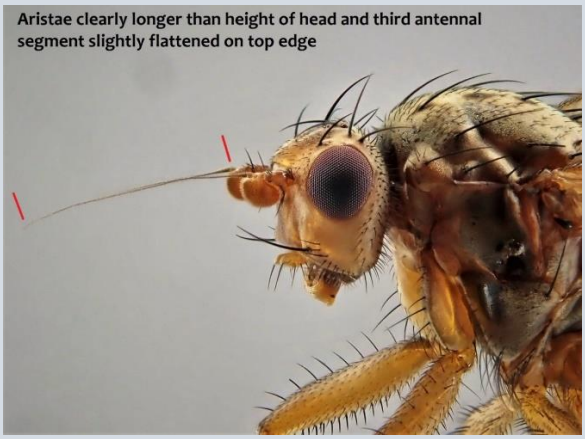
2. Prosternum (between fore coxae) without bristles. 1 pair of vibrissae. **3**



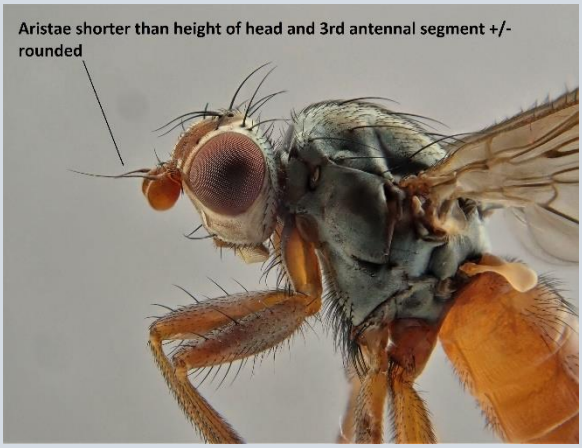
— Prosternum with bristles (one or more). 1 or 2 pairs of vibrissae**.** **GYMNOMUS HELEOMYZA SCOLIOCENTRA**



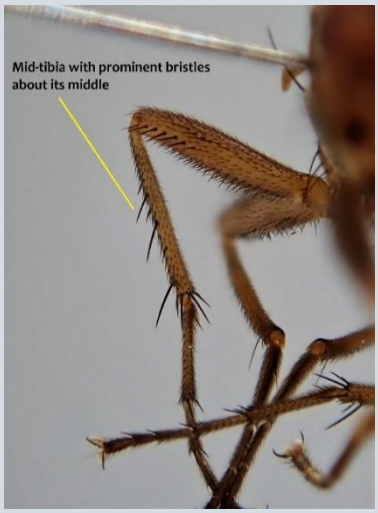
3. Arista clearly longer than height of head. Top of postpedicel (3rd antennal segment) slightly flattened; may appear to have a corner on outer edge. **4**



— Arista subequal to or shorter than height of head. Postpedicel (3rd antennal segment) rounded. **5**



4. Mid tibia with at least 2 antero-dorsal and 1 postero-dorsal bristle about its middle. 1 fronto-orbital bristle. **OECOTHEA**





— Bristles on mid-tibia confined to the apex. Usually 2 fronto-orbital bristles, the anterior reduced. **ECCOPTOMERA**





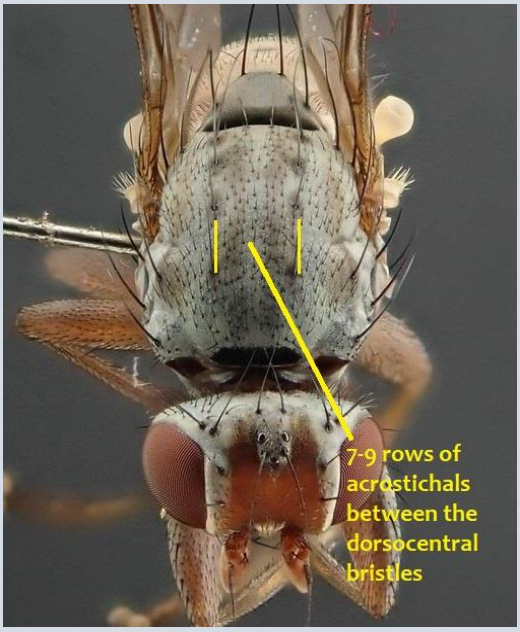
5. Small setae above the vibrissae and anepisternum bare. **SCHROEDERELLA** iners



— No setae above the vibrissae (or if setae present, two strong anepisternal bristles also present**)**. **6**

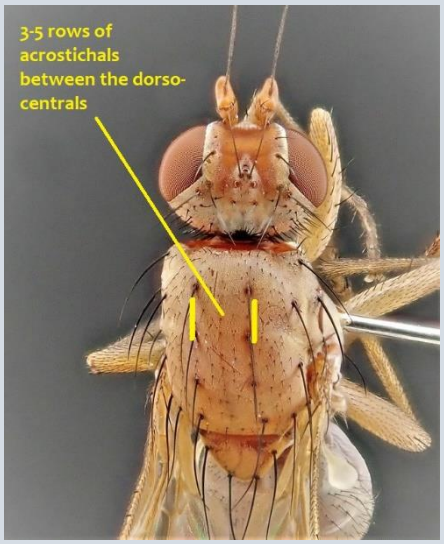


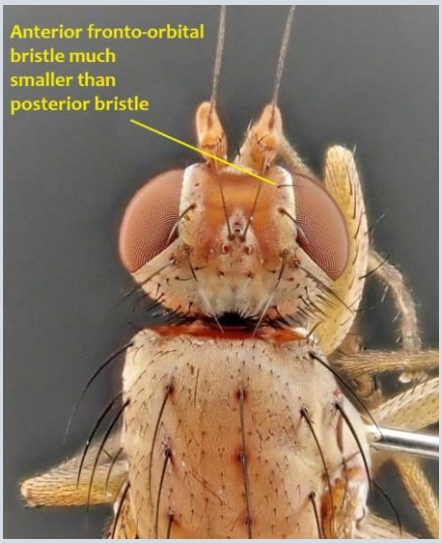
6. Acrostichals usually in 7-9 irregular rows. Scutum plain or with broad stripes. Anterior fronto-orbital bristle equal to or slightly longer than posterior. **NEOLERIA**





— Acrostichals usually in 3-5 rows, the centre row often well defined. No broad stripes on scutum. Anterior frontorbital bristle approx. ¾ length or much shorter than posterior. **MORPHOLERIA**





ECCOPTOMERA

1. Thorax yellow or brown. **2**



— Thorax grey. **3**



2. Thorax yellow/brown and body darker brown. 2 katepisternal bristles (anterior short). Cross veins R-M and DM-Cu clouded. **ornata**





— Thorax and body yellow (body occasionally darker). 1 katepisternal bristle. No wing markings, cross-veins not clouded. **longiseta**









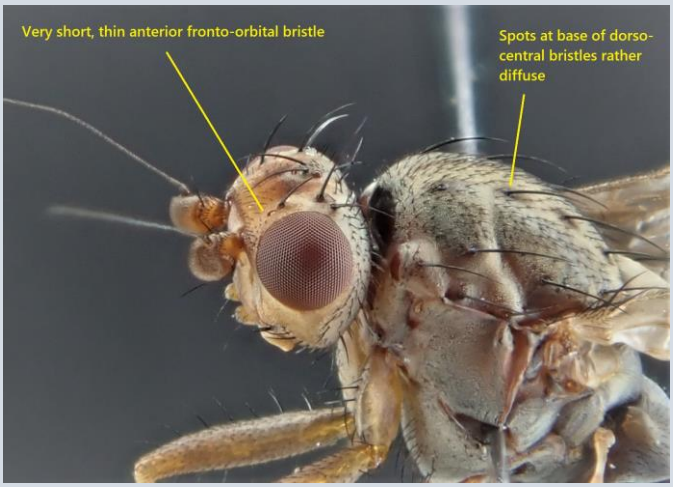
3. 1 fronto-orbital bristle, the anterior missing. Thorax with a thin dark midline and large dark streaks at bases of dorsocentrals, forming two more broken lines. **pallescens**





[Photos: Nils-Uno Svensson]

— 2 fronto-orbital bristles, the anterior much shorter and finer. Markings at bases of dorsocentrals at most rather diffuse, not so distinct. **4**



4. Scutellum grey with yellow apex. 1 katepisternal bristle. Gena deeper than vertical diameter of eye**.** **microps**



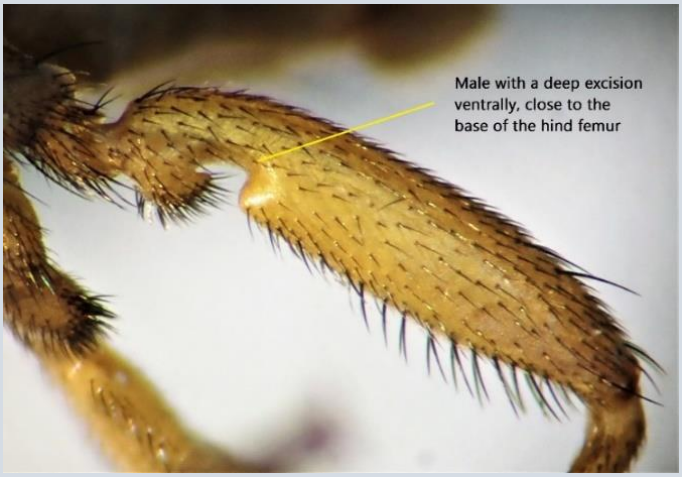




– Scutellum uniformly yellow. 2 katepisternal bristles. Gena not as deep as vertical diameter of eye. Male with deep excision towards the base of hind femur. **obscura**







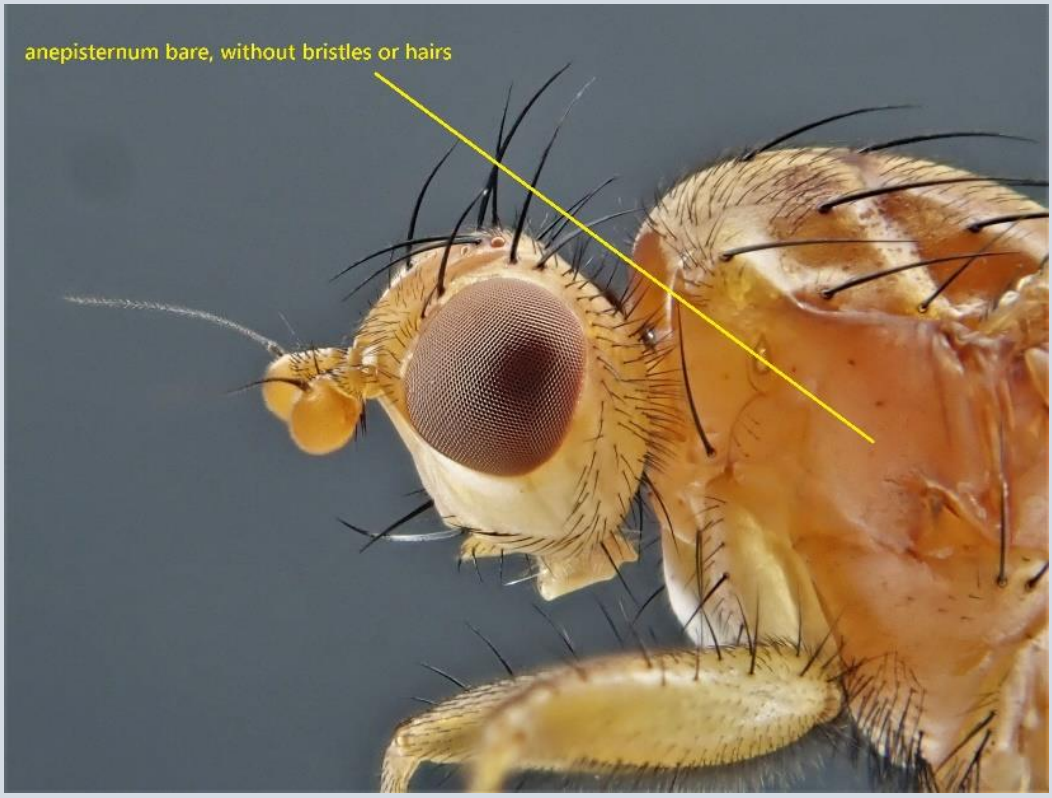




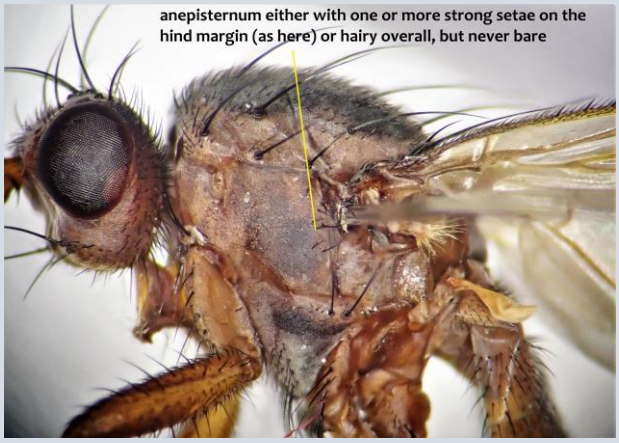


GYMNOMUS + HELEOMYZA + SCOLIOCENTRA

1. Anepisternum bare, no bristles or setae. **2**



– Anepisternum either with one or more strong setae near the hind margin (A), or with a covering of hairs (B), but never bare. **9**



A



B

2. Katepisternum with 2-3 strong bristles in upper hind corner. Shorter setae may be present**.** **3**



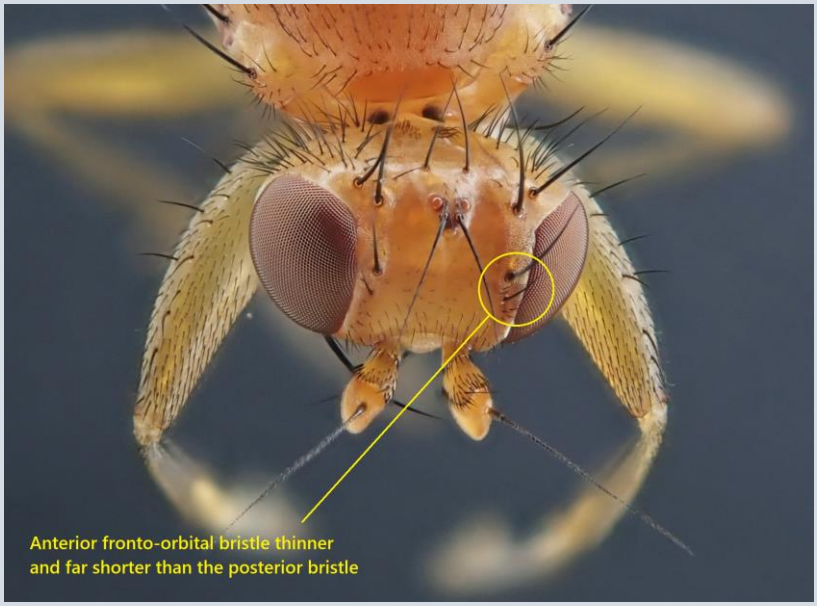
— Katepisternum with 1 strong bristle in upper hind corner. Shorter setae may also be present. **4**



3. Body and legs yellow, some abdominal segments may be darkened brown or grey. Anterior fronto-orbital bristle thin and less than a third the length of the posterior. **Scoliocentra flavotestacea**

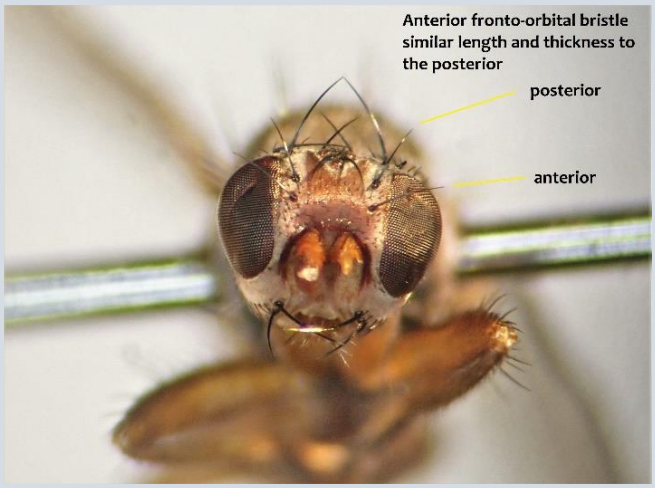


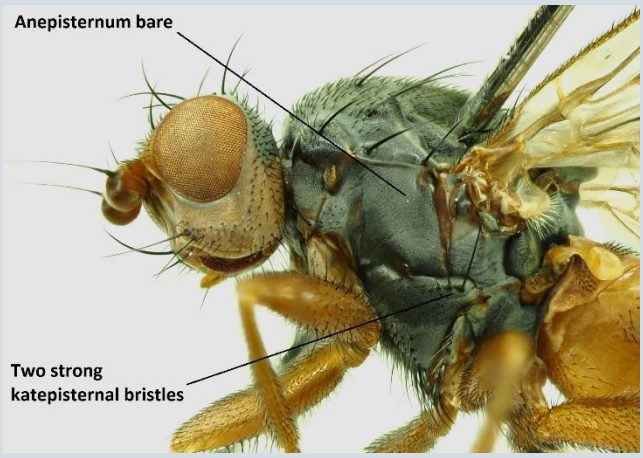




– Thorax grey, abdomen and legs yellow. Anterior fronto-orbital bristle similar in length and thickness to posterior. **Scoliocentra collini**









4. Body entirely orange-yellow (abdomen may be duller?). Male hind basitarsus not shorter than next segment. **Scoliocentra confusa**



— Thorax grey. Legs yellow. Abdomen often yellow, but may be grey, or both grey and yellow. **5**

5. Dark spots at bases of dorsocentrals, spots may be small, but are well defined. At least very tip of scutellum pale (can be hard to pick out). No bristles above vibrissae. **6**





— Any darkening around bases of dorsocentrals diffuse. Scutellum uniformly grey. Small bristles above vibrissae. **8**





6. Abdomen grey, same colour as thorax, on at least first 3 tergites, often becoming yellow in distal half. Scutellum pale at tip only. **Gymnomus caesius**









— Abdomen yellow, colour usually uniform, any darkening will be brown. **7**

7. Scutellum, postpronotum, occiput and proepisternum pink, contrasting with grey of thorax. Scutellum can be darker, like spectabilis. Hind femur with 5-6 anterodorsal bristles in apical third.

Gymnomus amplicornis







– Scutellum, postpronotum, occiput and proepisternum grey as rest of thorax. Scutellum pale at tip only. Hind femur with 2-3 anterodorsal bristles in apical third.

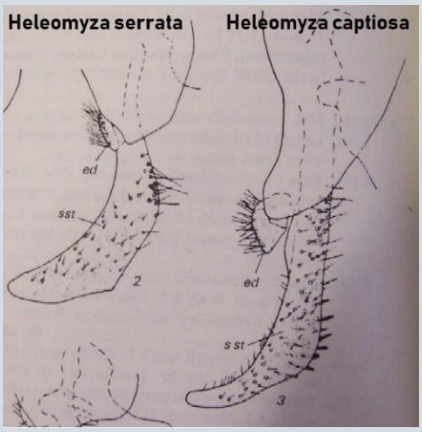
Gymnomus spectabilis







8. Male surstylus slender and narrowed distally, convex face of surstylus (in lateral view) angled once. Females difficult to separate from H. serrata. **Heleomyza captiosa**



Very many specimens of this pair in the UK seem to have surstyli intermediate between the diagrams here, with a slight kink in the stem (on the convex side) below the epandrium like *serrata*, but then with a slightly narrower apex like *captiosa* (though less extreme). The epandrium is oval in *serrata* and more elongate in *captiosa*.

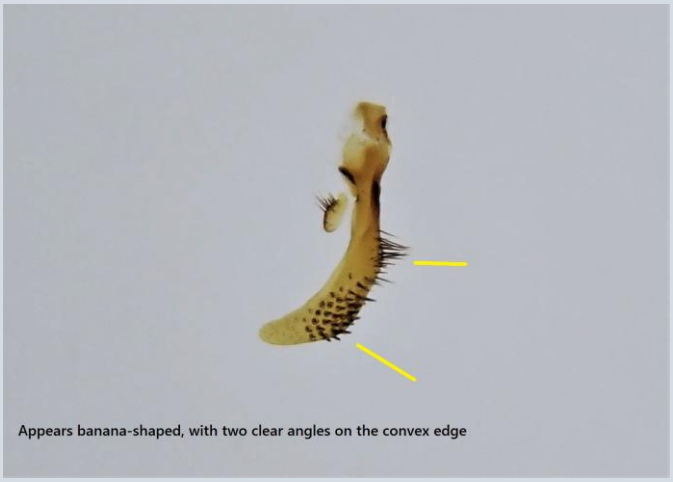
[It is possible that *captiosa* is not a UK species]

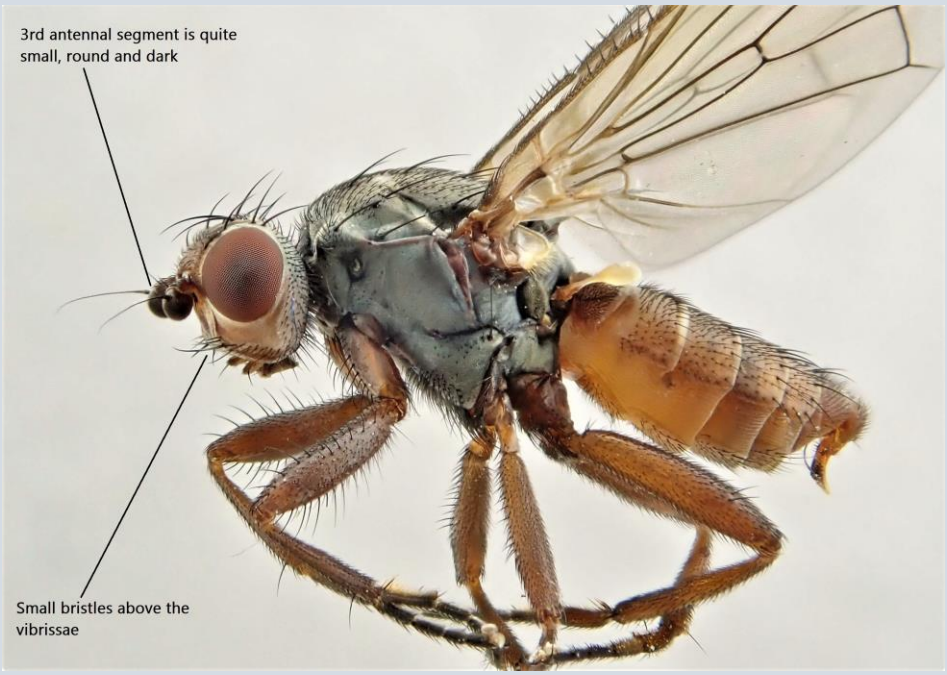
Photo (right): Ralph Sipple ©



– Male surstylus broad, similar width along its length and angled twice on convex side (in lateral view). Females difficult to separate from H. captiosa. **Heleomyza serrata**





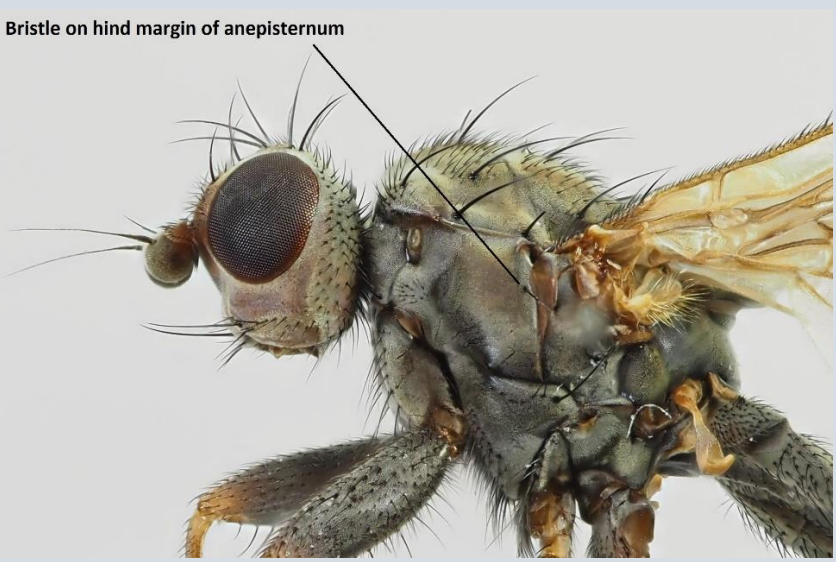


9. Anepisternum usually with one bristle on hind margin (can be two); head and body drab olive grey, legs dark orange-brown, tibiae usually paler. A small bristle present above vibrissae. **Heleomyza borealis**











— Either a few setae (A) or a covering of hairs (B) on the anepisternum, which is therefore never bare. Thorax grey, but with pink scutellum, proepisternum and postpronotum. Occiput also pink. Anepisternum usually grey, but may occasionally be pale. **10**

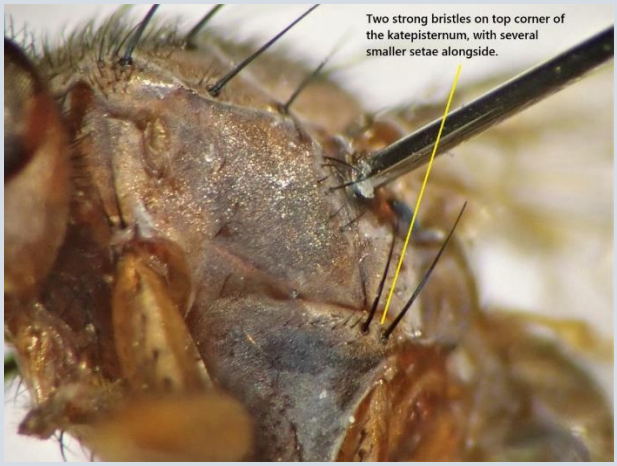


A



B

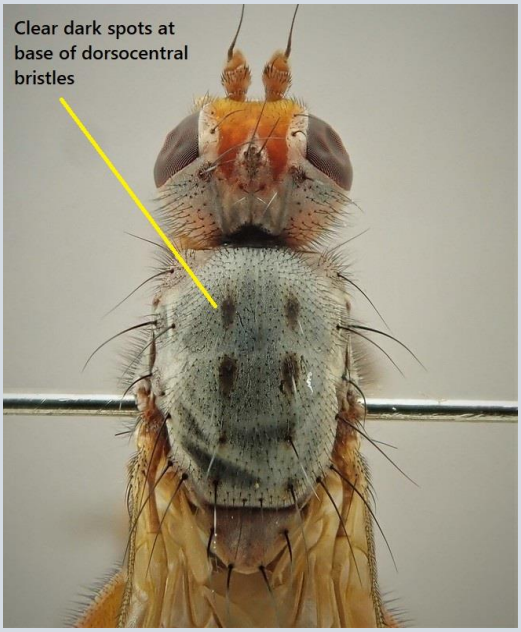
10. 2 strong katepisternal bristles, 5 – 8 short but strong setae on the hind margin of the anepisternum, similar number of setae on upper margin of katepisternum. Anepimeron bare. **Scoliocentra dupliciseta**

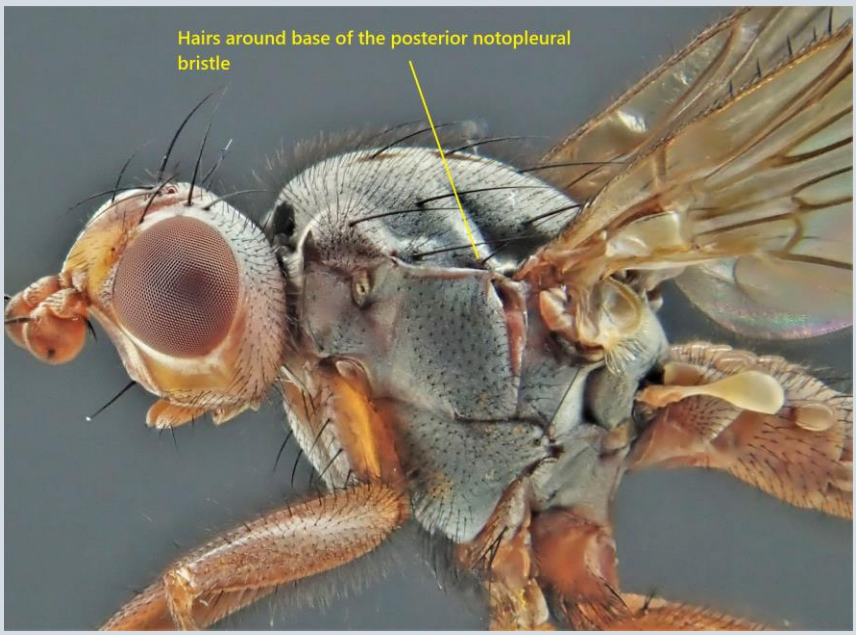




— 1 strong katepisternal bristle; anepisternum, anepimeron and katepisternum with a dense covering of long, fine setae. **11**

11. Well defined, strong dark spots at base of dorsocentrals. Fine hairs near posterior notopleural bristle. **Scoliocentra villosa**









— Any darker markings at base of dorsocentrals weak and diffuse. No hairs near posterior notopleural bristle. **Scoliocentra scutellaris**

[No photos currently available]

MORPHOLERIA

1. Yellow head, legs and thorax (occasionally the thorax is darker, but it is then separated from *kerteszii* by the single katepisternal bristle and from *dudai* by the 2-3 anterodorsal bristles on the hind femora); the abdomen may be same colour or darkened brown. 2-3 bristles anterodorsally on the apical third of the hind femur. The katepisternum has one strong bristle. **ruficornis**









— Grey or grey-brown scutum, often with dark spots at base of dorsocentrals, yellow abdomen and legs. **2**

2. 2-3 katepisternal bristles. Scutellum same shade of grey as scutum. Humeri and occiput also grey. **kerteszii**

(no pictures available)

— 1 strong katepisternal bristle. Scutellum, humeri and occiput usually paler than scutum. Only a single bristle anterodorsally in the apical third of the hind femur. On average, slightly smaller than *ruficornis*. **dudai**









NEOLERIA

1. Frons orange, extending either side of ocellar triangle. Abdomen yellow, at most some darker markings in centre of tergites. **2**



It is easy to misinterpret the frons colour alongside the ocellar triangle as the orange is often darker in that area. It can be judged best viewed from in front; generally, the tip of the ocellar triangle stretches slightly further forward than any darker orange-brown colour alongside and the bright orange stretches slightly further back towards the rear of the head than the posterior fronto-orbital bristle. The grey ocellar triangle forms a contrast with the dark orange alongside.

— Frons orange in lower part, but dark either side of ocellar triangle. Abdomen darker; either grey or with extensive dark brown markings. **5**



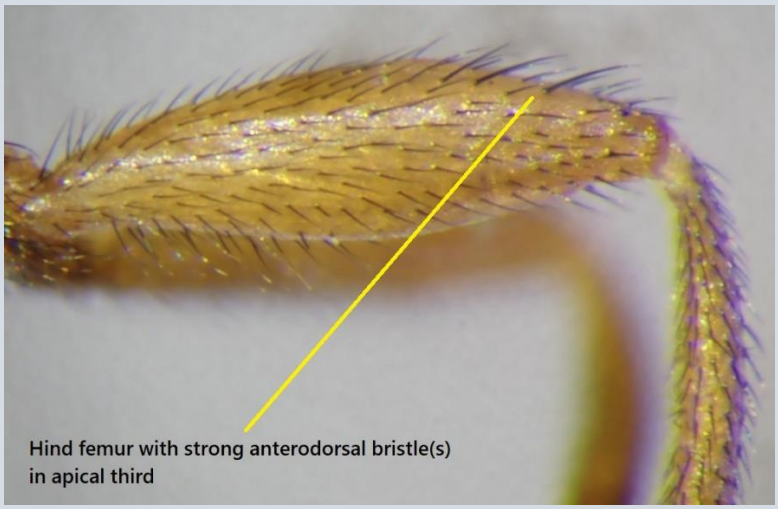
The frons colour either side of the ocellar triangle is often darker and lacks any orange tone. That dark usually stretches forward beyond the posterior fronto-orbitals. Sometimes, the whole frons is a bit dirty looking, lacking any bright orange and the contrast between the ocellar triangle and the colour alongside is less marked.

Only *N.prominens*, a rare species of coastal bird colonies, and *N. ruficauda*, a common species of woodland associated with carrion, have this pattern.

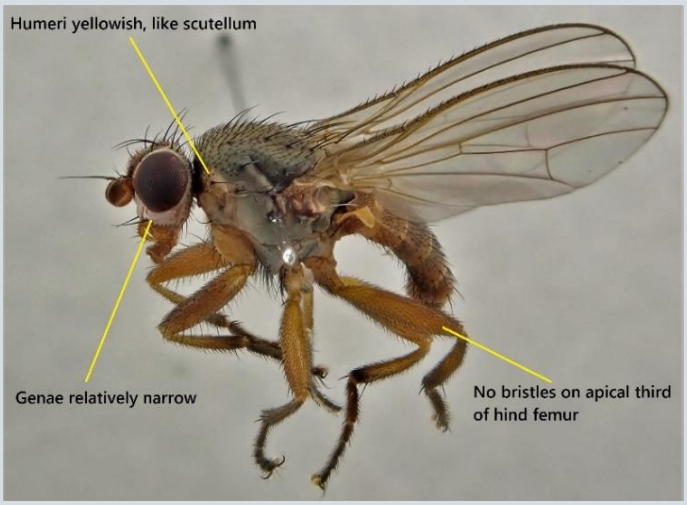
2. Hind femur without stronger anterodorsal bristles in apical third. Third antennal segment orange at base, usually coloured brown towards front margin. **3**



— Hind femur with stronger anterodorsal bristle(s) in apical third. Third antennal segment usually clear orange, without brown markings. **4**



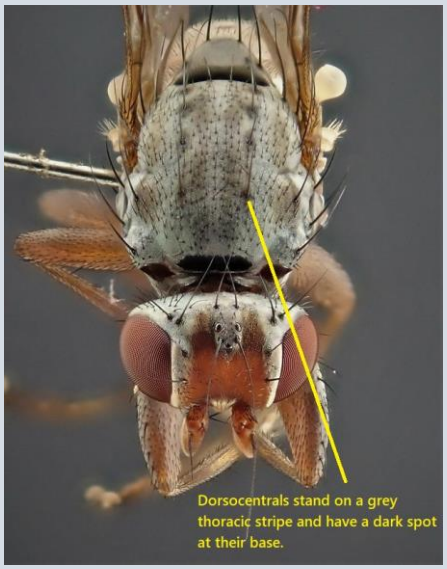
3. Scutum plain grey, postpronota and scutellum yellow, usually in striking contrast to rest of thorax, but sometimes also tinged with grey. A species of spring to autumn. **inscripta**



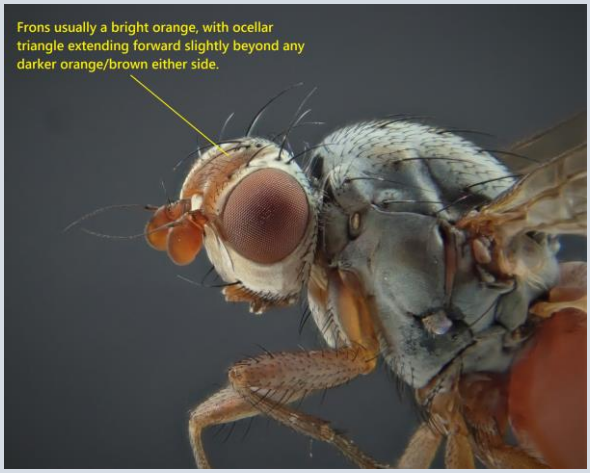




— Scutum, postpronota and scutellum grey, with darker markings on scutum, especially at base of dorsocentrals. A noticeably grey/orange species of carrion in winter to early spring. **propinqua**









4. Normally 2 stronger bristles on hind femur, 2 anepisternal bristles, one thicker and twice the length of the other. **maritima**



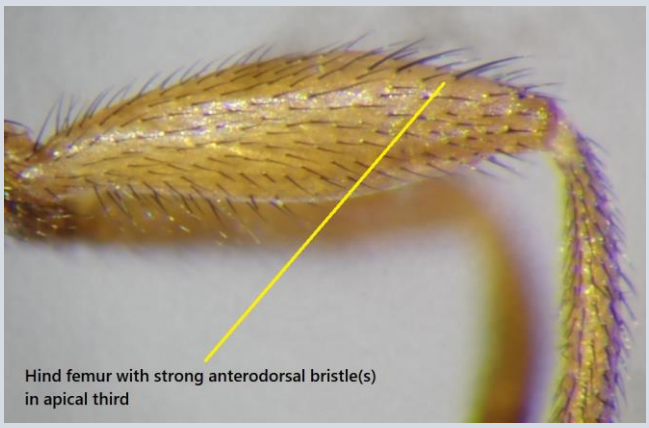
Photo: M.Elkins





Photos: M.Elkins

— Normally 1 (or 2) stronger bristles on hind femur, anepisternal bristles absent**.** **ruficeps**



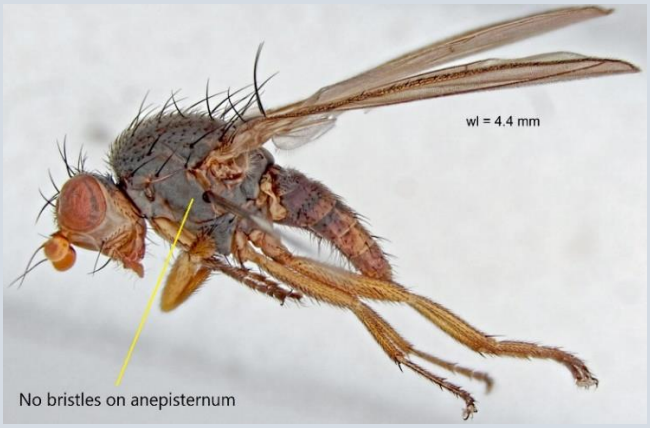


Photo: S. Crellin

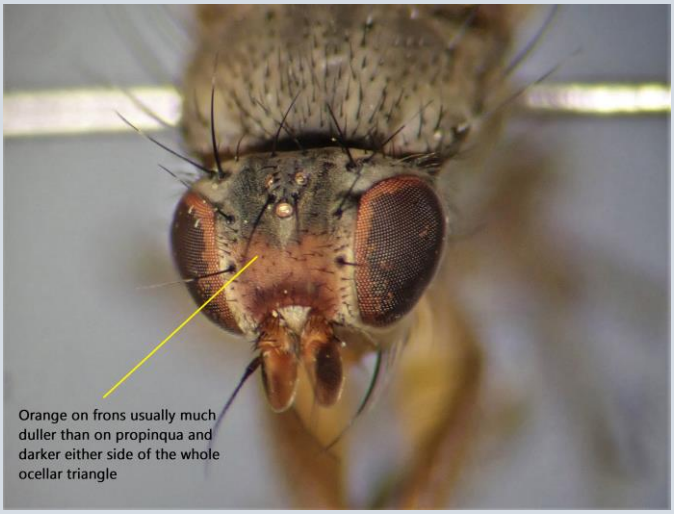




Photos: C. Le Boutillier

5. Abdomen grey, thorax grey without dorsal stripes, legs shining brown. Frons dark above level of anterior frontorbital bristle. **prominens**

— Abdomen yellow with extensive brown markings, thorax grey-brown with brown dorsal stripes, legs orange. Frons dark above level of posterior frontorbital bristle. **ruficauda**

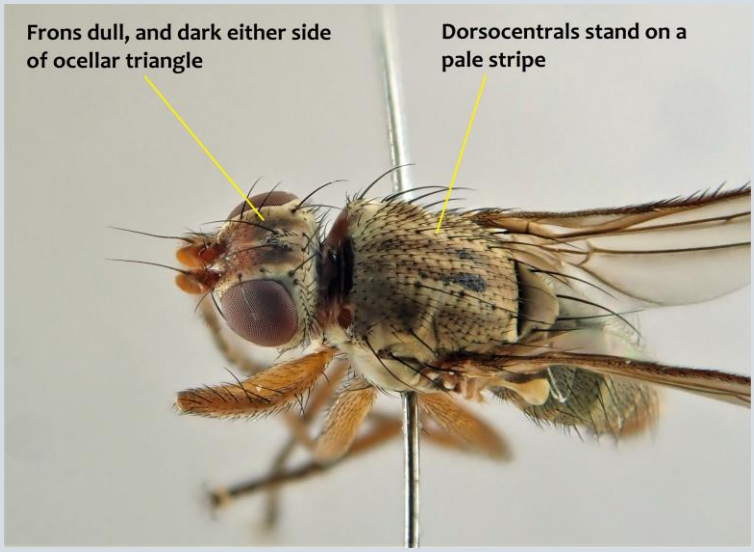












OECOTHEA

1. Maximum depth of gena subequal to maximum diameter of eye. (gena : eye ratio >1 acc. Košel & Woźnica 2019) **praecox**

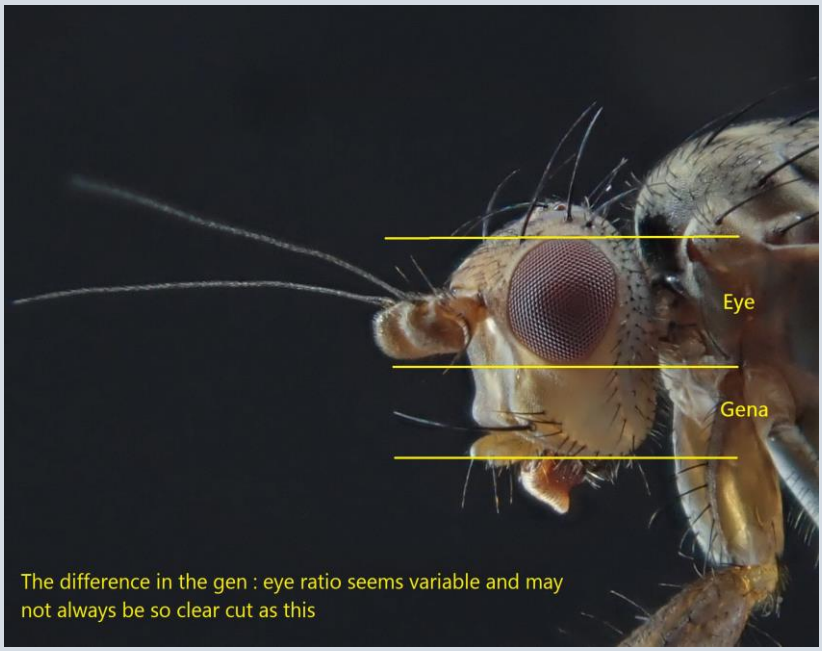
[On the continent, praecox is considered an obligate species of caves, and the same may be true here, if it is indeed a UK species]

— Maximum depth of gena not more than two-thirds maximum diameter of eye. **fenestralis**





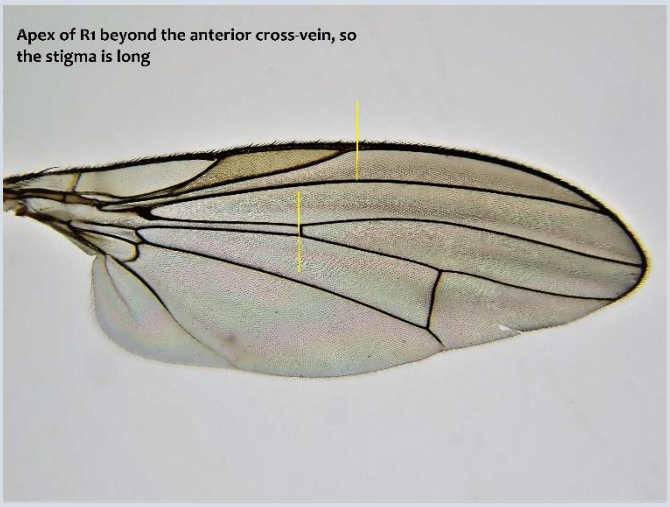


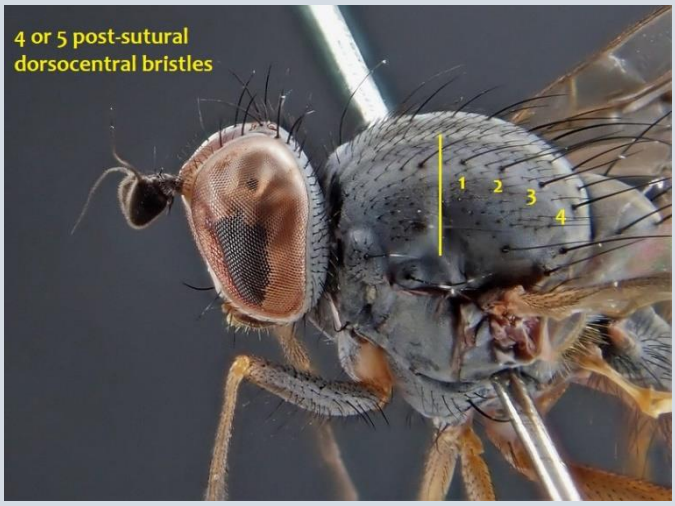


Heteromyzinae

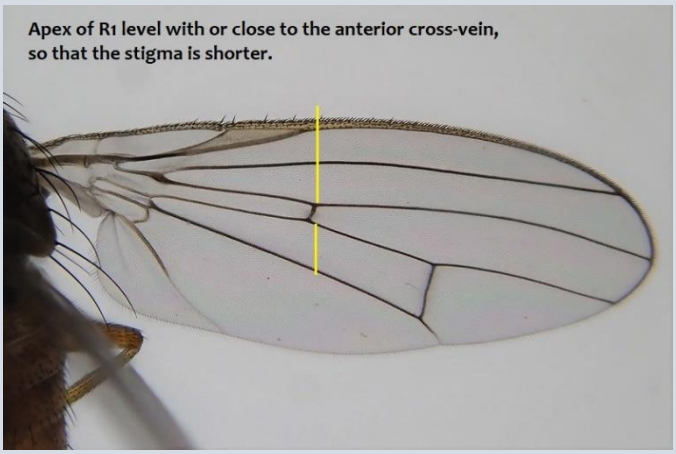
Key to Genera

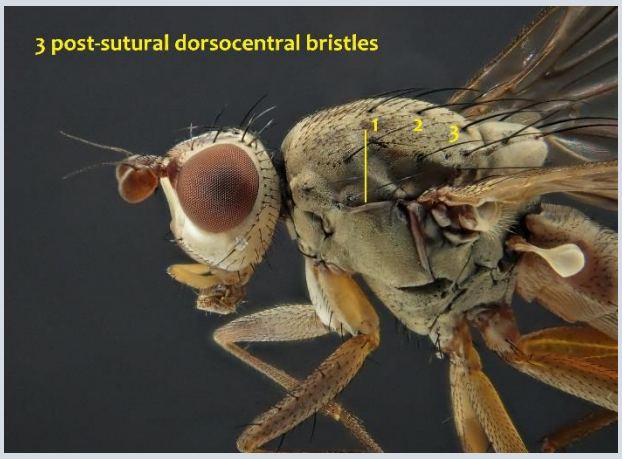
1. R1 apex far beyond level of DM-Cu. 4 or 5 postsutural dorsocentral bristles. **HETEROMYZA**



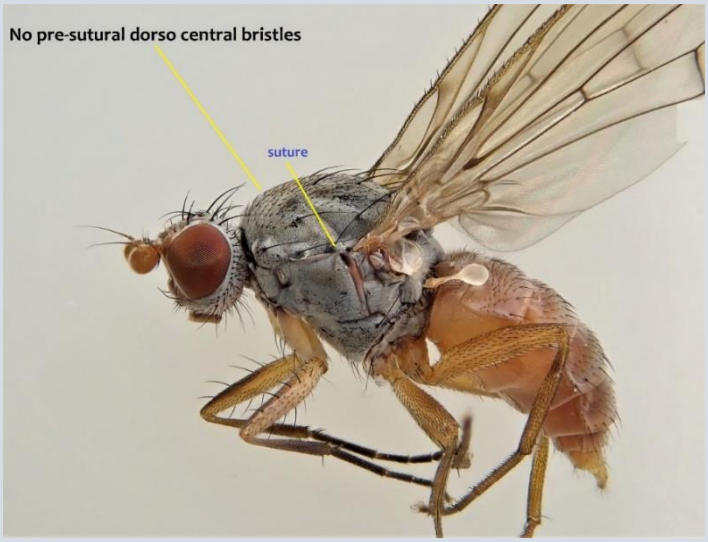


— R1 apex about level of DM-Cu. 3 postsutural dorsocentral bristles. **2**





2. Presutural dorsocentral bristles absent. **TEPHROCHLAMYS**



— A pair of presutural dorsocentral bristles present. **3**

3. A small (4-5mm), strictly coastal species with a grey thorax and abdomen, rounded 3rd antennal segment short aristae and rather deep genae. **TEPHROCHLAENA oraria**





— An inland species with an association with woodland and with carrion and recorded mainly from October to May. The abdomen is more orange, with the frons slightly darkened towards the ocellar triangle and the 3rd antennal segment darker apically and less rounded. The aristae are longer. The genae are narrower. **Possible new species; cf. Tephrochlamys***







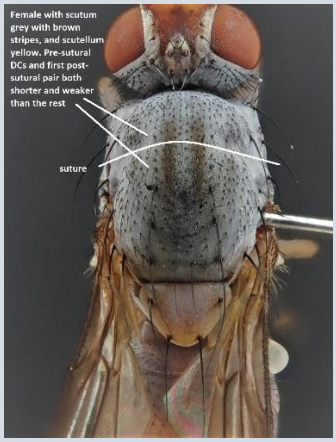


* Please retain any specimens…the identification of this species is being investigated.

HETEROMYZA

1. Presutural dorsocentral bristle weak and short, scutellum usually entirely yellow **oculata**



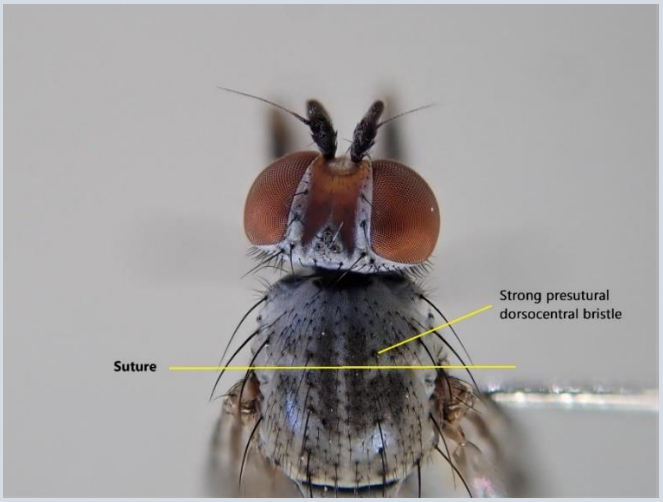








— Presutural dorsocentral strong and long, scutellum grey as rest of scutum. **2**

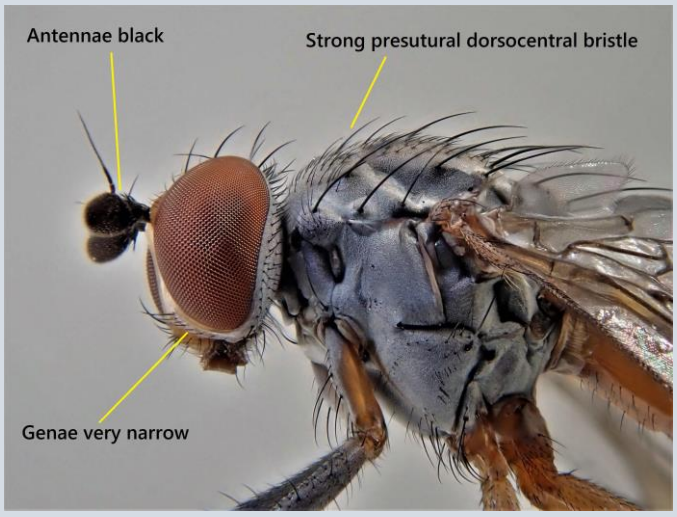


2. Males **3**

— Females **5**

3. Frons broad but face very narrow, eyes much closer together below antennae than above. **rotundicornis**









— Face broader, width of face similar to or wider than width of frons. **4**



4. Distance between eyes narrowest about level or slightly below antennal bases. Orbital plates long, running most of the length of the frons, which does not narrow anteriorly. **atricornis***

** Presence in the UK has yet to be confirmed*

— Distance between eyes narrowest about mid point of frons. Orbital plates short, approx. twice length of ocellar triangle. Frons narrows slightly towards the antennae. **commixta**



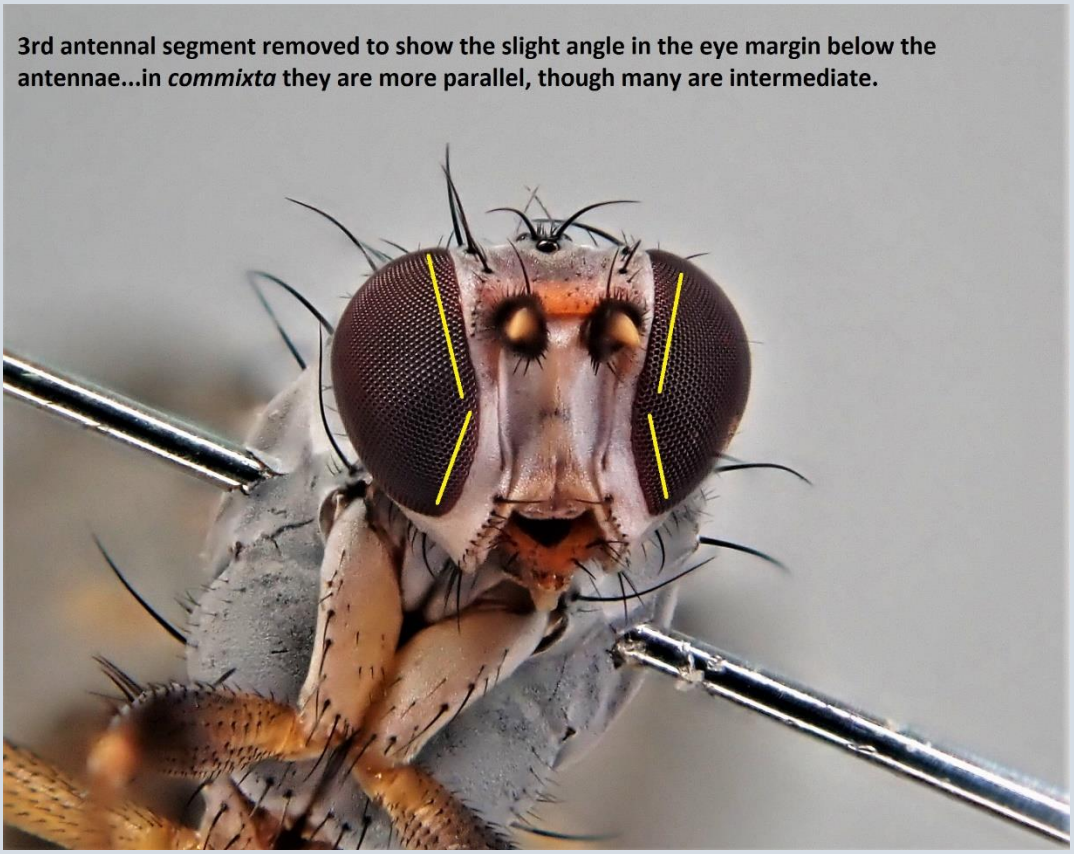




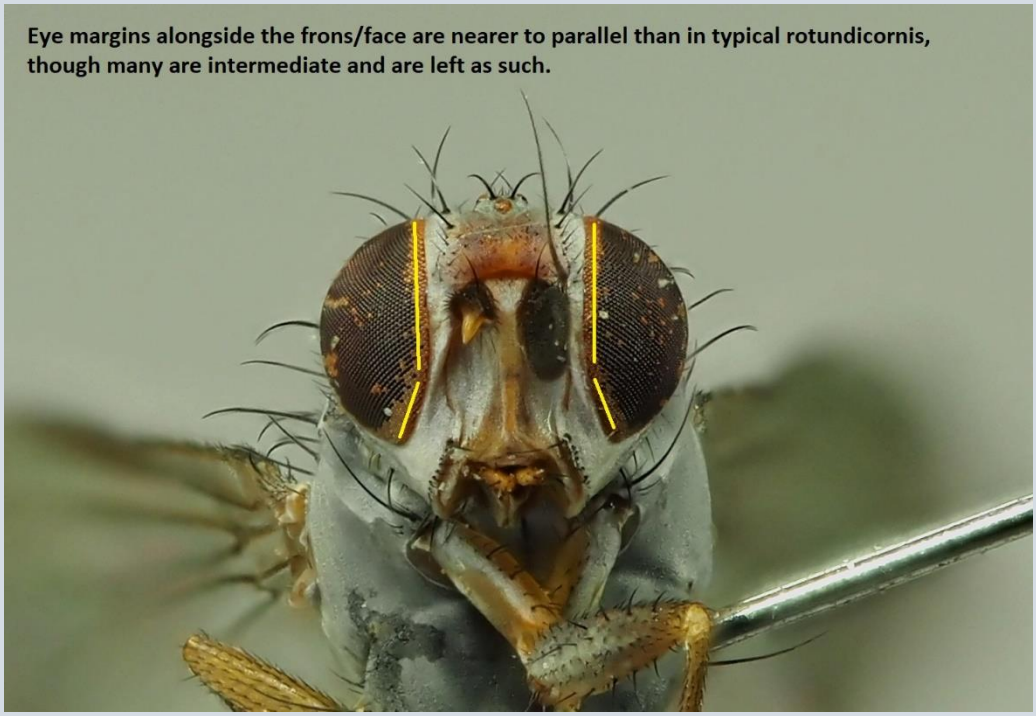
5. Vibrissae inserted below lower margin of eye. **atricornis***

— Vibrissae inserted about level with or above lower margin of eye. **6**

6. Face slightly narrower than frons (may be difficult to separate from *commixta*). **rotundicornis**



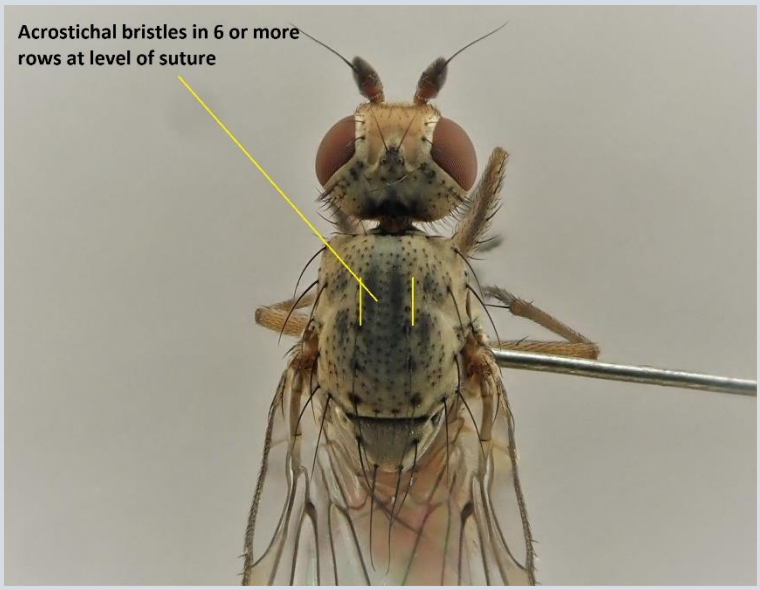
— Face same width as frons (may be difficult to separate from *rotundicornis*). **commixta**



TEPHROCHLAMYS

1. Acrostichal bristles in 4 rows at level of suture. Small (wing length 3.0 mm). **laeta**

— Acrostichal bristles in 6 or more rows at level of suture. Medium size (wing length 4.0 – 5.5 mm). **2**



2. Subcostal cell uniformly clear or hyaline. Antennae very dark brown. Anterior bristle about middle of mid femur, short but distinct from surrounding setae. **rufiventris**

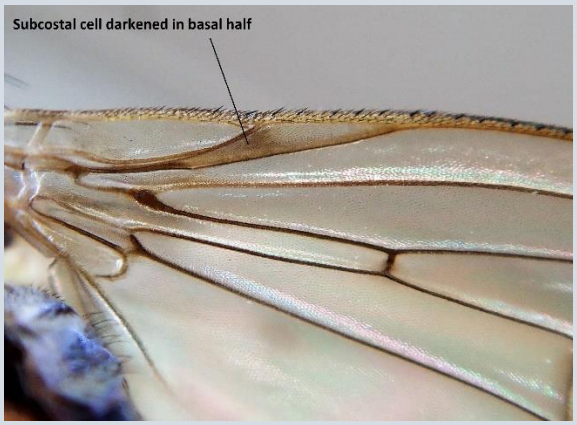








— Subcostal cell darkened in basal half. Antennae mid orange-brown. Mid femur lacking an anterior bristle. **3**



3. Mouth margin incised, almost triangular in frontal view. Gena narrow and mostly grey, same colour as occiput. Fore femur usually with dark streak above. **tarsalis**

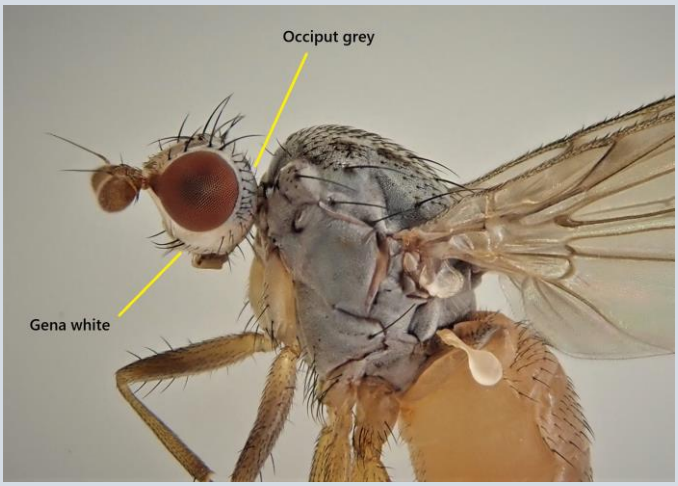






— Mouth margin gently curved in frontal view. Gena very pale, in contrast to grey occiput. **flavipes**







Suilliinae

SUILLIA

1. Wings without markings, at most a slight shading over outer crossvein (DM-Cu). **Group A**



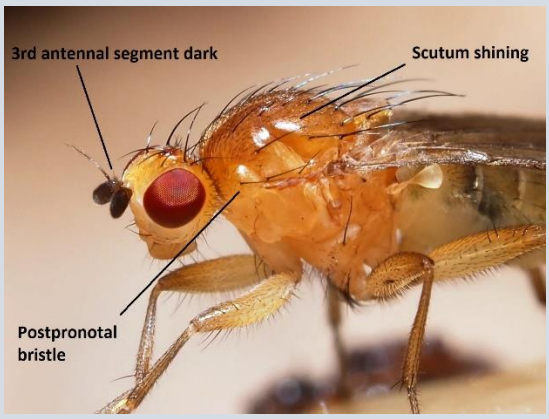
— Wings distinctly marked at both crossveins (R-M and DM-Cu), usually also at wing apex over long veins. Occasionally, and if teneral, the markings can be less distinct, but the cross-veins are usually still darker than any in Group A. **Group B**



The markings at the wing tip are often far more vague than those shown here.

SUILLIA GROUP A **Wings without markings, at most a slight shading over outer crossvein.**

1. Antennae entirely black. Postpronotum with a strong bristle (if knocked off, look for strong bristle pit). **atricornis**





— Postpronotum without a bristle, although setae may be present. **2**



2. Scutellum with extensive short black setae over half or more its surface. Faint but usually distinct shading over crossvein DM-Cu. **3**

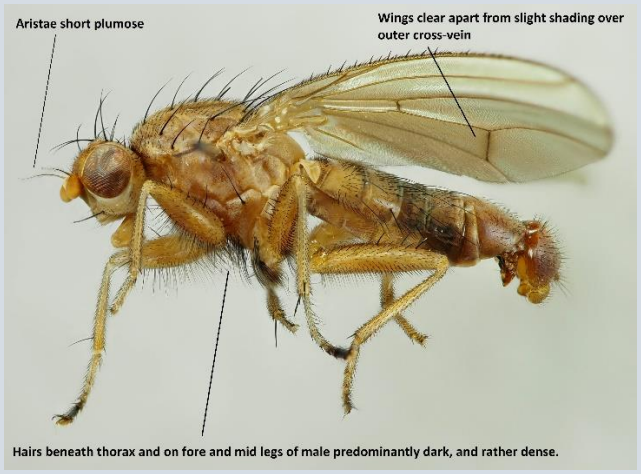




— Scutellum largely or completely bare. If setae are present these are few and confined to margins. No shading of DM-Cu crossvein. **4**

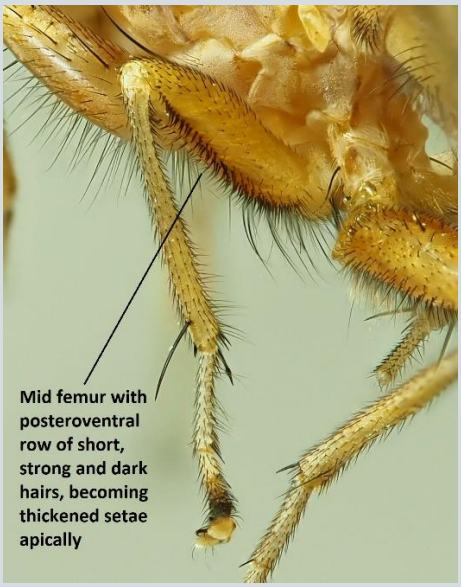


3. Male mid femur with short, dark hairs posteroventrally from base to tip, becoming thickened setae in apical half, the apical 7 or so slightly longer. Long hairs on male fore coxae, lower katepisternum and mid coxae mainly dark (in contrast to *pallida*). Scutellum with hairs all over, incl. at the base. Female tergite 6 short (scarcely half as long as tergite 5 and 7 long triangular. **vaginata**









– Male mid femur lacking the dense, thickened setae posteroventrally of *vaginata* and with many pale-yellow hairs on fore and mid coxae and lower katepisternum. Scutellum bare centrally next to scutum. Female tergites more equal in size. **pallida**

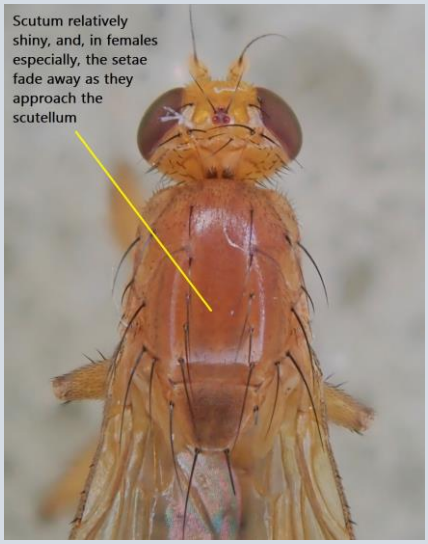






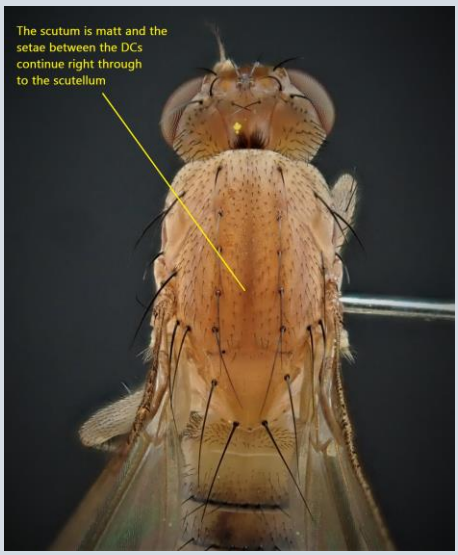


4. Scutum moderately shining (view from above with light coming from in front; as in *atricornis*). Male fore basitarsus with a tooth at the ventral apex, may be partially obscured by dense setae. **5**

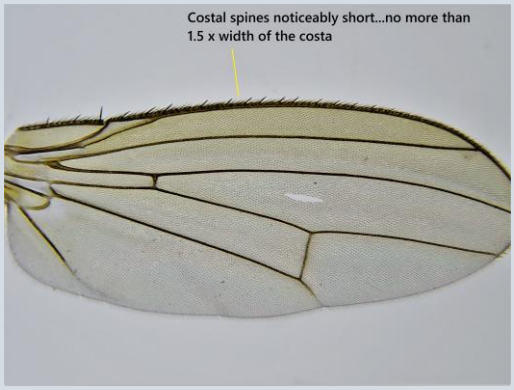




– Scutum matt (at most a glimmer of shininess; as *pallida*). Male fore basitarsus not modified, setae allow clear view. **6**



5. Costal spines short, about 1.5x width of costa. Female scutum with many acrostichals before the suture but fewer in the posterior half, especially towards the scutellum. Scutellum has a few pale or dark hairs on top, especially at the margins, but which can need good lighting to pick out. No long hairs on male mid basitarsus. **bicolor**









— Costal spines usually long, at least 2.0x width of costa (may not be so obvious always?). Female scutum with many acrostichals in both anterior and posterior halves. Scutellum bare...no hairs at all. Long posterior hairs on male mid basitarsus, and on mid tibia. **dumicola**







6. Scutellum with a distinct projection at apex, which is usually longer than wide. **oxyphora**

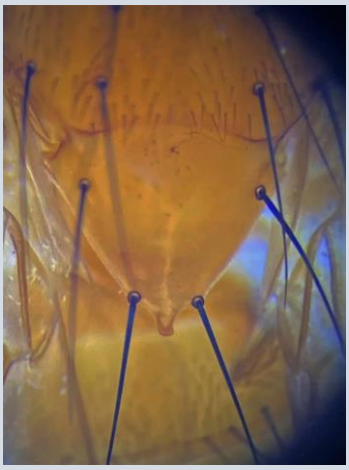


Photo: Ruud van der Weele

— Scutellum with a slightly angular (occasionally more rounded) apex; lacking a distinct projection as in *oxyphora*, but usually a small tubercle (pimple) at the apex. **fuscicornis**









SUILLIA GROUP B **Wings distinctly marked (at both crossveins, in some species also at wing apex over long veins).**

1. Anepisternum and anepimeron partly hairy. Scutellum covered in short dark setae. **2**





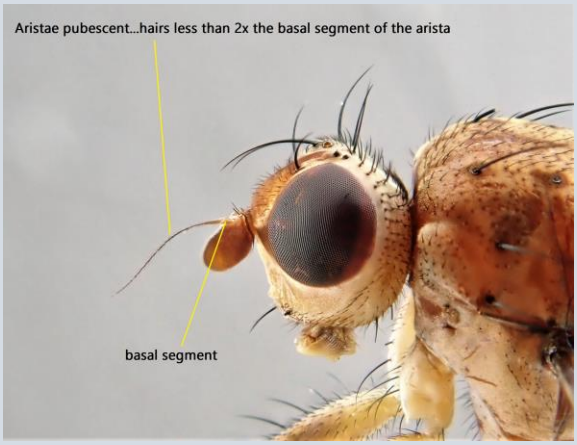
— Anepisternum and anepimeron bare. Scutellum with variable cover of setae (none to full covering). **5**



2 Arista plumose, hairs more than twice width of basal article of arista, often much longer. **3**



— Arista pubescent, hairs less than twice width of basal article of arista. **4**

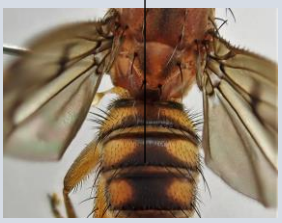


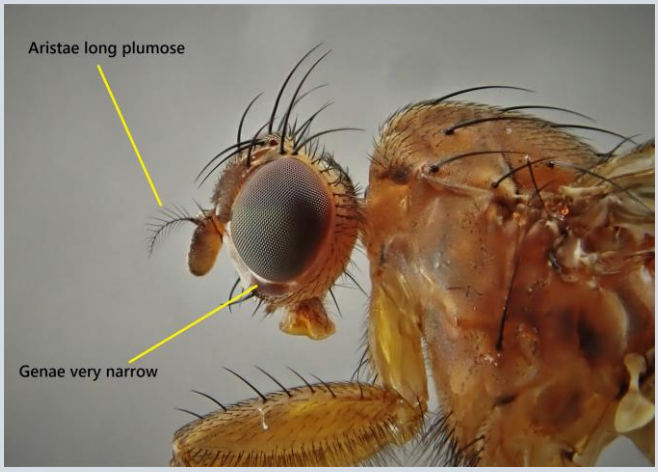
3. Aristal hairs (individually) subequal to or longer than width of flagellomere. White markings at wing apex contrast sharply with adjacent dark markings. Scutellum is extensively haired, except at the base.

variegata



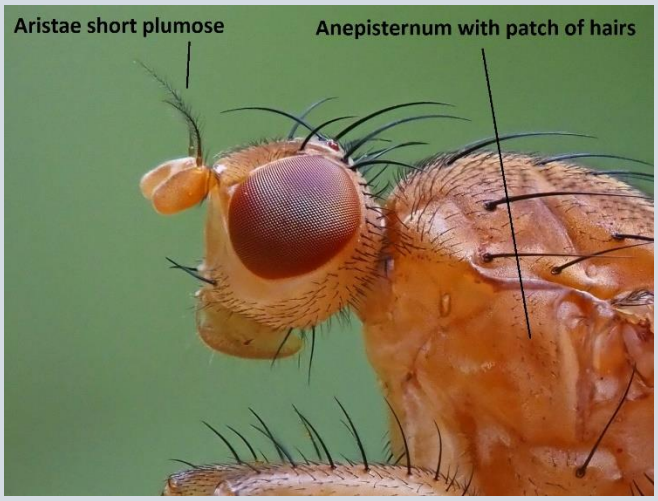
Occasionally, the dark wing markings are less obvious, but the combination of plumose aristae, narrow genae, haired anepisternum and often obvious dark markings on the tergites make it easy to pick out.

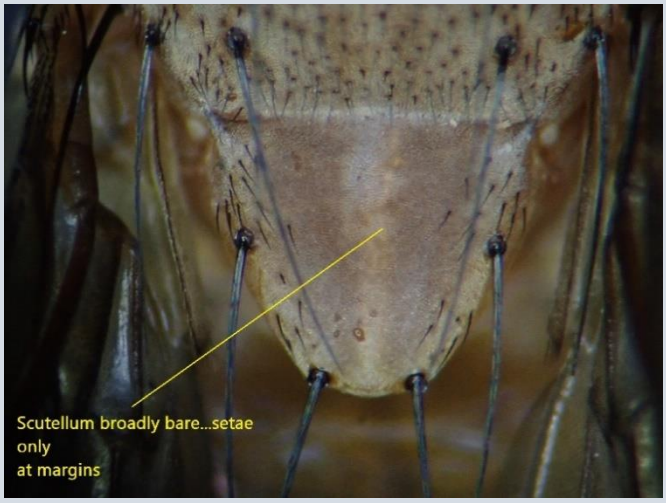






— Individual hairs on arista approximately a third of width of flagellomere. Markings at the wing apex are faint and diffuse. The scutellum has some hairs on each side, but with a broad bare area in the middle. A large species. **notata**







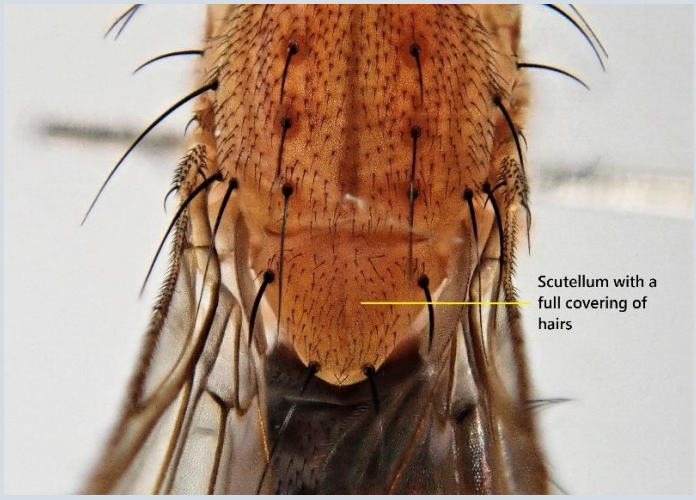


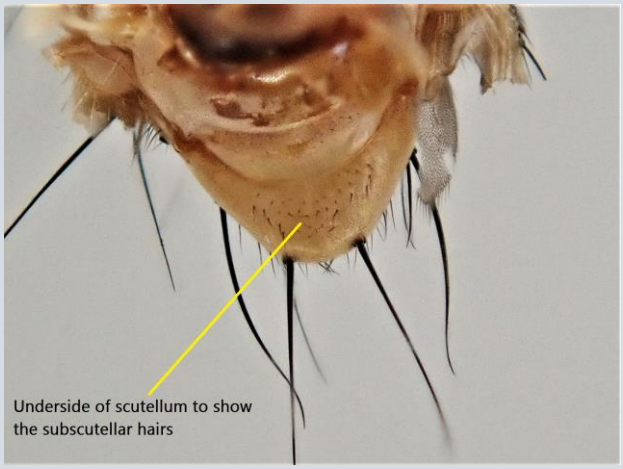




4. Some fine black hairs under apex of scutellum. **humilis**









5. Aristae plumose, hairs subequal to or longer than width of flagellomere. **6**



— Aristae pubescent, hairs approx. twice width of basal article of arista or shorter. **8**



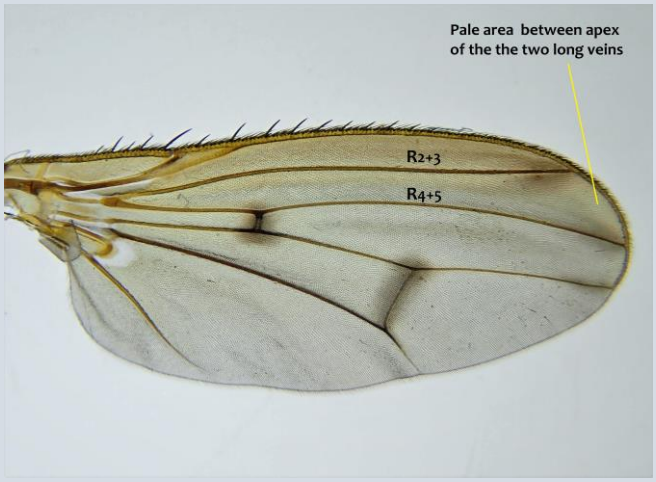
6. Darker markings at wing apex fused along the margin. Cell r2+3 darkened on outer edge, although pale area present before this. **flava**

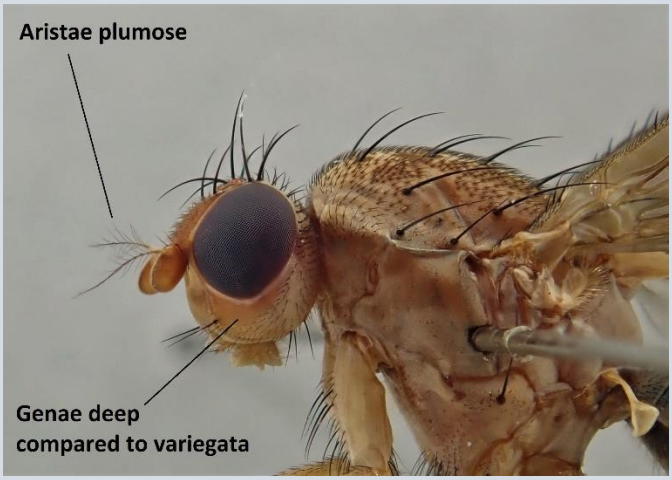




— Wing pale on outer margin of cell r2+3 between the darker apices of veins R2+3 and R4+5. If pale area indistinct the vein apices should still appear darker. **7**

7. Wing with weak longitudinal dark streaks and about apex; the apex between R2+3 and R4+5 contrastingly somewhat paler. **affinis**







Long-plumose aristae and a scutellum with a full covering of setae makes *affinis* easy to pick out. Quite a large species and has a darkened apex to the fore and hind tibiae which usually is obvious. Genae are deep.



8. Hairs on arista about twice width of basal article. Wing apex with large spots over end of veins **laevifrons**











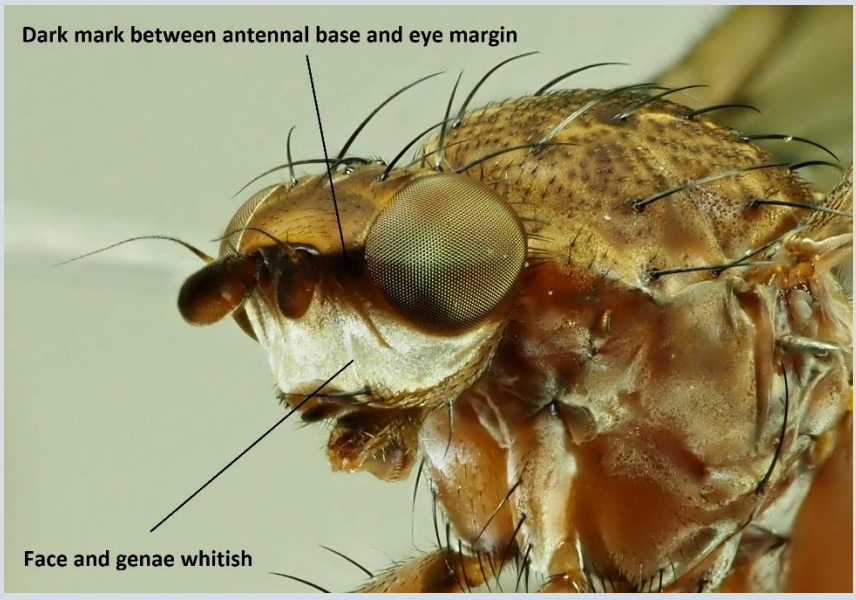
— Hairs on arista shorter than twice width of basal article, often much shorter. **9**

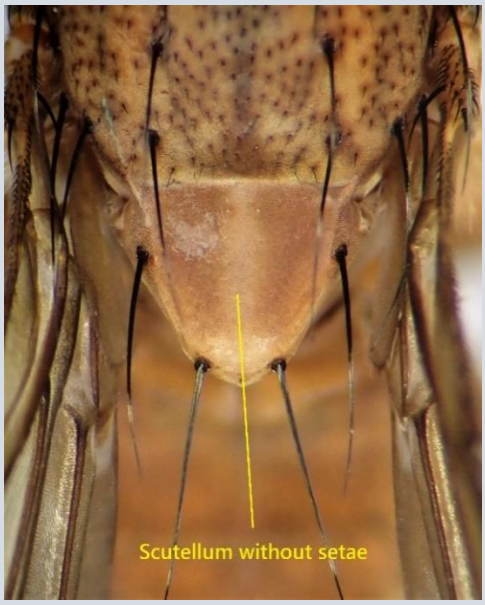
9. Large species (wing length more than 5.5 mm). Male hind femur with ventral hairs at least as long as width of femur. Apex of R2+3 with an obvious dark spot. **10**



— Medium-sized species (wing length less than 5.5 mm). Male hind femur with ventral hairs approx. half width of femur. Apex of R2+3 with at most an obscure faint spot. **11**

10. Dark line across base of antennae extending to eye margins. Wings extensively tinged dark-brown, with dark spots and a paler wedge near apex. Male hind femur with ventral hairs much longer than width of femur. A large species with whitish face/genae when fresh. **ustulata**



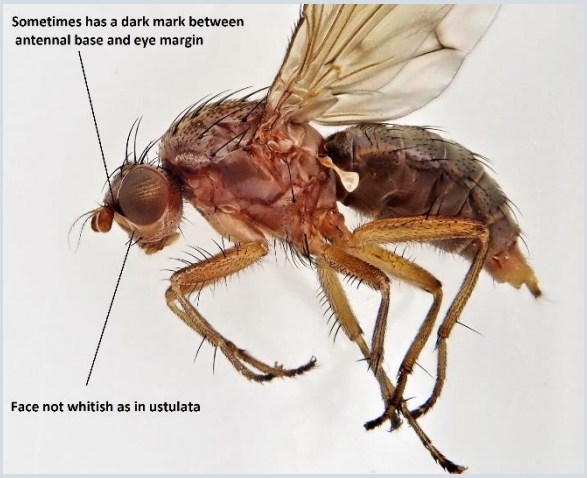


The combination of large size, whitish face, dark mark between the eye and antennal base, darkened wings and bare scutellum make it easy to identify.

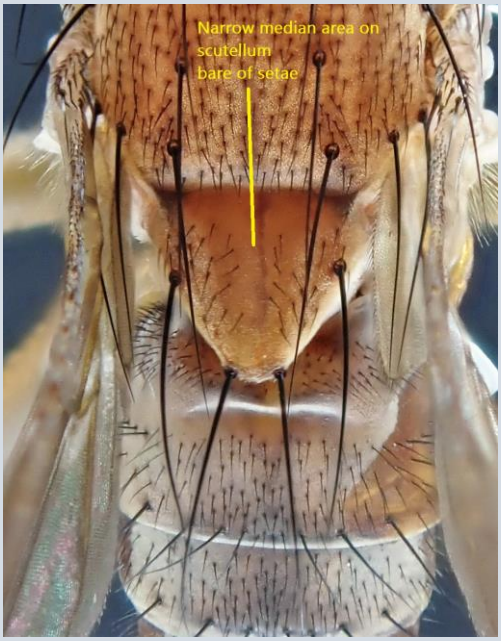




— Wing with spots, but membrane not extensively tinged dark-brown. Male hind femur with ventral hairs as long as width of femur. Scutellum haired, with a narrow bare patch down the middle (compare to *laevifrons*). **imberbis**

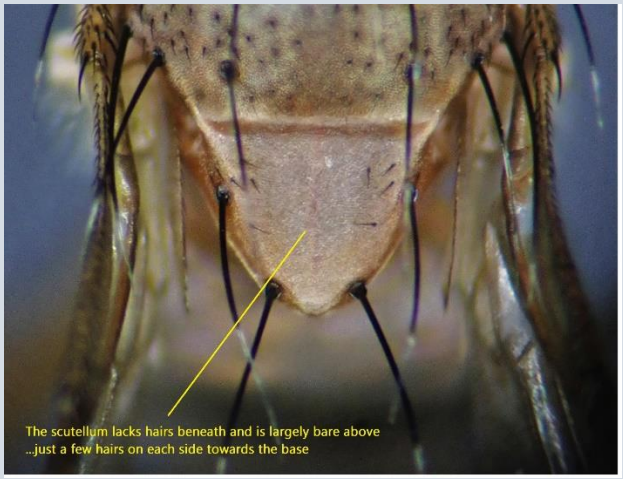








11. Scutellum bare beneath apex. **flavifrons**







— Scutellum with fine pale or dark hairs beneath apex **parva (includes dawnae)**

