

# Identifying soldierflies and allies: robberflies, family Asilidae

*Compiled by Martin C. Harvey for the Soldierflies and Allies Recording Scheme*

*Version 2 at 3 September 2024*

These guides are only possible thanks to the generosity of the brilliant photographers who have allowed their images to be used. Special thanks to Steven Falk and Malcolm Storey, whose photo collections form the backbone for this species guide:

Steven Falk's [photo collections on Flickr](#) – Malcolm Storey's [BioImages website](#)

Other photos included in this guide are by Andy Brown, Arnold Wijker, Colin le Boutillier, Dick Belgers, Fritz Geller-Grimm, Geoffrey Foale, Ian Andrews, James Fowler, Janet Graham, Jeremy Early, Jody Robert, Kevin McGee, Malcolm Smart, Marc de Winkel, Mark Gurney, Martin Harvey, Nigel Jones, Paul Kitchener, Rob Petley-Jones, Simon Van Toller, Sue Taylor, Sylvie Herault and Tim Worfolk.

Species are in alphabetical order. Where there are obvious differences between the sexes a separate page is given for males and females. The pages include distribution maps taken from the recording scheme database as displayed on iRecord, along with summary information about habitats and statuses from the scheme's [provisional atlas](#) (Harvey 2017).

As far as possible, these guides show features that can be seen on live insects in the field, or are likely to be visible in photographs. For comprehensive identification keys and species accounts see:

- [British soldierflies and their allies](#), by Alan Stubbs and Martin Drake (and also the recording scheme's [additional notes](#) on these keys).
- The excellent *Field guide to the robberflies of the Netherlands and Belgium*, by Reinoud van der Broek and André Schulten, was published in English in 2017 but appears to be out of print.

For lots more information on soldierflies and allies go to the [recording scheme website](#), [Twitter \(X\)](#) page or [Facebook](#) group.

For general information and events, and to support the study and conservation of flies, please consider joining [Dipterists Forum](#).

## Records wanted!

Once you have identified your fly, please let the recording scheme have the details! Add to [iRecord](#) or send to the [recording scheme](#) so that we can share the records for conservation and research.

The Soldierflies and Allies Recording Scheme is part of Dipterists Forum



The Soldierflies and Allies Recording Scheme is supported by the UKCEH Biological Records Centre



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Records Centre



UK Centre for  
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# Robberfly overview

This guide covers 27 robberfly species in 15 genera: *Asilus* (1 species), *Choerades* (1 sp.), *Dioctria* (6 sp.), *Dysmachus* (1 sp.), *Eutolmus* (1 sp.), *Laphria* (1 spp.), *Lasiopogon* (1 sp.), *Leptarthrus* (2 spp.), *Leptogaster* (2 spp.), *Machimus* (5 spp.), *Neoitamus* (2 spp.), *Neomochtherus* (1 spp.), *Pamponerus* (1 spp.), *Philonicus* (1 sp.) and *Rhadiurgus* (1 sp.). The *Dioctria* section is an update of a separate ID guide to that genus.

The species in family Asilidae are quite diverse (see images on next page). Most have the typical robberfly shape, with large eyes on the head, a domed thorax, and an elongate abdomen, but they range from the extraordinarily elongate and delicate *Leptogaster* species to the large, broad and very hairy Bumblebee Robberfly, *Laphria flava*. Most have obvious bristles on the legs and thorax, and most are predominantly black and grey, the exception being the yellow, brown and black of the Hornet Robberfly *Asilus crabroniformis*, the largest species in the robberfly family and one of the largest flies in the UK.

Careful checking is sometimes needed to tell the species apart, and when photographing them it is very useful to have side-on views as well as top-down views, so that the colours on the legs and the bristles on the body can be seen.

Many of the species in subfamily Asilinae are quite similar in appearance (genera *Dysmachus*, *Eutolmus*, *Machimus*, *Neoitamus*, *Neomochtherus*, *Pamponerus*, *Philonicus* and *Rhadiurgus*). The leg colours/markings provide a starting point for separating this group, see the table on the next page.

All robberflies are predators of other insects, both as adults and as larvae. Adult robberflies will take a wide range of prey, sometimes including other robberflies. The species in this guide include some that are widespread and frequent, and others that are habitat specialists, some with a very restricted range (see table below).

The first robberfly to emerge each year is *Lasiopogon cinctus*, which flies from April to June. Most species are on the wing between May and August, with some still active through to October.

## Robberflies with restricted habitat preferences and/or ranges:

Species	Habitat	Distribution
<a href="#"><i>Laphria flava</i></a>	Pine woods, woodland edge	Scottish highlands
<a href="#"><i>Lasiopogon cinctus</i></a>	Sandy soils (with early flight period)	Widespread in England and Wales
<a href="#"><i>Neoitamus cothurnatus</i></a>	Open woodland, bracken slopes	Last seen in south Wales in 1997
<a href="#"><i>Neomochtherus pallipes</i></a>	Grassland with exposed rock	Isolated records in Devon, Berkshire, Shropshire
<a href="#"><i>Pamponerus germanicus</i></a>	Almost entirely confined to sand dunes	Coasts (mostly west coast and north-east coast)
<a href="#"><i>Philonicus albiceps</i></a>	Almost entirely confined to sand dunes	Coasts
<a href="#"><i>Rhadiurgus variabilis</i></a>	Woodland margins	Scottish highlands (formerly more widespread in Scotland)



A typical robberfly

© Martin Harvey

Many (not all!) robberflies have large eyes on the head, a domed thorax, and an elongate abdomen. The legs are usually (not always!) obviously bristly.

Guessing guide for subfamily Asilinae (*Machimus* and similar robberflies), based on leg colour

Femora	Tibiae	Species	Notes
All black	All black	<a href="#"><i>Dysmachus trigonus</i></a>	Shorter abdomen, more bristly on thorax and abdomen Female: ovipositor <b>broad and flattened</b>
		<a href="#"><i>Machimus rusticus</i></a> (very slightly orange at base of tibia)	Bristles at tip of scutellum <b>pale</b> Bristles on legs <b>mixed dark and pale</b> Male: 'tab' under the tip of abdomen <b>present</b>
		<a href="#"><i>Eutolmus rufibarbis</i></a>	Bristles at tip of scutellum <b>dark</b> Bristles on legs <b>dark</b> Male: 'tab' under the tip of abdomen <b>present</b> Female: ovipositor <b>broad and flattened</b>
		<a href="#"><i>Philonicus albiceps</i></a>	Bristles at tip of scutellum <b>pale</b> Bristles on legs <b>pale</b> Female: ovipositor <b>spiny at tip</b>
	Contrasting orange	<a href="#"><i>Neoitamus cothurnatus</i></a> and <a href="#"><i>cyanurus</i></a>	Wings <b>clear</b> Male: genitalia distinctive Female: ovipositor <b>very long and narrow</b>
		<a href="#"><i>Pamponerus germanicus</i></a>	Wings <b>shaded</b> Male: genitalia distinctive
		<a href="#"><i>Rhadiurgus variabilis</i></a>	Bristles <b>dark</b> Male: genitalia distinctive Female: ovipositor <b>short</b>
Black and orange	Black and orange	<a href="#"><i>Machimus arthriticus</i></a> (variable amount of orange at base of tibia)	Leg bristles mostly <b>pale</b>
		<a href="#"><i>Machimus atricapillus</i></a>	Bristles at tip of scutellum <b>dark</b> Bristles on legs <b>dark</b> Bristles on frons (top of head) <b>dark</b> Male: 'tab' under the tip of abdomen <b>present</b>
		<a href="#"><i>Machimus cingulatus</i></a>	Bristles at tip of scutellum <b>dark</b> Bristles on legs <b>dark</b> Bristles on frons (top of head) <b>half pale, half dark</b>
		<a href="#"><i>Machimus cowini</i></a>	Bristles at tip of scutellum <b>dark</b> Bristles on legs <b>dark</b> Bristles on frons (top of head) <b>dark</b>
		<a href="#"><i>Neomochtherus pallipes</i></a>	Legs <b>predominantly orange</b> Bristles at tip of scutellum <b>dark</b> Bristles on legs <b>dark</b> Bristles on frons (top of head) <b>short, difficult to see</b>

**Names for genus *Machimus***  
In the UK checklist we have five species in genus *Machimus*, but these are subject to differing taxonomic interpretations.

Species *atricapillus*, *cingulatus* and *cowini* are usually put in genus *Tolmerus* outside the UK.

Species *arthriticus* is sometimes put in genus *Neoepitriptus*.

# Pointers for recognising the robberfly genera



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***Asilus***: distinctive colours, very large



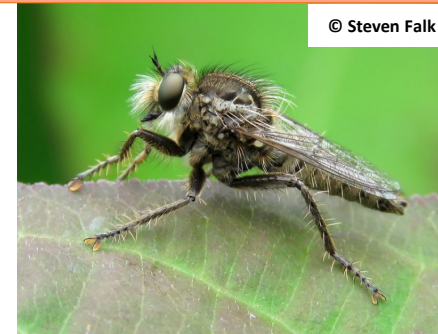
© Steven Falk

***Choerades***: moderate size, golden hairs on abdomen – compare *Dioctria* and *Lasiopogon*



© Martin Harvey

***Dioctria***: moderate size, not very hairy – compare *Choerades* and *Lasiopogon*



© Steven Falk

***Dysmachus***: moderate size, grey, very hairy/bristly



© Martin Harvey

***Eutolmus***: fairly large, legs black – compare *Machimus*, *Philonicus* and *Rhadiurgus*



© Steven Falk

***Laphria***: large size, distinctive bumblebee mimic



© Steven Falk

***Lasiopogon***: small, flies early in year on sandy soils – compare *Choerades* and *Dioctria*



© Steven Falk

***Leptarthrus***: small, abdomen often curved down



© Janet Graham

***Leptogaster***: small, with long claws, very elongate and thin, almost like a damselfly



© Martin Harvey

***Machimus***: moderate to large, legs with reddish colours or all black – compare *Eutolmus*, *Philonicus* and *Rhadiurgus*



© Steven Falk

***Neoitamus***: fairly large, legs contrasting orange and black



© Nigel Jones

***Neomochtherus***: fairly large, legs bright orange



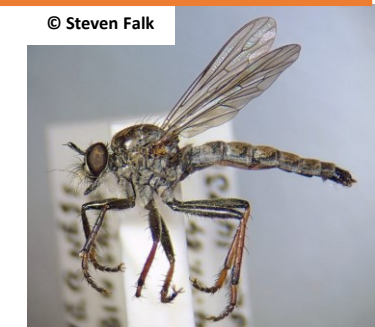
© Sylvie Herault

***Pamponerus***: large, legs contrasting orange and black, wings partly white, partly shaded



© Martin Harvey

***Philonicus***: large, legs black, on sand dunes – compare *Machimus*, *Philonicus* and *Rhadiurgus*



© Steven Falk

***Rhadiurgus***: fairly large, legs black and orange (Scottish woodland edges only) – compare *Machimus*, *Philonicus* and *Rhadiurgus*

© Geoffrey Foale  
via [iRecord](#)

♂



antennae  
yellow at base,  
black at tip

The largest robberfly,  
15–35 mm long, with  
very distinctive  
'hornet' colours.

♀



© Geoffrey Foale  
via [iRecord](#)

- ID difficulty: 1
- Flight period: late Jul to early Oct, peak Aug to early Sep
- GB threat: Least Concern
- southern England and Wales
- heaths, calcareous grassland, neutral grassland

***Asilus crabroniformis* (Hornet Robberfly)**

© Steven Falk

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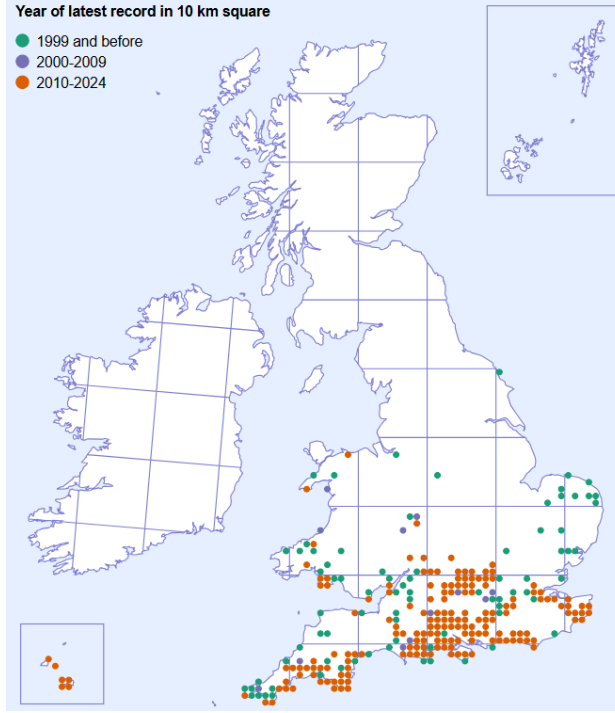


grey triangle  
shading on  
wing edges

♀

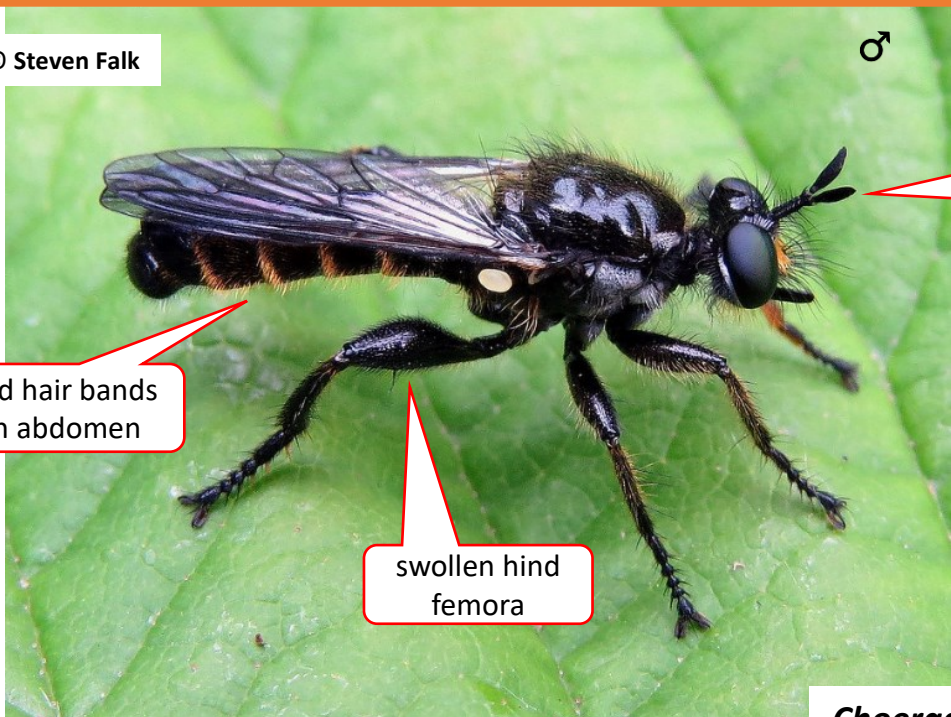


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♂

antennae blunt-tipped, with no arista

Sometimes confused with *Dioctria* and *Lasiopogon*

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swollen hind femora

gold hair bands on abdomen

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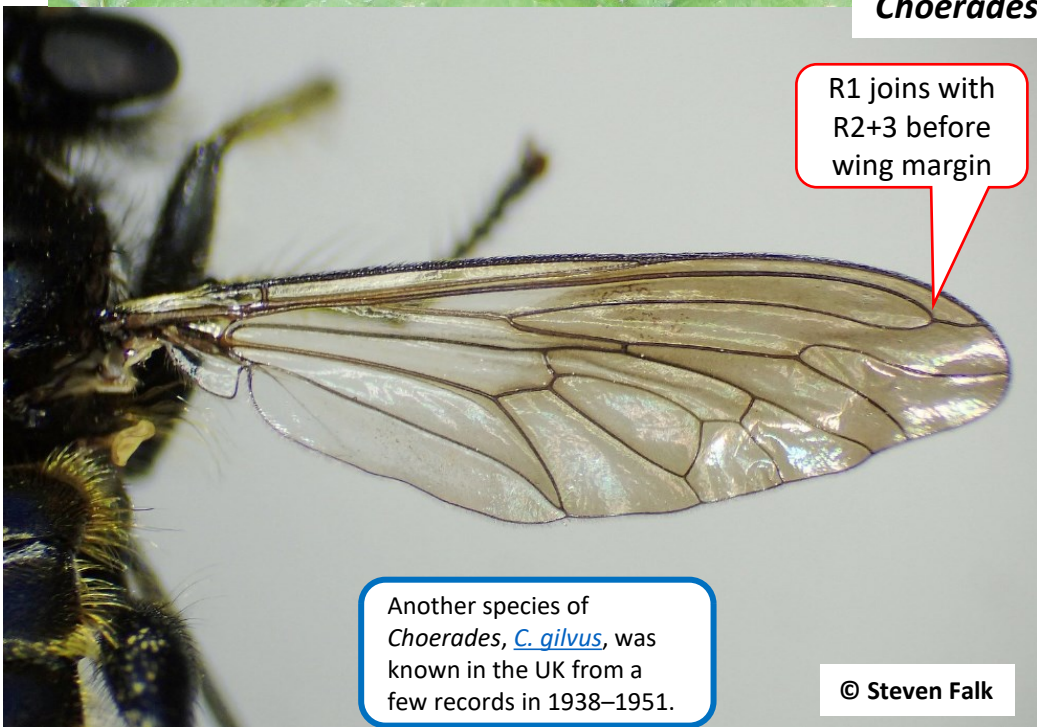


♂

10–15 mm long

- ID difficulty: 2
- Flight period: mid May to early Nov, peak late Jun to Aug
- GB threat: Least Concern
- southern England, midlands
- ancient oak woodland

### *Choerades marginatus* (Golden-haired Robberfly)



R1 joins with R2+3 before wing margin

Another species of *Choerades*, *C. gilvus*, was known in the UK from a few records in 1938–1951.

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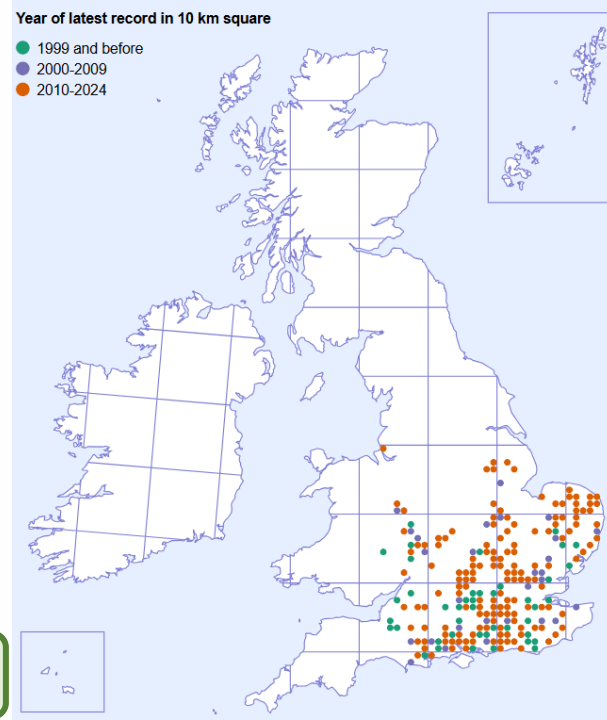


♀

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Year of latest record in 10 km square

- 1999 and before
- 2000-2009
- 2010-2024



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♂

legs almost entirely black

Typically (not always!) found among low vegetation in grassland

**male:** eyes usually distinctly blue

mystax hairs black or brown (can be pale brown, not usually white)

[Steven Falk link](#)

♂

R2+3 vein

R1 vein

**male:** wings strongly darkened at base

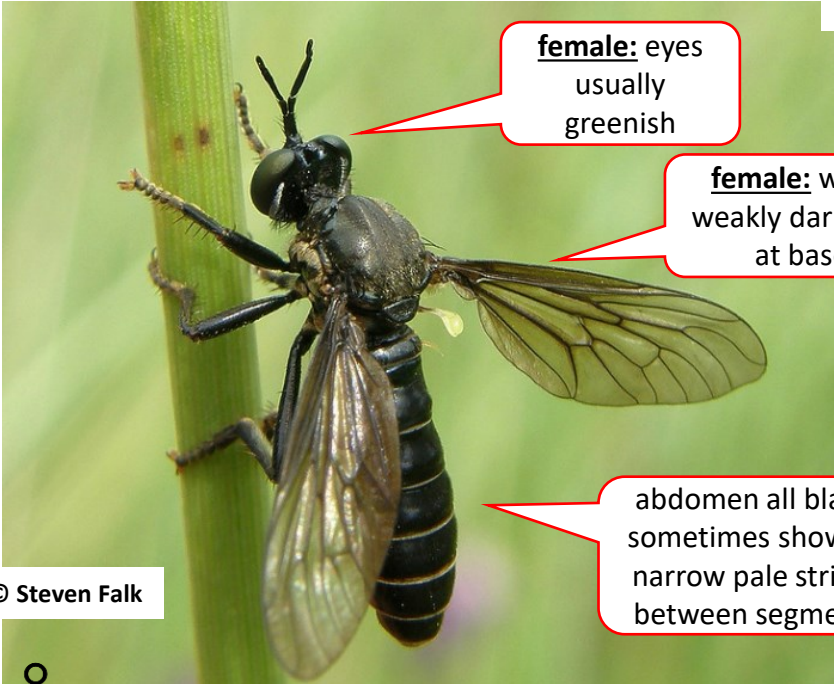


All *Dioctria* have R1 separate from R2+3 (compare with *Choerades*)

*Dioctria atricapilla* (Violet Black-legged Robberfly)

10–12 mm long

- ID difficulty: 2
- Flight period: mid May to mid Sep, peak Jun to mid Jul
- GB threat: Least Concern
- mainly England
- open grassland, woodland rides



♀

**female:** eyes usually greenish

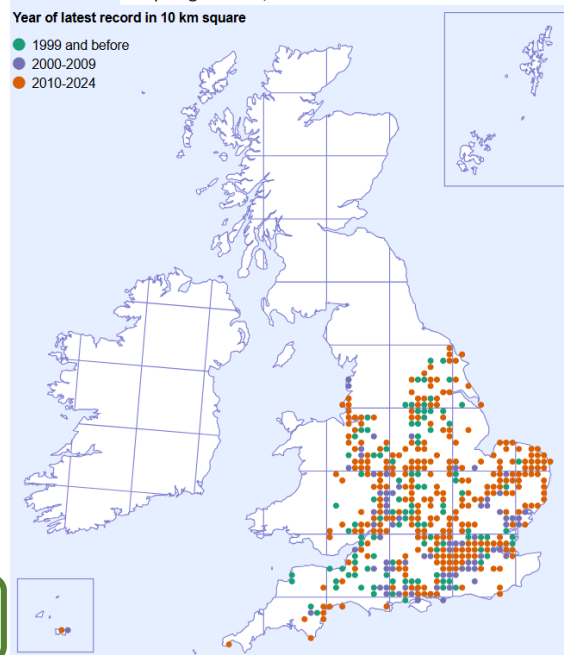
**female:** wings weakly darkened at base

abdomen all black, sometimes showing narrow pale stripes between segments



© Martin Harvey

silver strip **with shiny gap** above the mid coxa

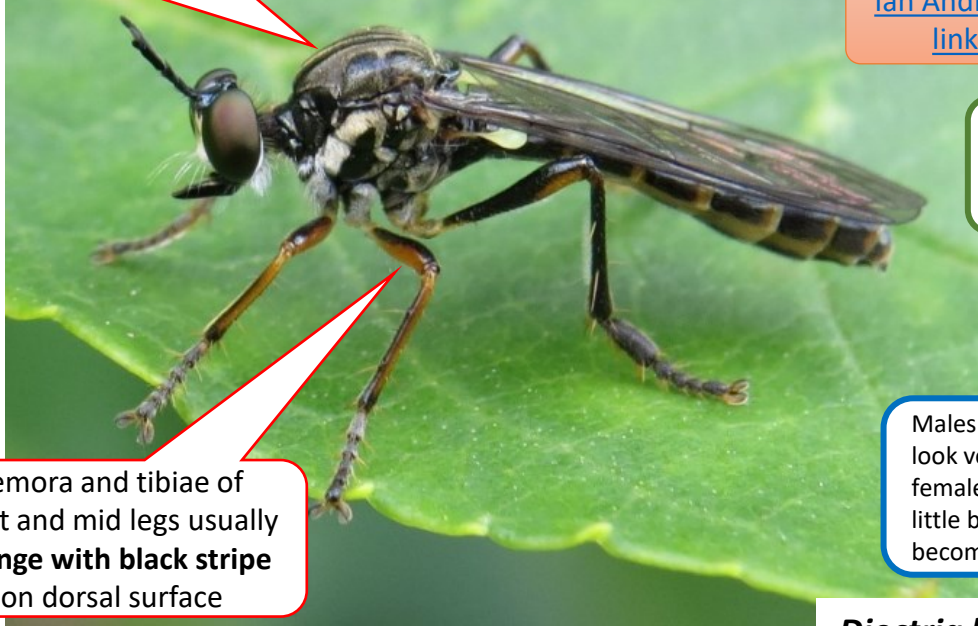


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thorax mostly dusted, with obvious shiny stripes

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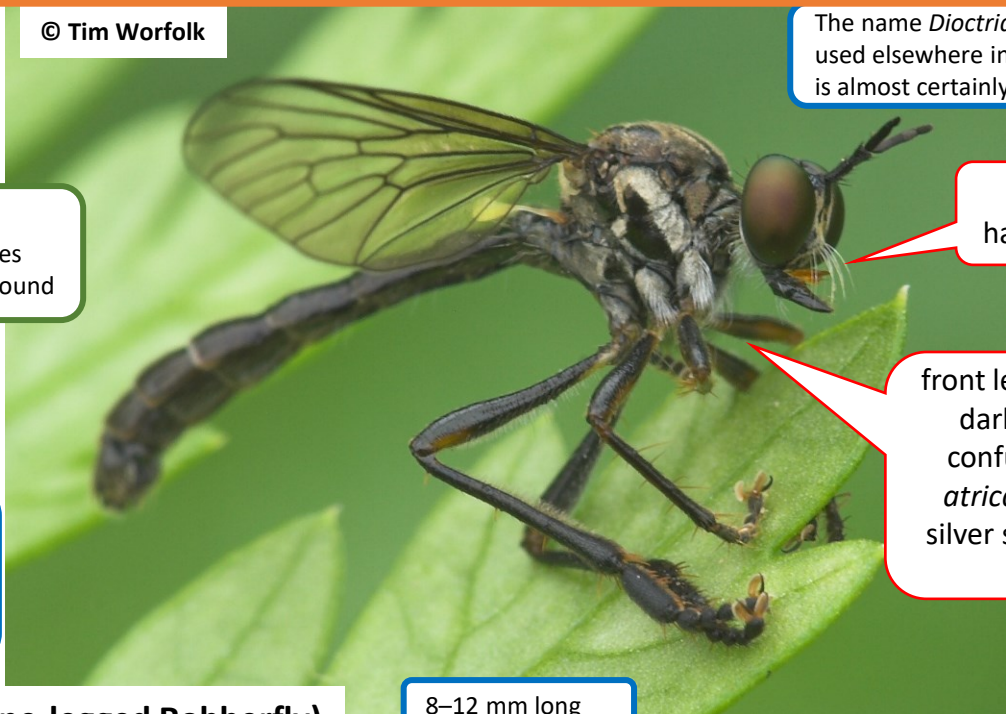


Typically (not always!) found in scrub and trees around 1.5m above ground

Males and females can look very similar – the female's abdomen is a little broader and can become swollen with eggs

femora and tibiae of front and mid legs usually orange with black stripe on dorsal surface

© Tim Worfolk



The name *Dioctria hyalipennis* is used elsewhere in Europe for what is almost certainly the same species

mystax hairs white

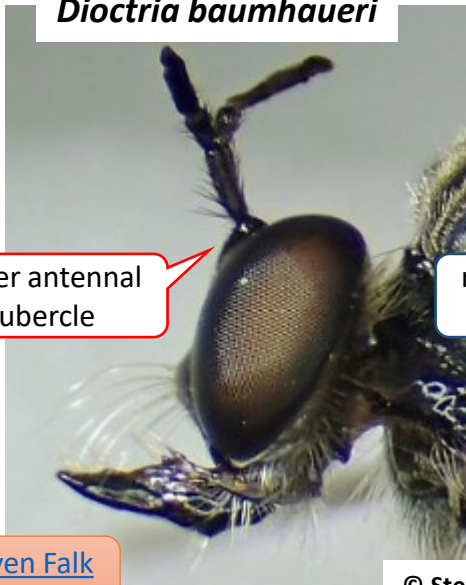
front legs can be very dark, leading to confusion with *D. atricapilla* – check silver strip on side of thorax

8–12 mm long

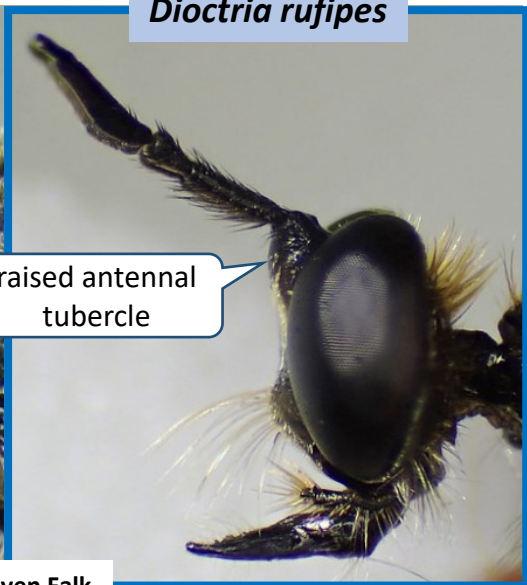
### *Dioctria baumhaueri* (Stripe-legged Robberfly)

#### *Dioctria baumhaueri*

#### *Dioctria rufipes*



flatter antennal tubercle

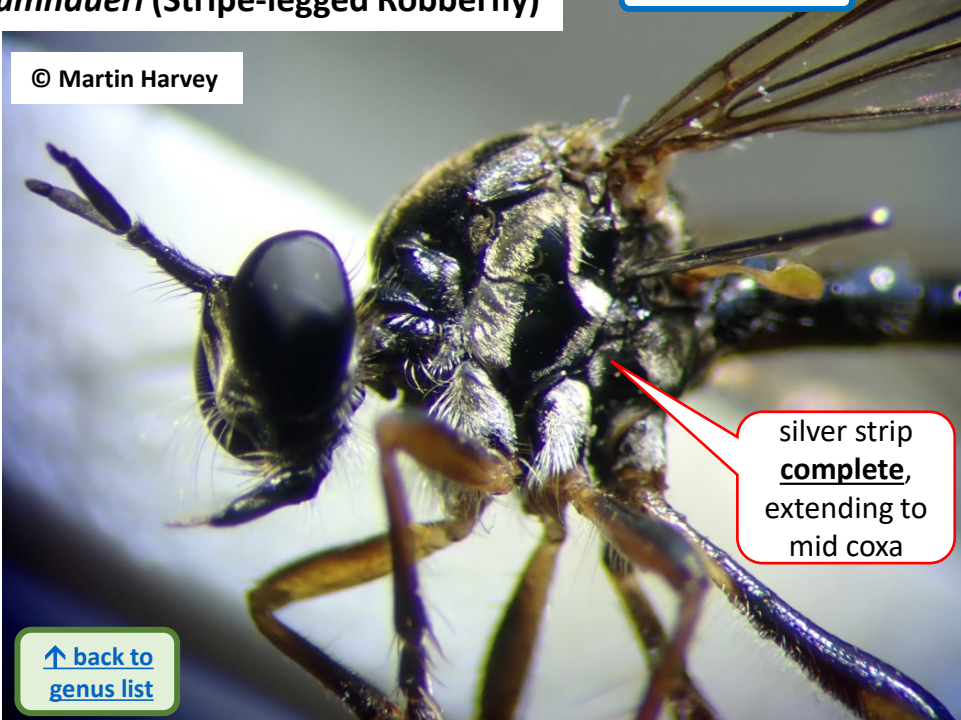


raised antennal tubercle

© Steven Falk

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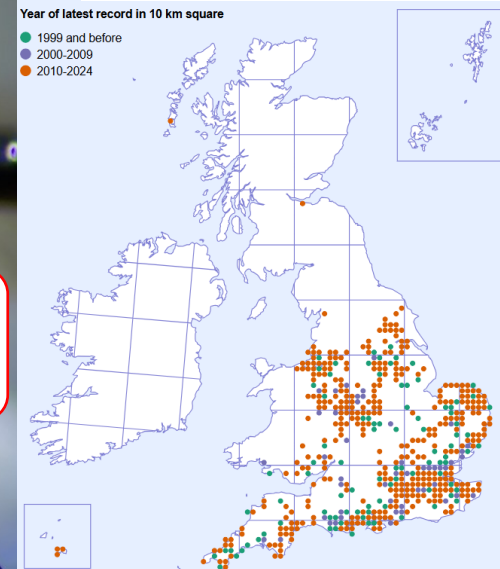
© Martin Harvey



silver strip **complete**, extending to mid coxa

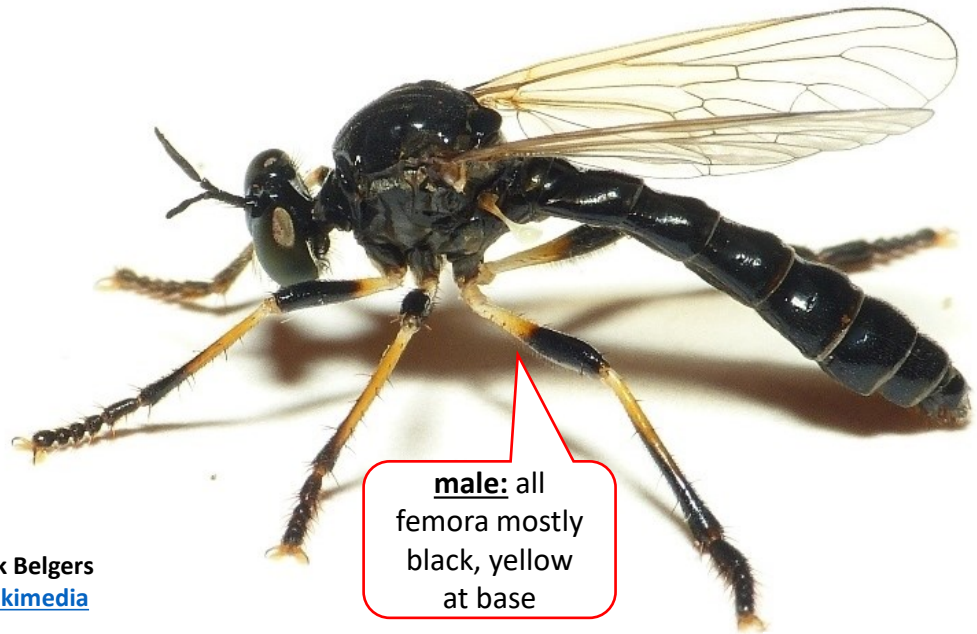
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- ID difficulty: 2
- Flight period: early May to Aug, peak late Jun to early Jul
- GB threat: Least Concern
- mainly England
- edges of woods and scrub





♂



**male:** all femora mostly black, yellow at base

© Dick Belgers via [Wikimedia](#)

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♂

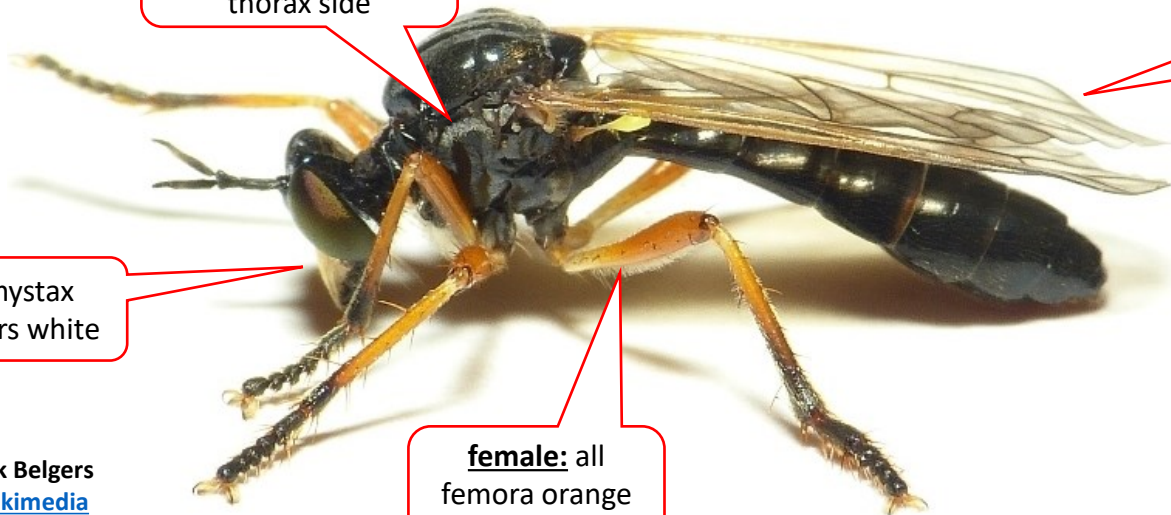


12–16 mm long

- ID difficulty: 3
- Flight period: May to Jul
- GB threat: Least Concern • GB rarity: Nationally Scarce
- scattered
- wet woodland, river banks

### *Dioctria cothurnata* (Scarce Red-legged Robberfly)

♀



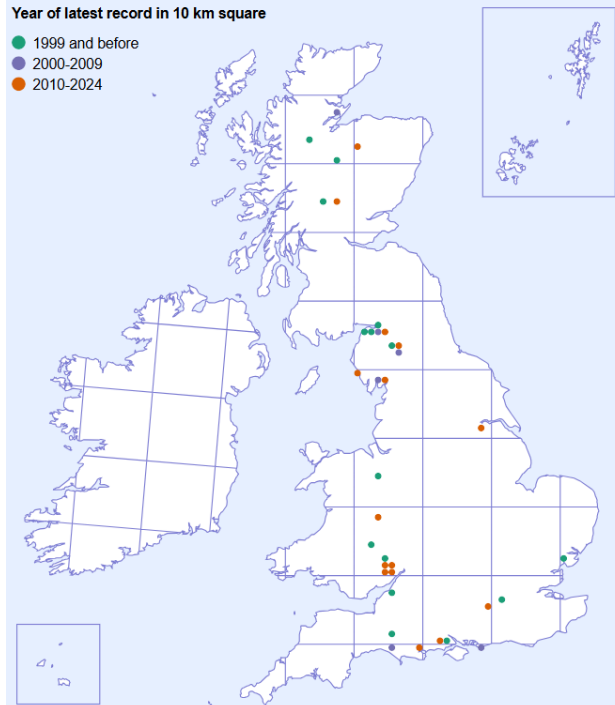
silver strip **confined to top margin** of thorax side

mystax hairs white

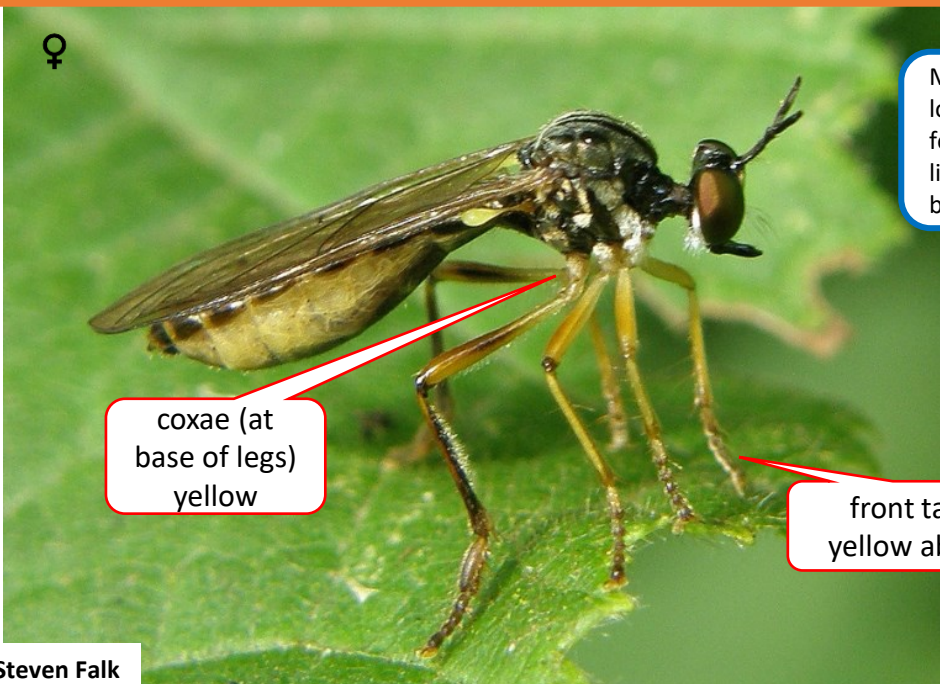
**female:** all femora orange / yellow

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wings clear (darkened in the similar *D. oelandica*)



[↑ back to genus list](#)



♀

coxae (at base of legs) yellow

Males and females can look very similar – the female's abdomen is a little broader and can become swollen with eggs

relatively small and delicate robberflies

front tarsi yellow above

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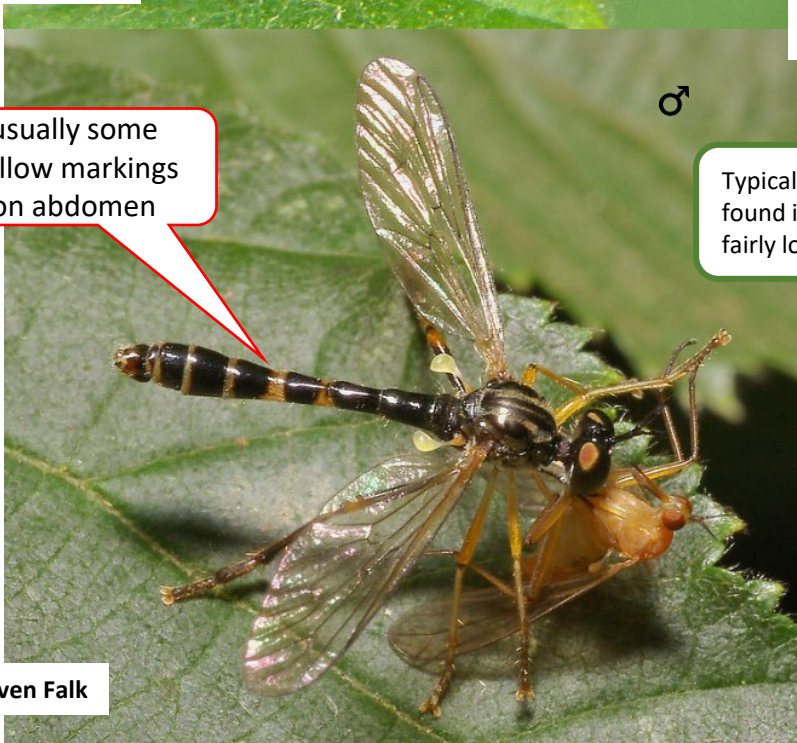
♀

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9–12 mm long

silver strip **with shiny gap** above the mid coxa

***Dioctria linearis* (Small Yellow-legged Robberfly)**

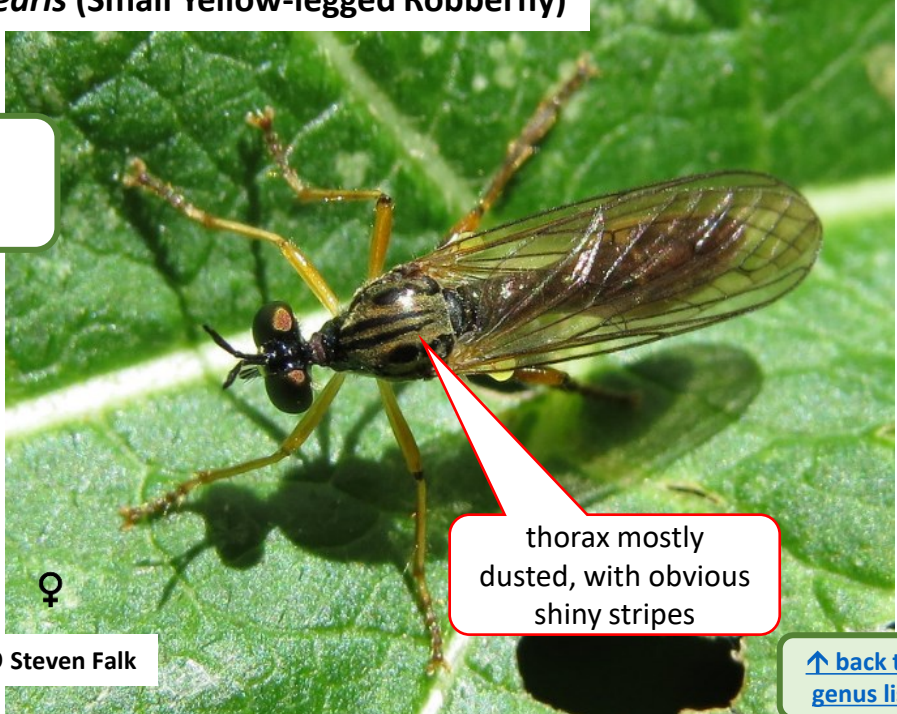


♂

usually some yellow markings on abdomen

Typically (not always!) found in scrub and trees fairly low down

© Steven Falk

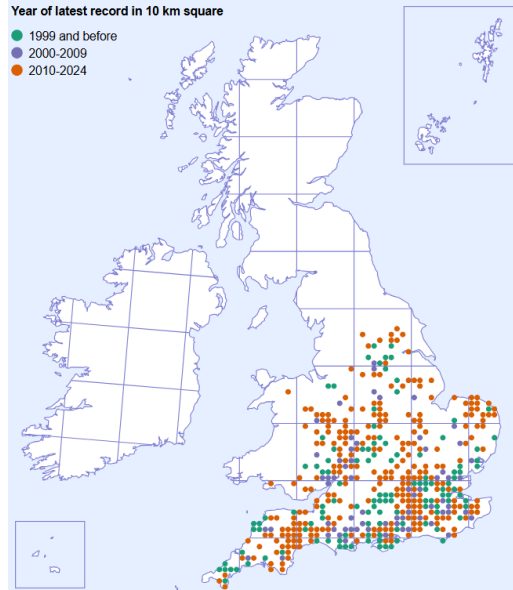


♀

© Steven Falk

thorax mostly dusted, with obvious shiny stripes

- ID difficulty: 2
- Flight period: mid May to mid Aug, peak mid Jun to mid Jul
- GB threat: Least Concern
- mainly southern England and midlands
- dappled shade in woodland

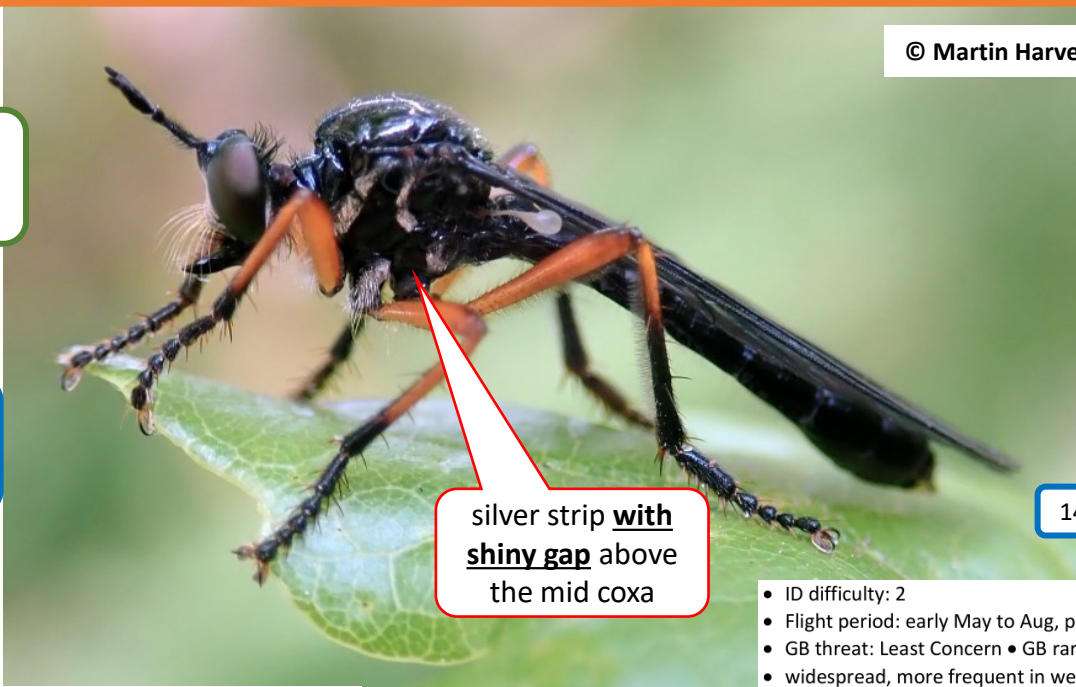


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Typically (not always!) found in scrub and trees at least 2m above ground

The largest of the *Dioctria* robberflies, 14–15mm long



© Martin Harvey

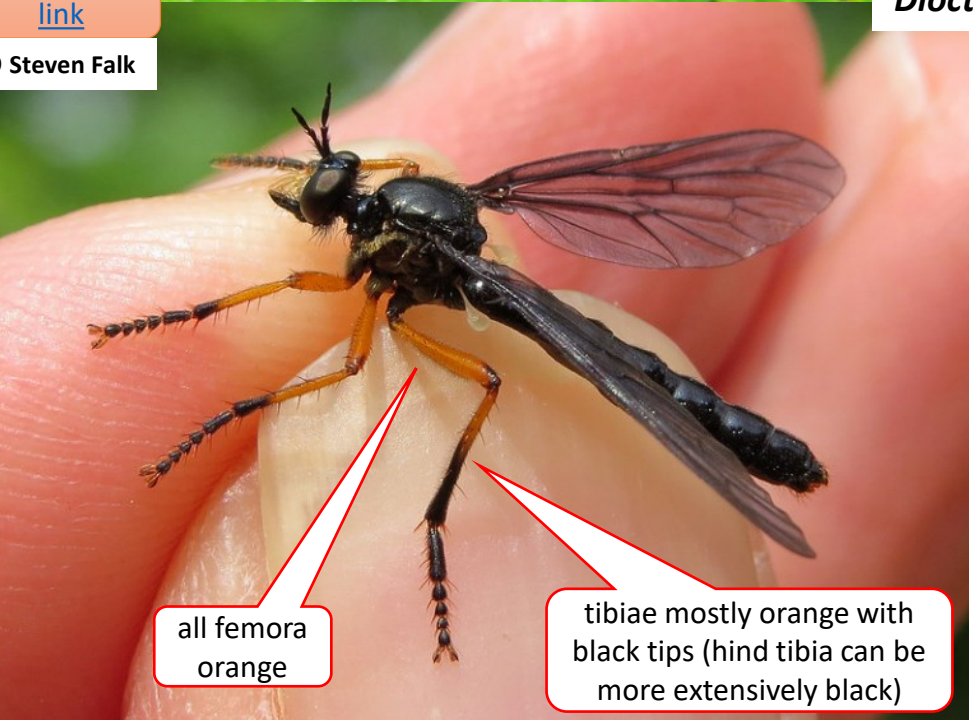
silver strip **with shiny gap** above the mid coxa

14–18 mm long

- ID difficulty: 2
- Flight period: early May to Aug, peak in Jun
- GB threat: Least Concern • GB rarity: Nationally Scarce
- widespread, more frequent in west
- oak woodland

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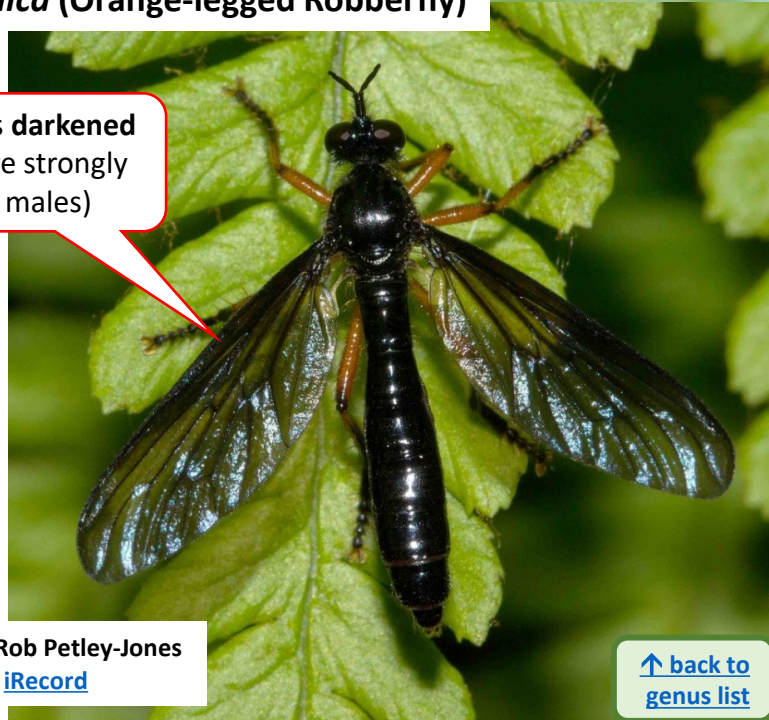
### *Dioctria oelandica* (Orange-legged Robberfly)



© Steven Falk

all femora orange

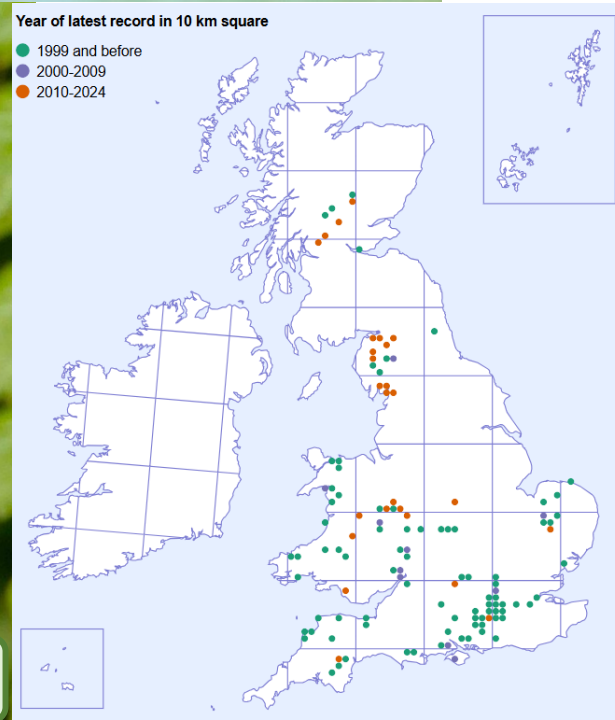
tibiae mostly orange with black tips (hind tibia can be more extensively black)



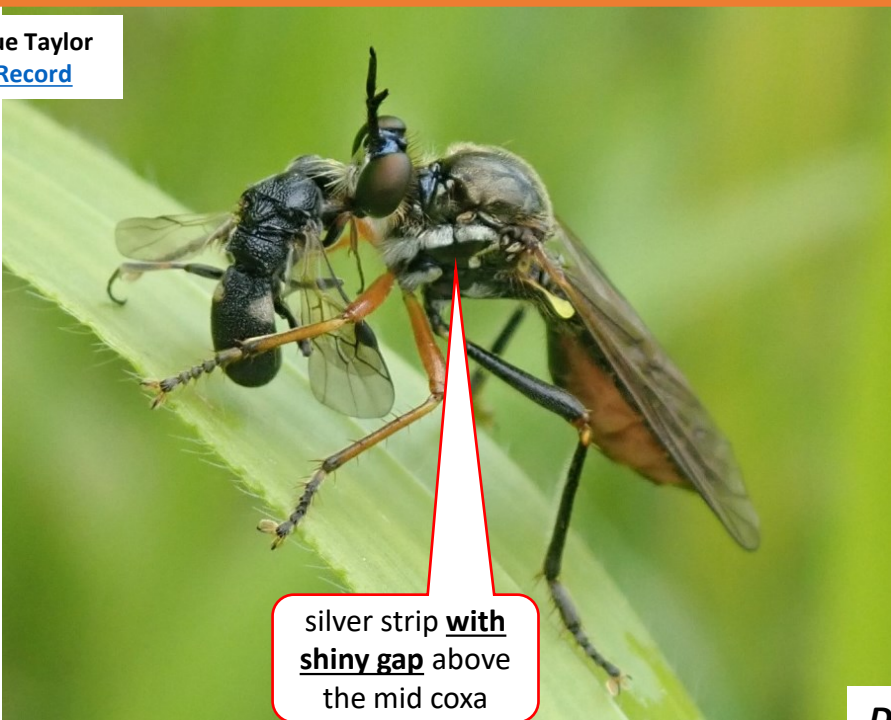
wings **darkened** (more strongly in males)

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via [iRecord](#)



silver strip **with shiny gap** above the mid coxa

Typically (not always!) found in tall vegetation and scrub up to 1m above ground

mystax hairs white

femora and tibiae of front two pairs of legs almost entirely clear orange

Males and females can look very similar – the female's abdomen is a little broader and can become swollen with eggs

12–14 mm long

### *Dioctria rufipes* (Red-legged Robberfly)



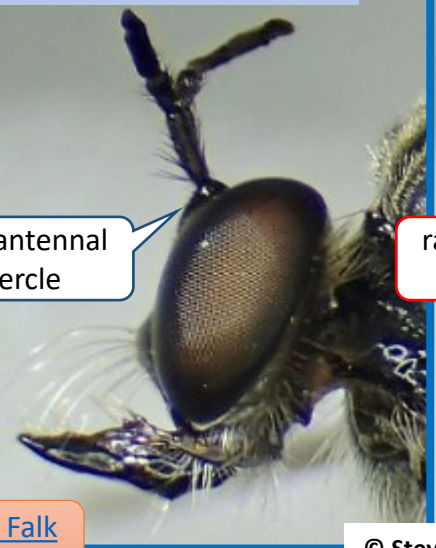
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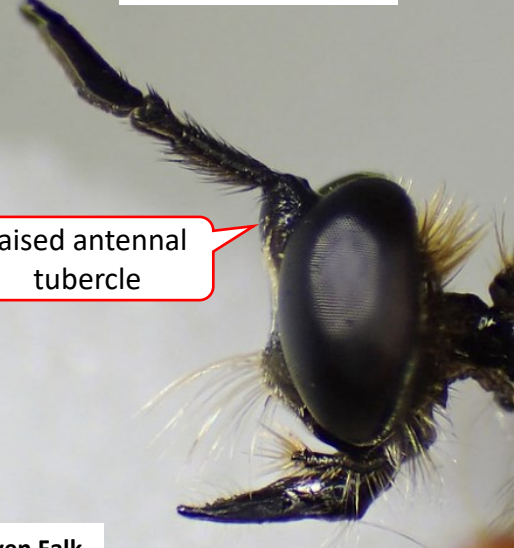
- ID difficulty: 3
- Flight period: early May to early Aug, peak in late May and Jun
- GB threat: Least Concern
- widespread in England, local in Wales and Scotland
- grassland with scrub, woodland margins

### *Dioctria baumhaueri*

### *Dioctria rufipes*



flatter antennal tubercle

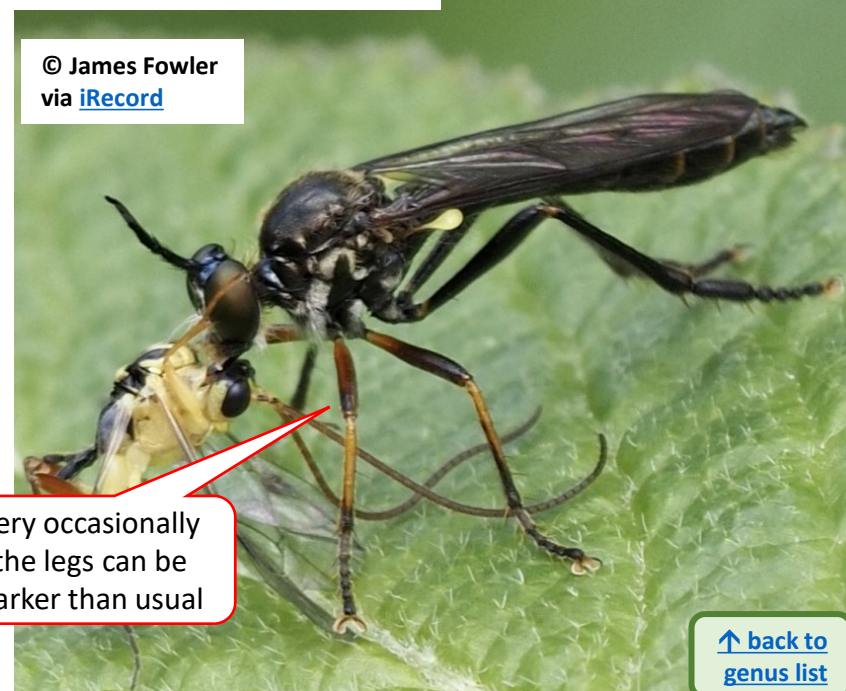


raised antennal tubercle

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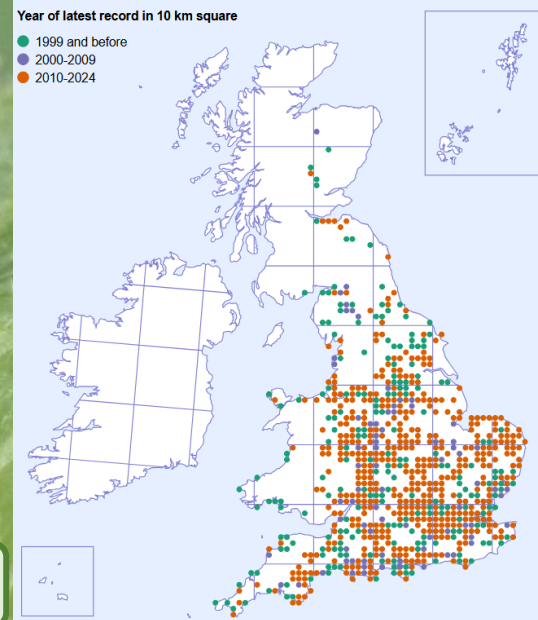
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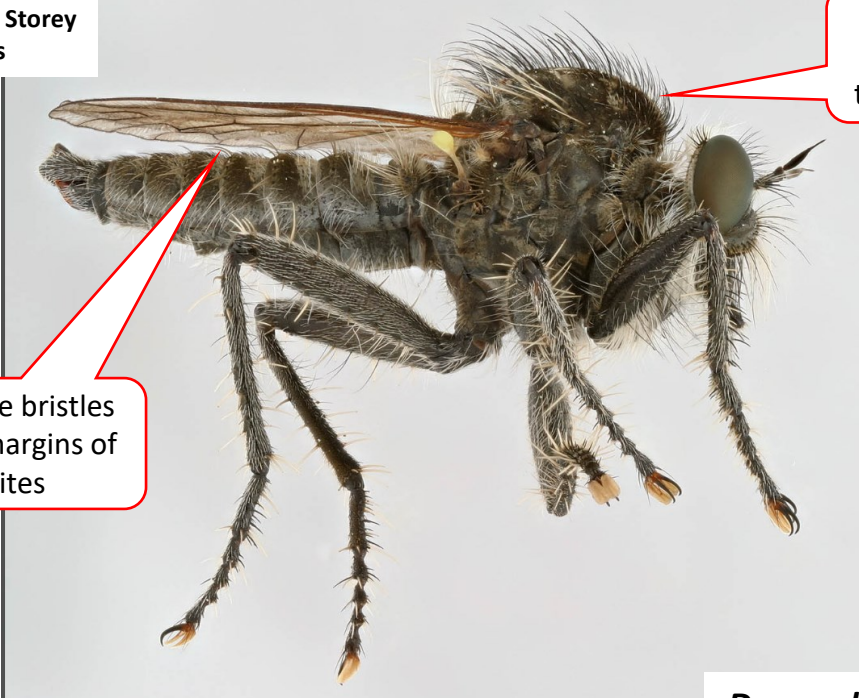


very occasionally the legs can be darker than usual

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hairs at front of thorax **longer** than tibia is wide

long white bristles on hind margins of tergites

[Biolimages link](#)

[Steven Falk link](#)

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legs **entirely black**, with **bristles mostly white**, some black

10–15 mm long

- ID difficulty: 2
- Flight period: May to mid Sep, peak in Jun and Jul
- GB threat: Least Concern
- very widespread, more frequent in south
- sandy soils: heaths and dunes, mainly coastal in north

*Dysmachus trigonus* (Fan-bristled Robberfly) - MALE

[go to female](#)



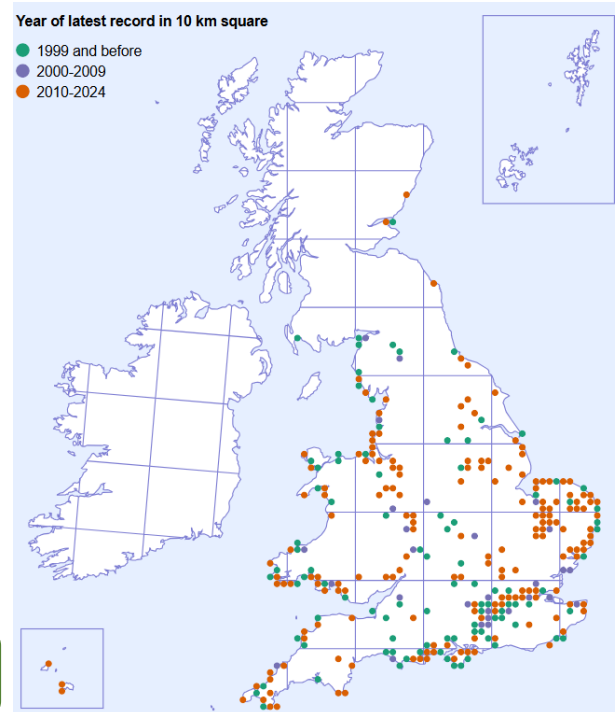
grey dusting at sides, forming black 'triangles' at base of each tergite

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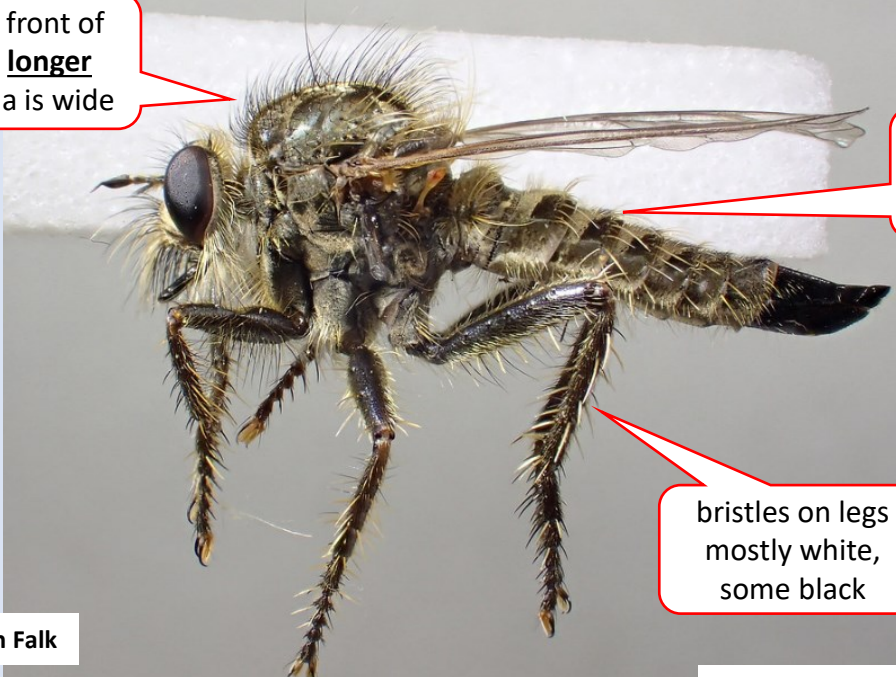


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hairs at front of thorax **longer** than tibia is wide



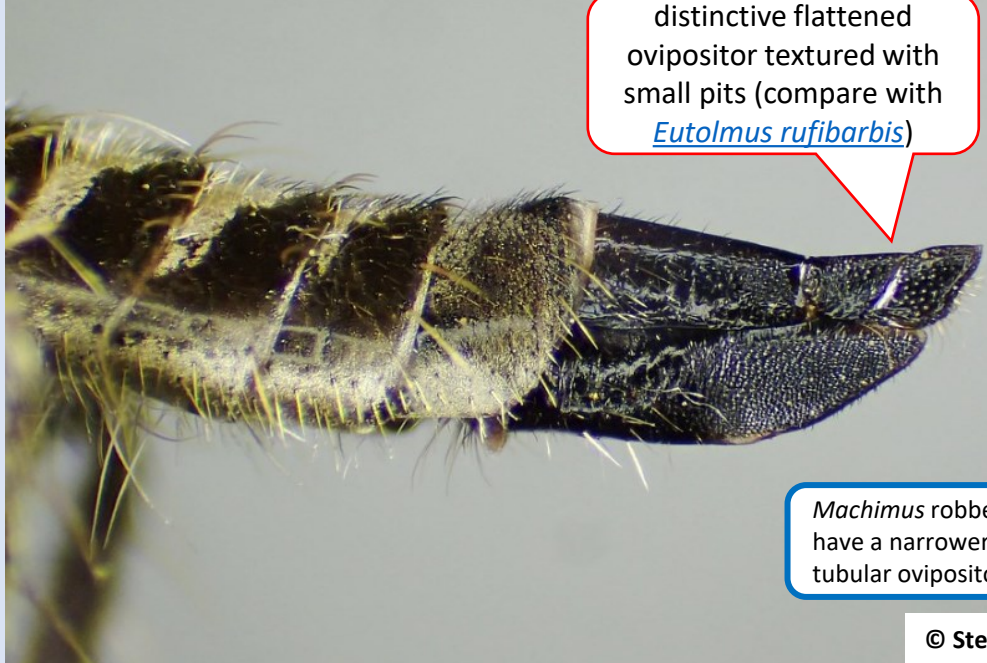
long white bristles on hind margins of tergites

bristles on legs mostly white, some black

[Steven Falk link](#)

© Steven Falk

distinctive flattened ovipositor textured with small pits (compare with [Eutolmus rufibarbis](#))

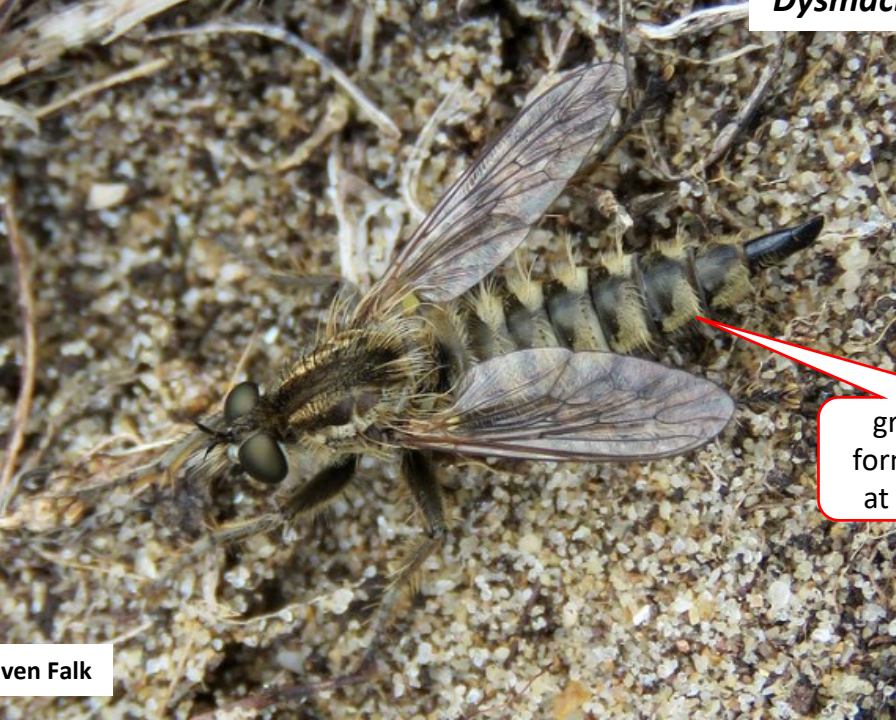


*Machimus* robberflies have a narrower, more tubular ovipositor

© Steven Falk

***Dysmachus trigonus* (Fan-bristled Robberfly) - FEMALE**

[go to male](#)



grey dusting at sides, forming black 'triangles' at base of each tergite

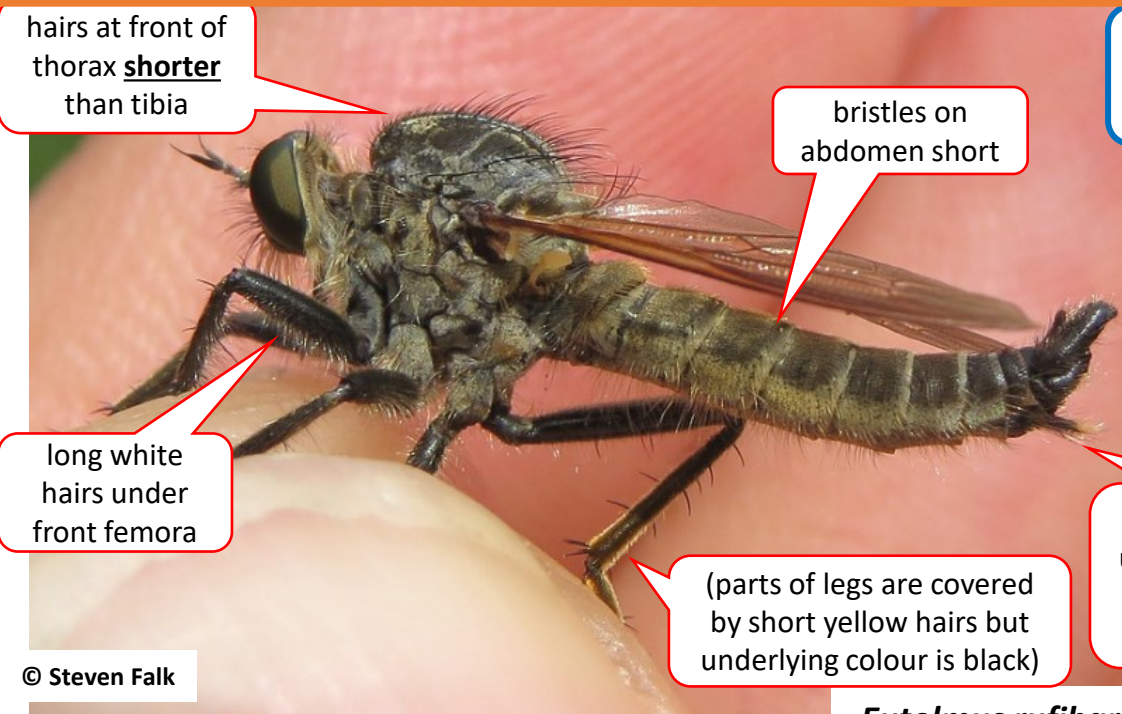
© Steven Falk



© Malcolm Storey / Biolmages

[Biolmages link](#)

[↑ back to genus list](#)

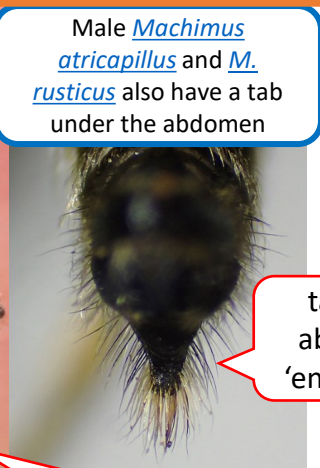


hairs at front of thorax **shorter** than tibia

bristles on abdomen short

long white hairs under front femora

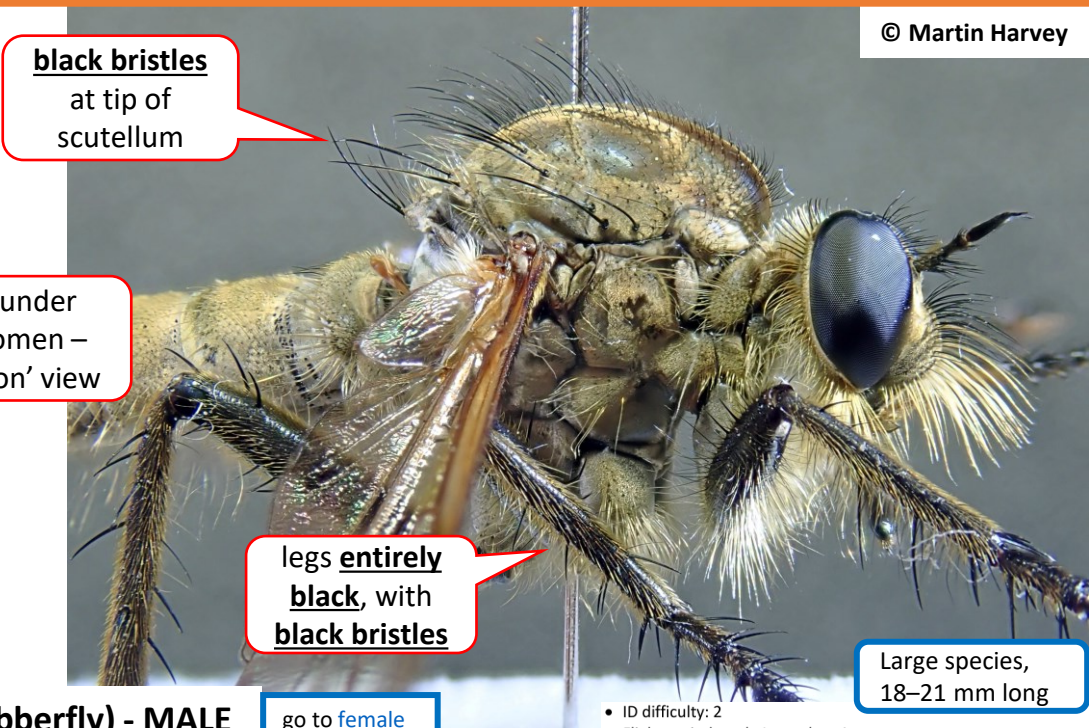
(parts of legs are covered by short yellow hairs but underlying colour is black)



Male *Machimus atricapillus* and *M. rusticus* also have a tab under the abdomen

tab under abdomen – 'end-on' view

narrow extended tab under abdomen, with a tuft of both black and yellowish hairs



**black bristles** at tip of scutellum

legs **entirely black**, with **black bristles**

Large species, 18–21 mm long

***Eutolmus rufibarbis* (Golden-tabbed Robberfly) - MALE**

go to [female](#)

- ID difficulty: 2
- Flight period: early Jun to late Aug
- GB threat: Least Concern • GB rarity: Nationally Scarce
- south-eastern England
- heaths, with some grassy areas, edges of woodland on sandy soil

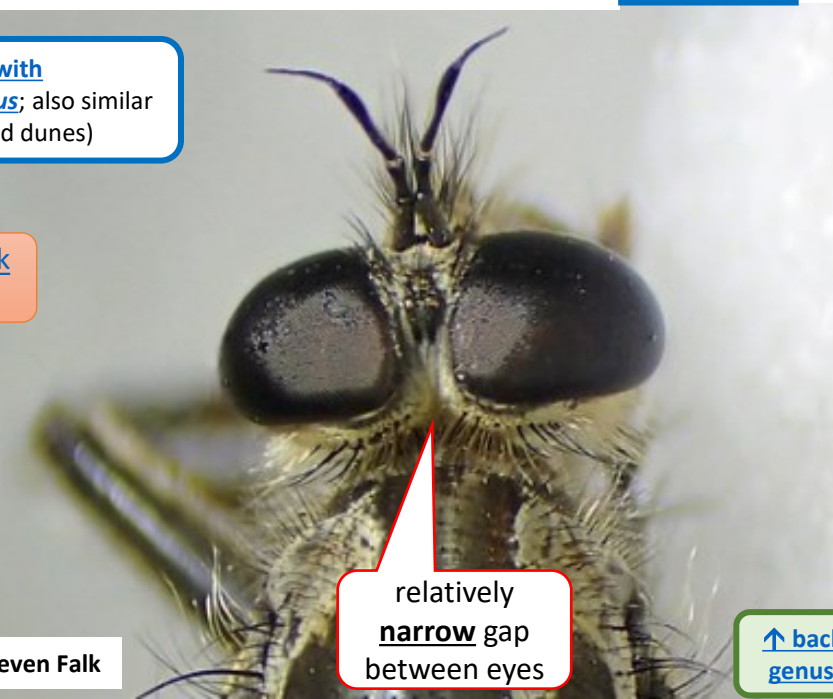


© Steven Falk

abdomen with fairly even grey-brown dusting

See [comparison with Machimus rusticus](#); also similar to *Philonicus* (sand dunes)

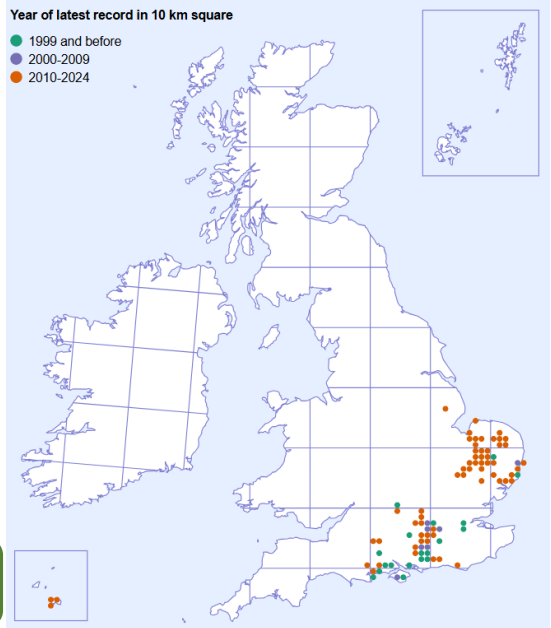
[Steven Falk link](#)

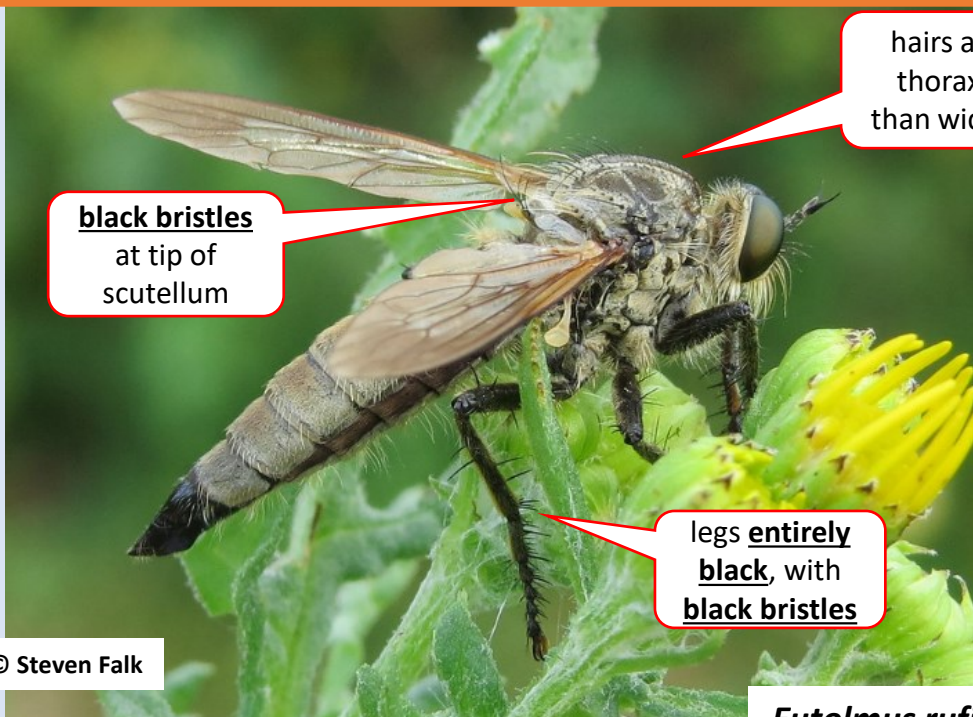


© Steven Falk

relatively **narrow** gap between eyes

[back to genus list](#)



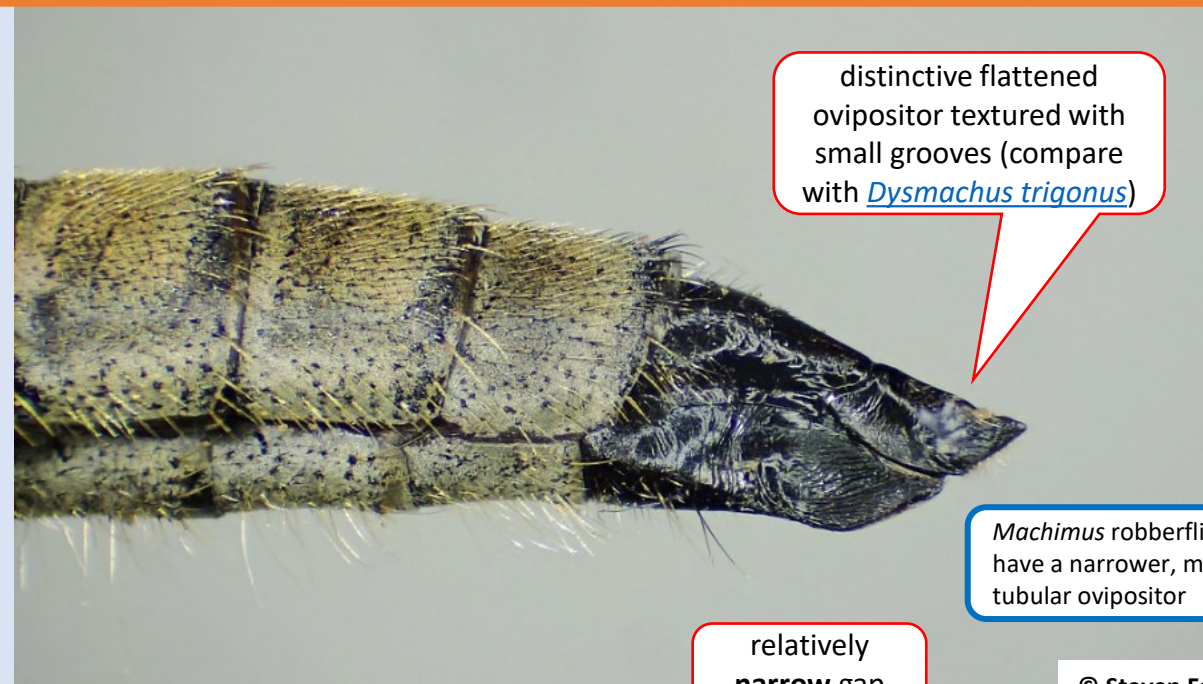


© Steven Falk

hairs at front of thorax **shorter** than width of tibia

**black bristles** at tip of scutellum

legs **entirely black**, with **black bristles**



distinctive flattened ovipositor textured with small grooves (compare with *Dismachus trigonus*)

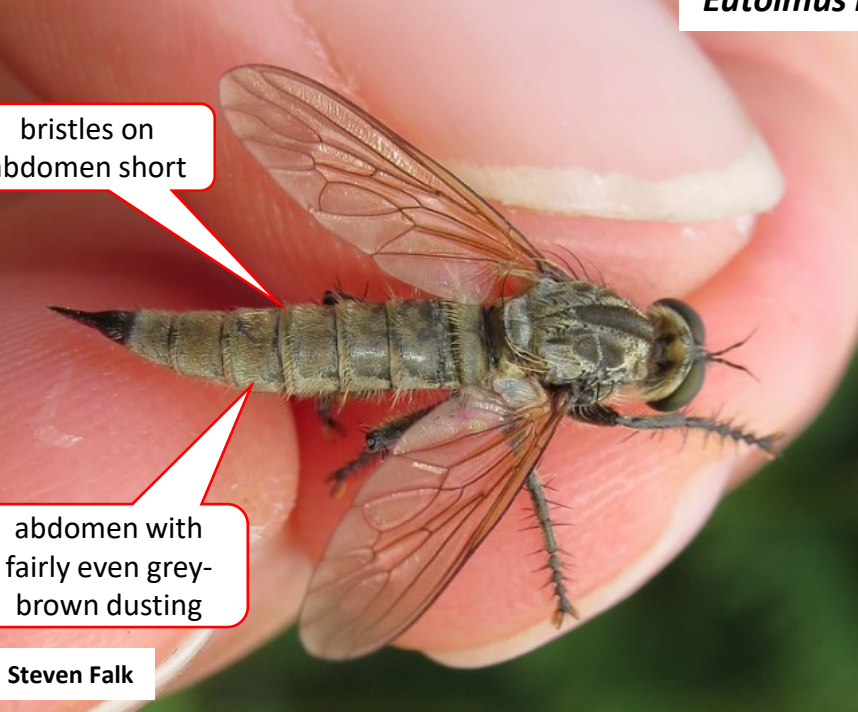
*Machimus* robberflies have a narrower, more tubular ovipositor

***Eutolmus rufibarbis* (Golden-tabbed Robberfly) - FEMALE**

[go to male](#)

relatively **narrow** gap between eyes

© Steven Falk



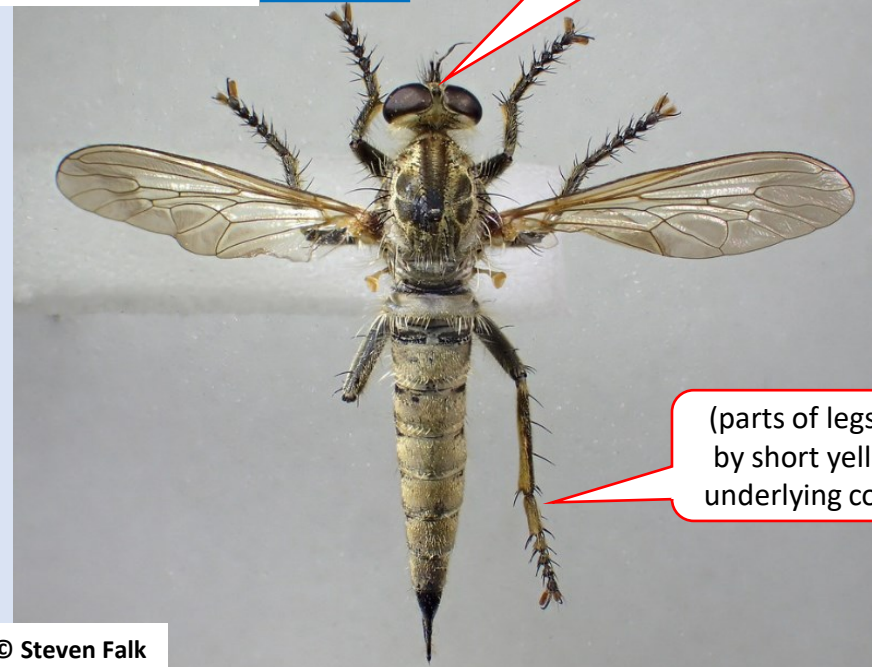
bristles on abdomen short

abdomen with fairly even grey-brown dusting

© Steven Falk

[Steven Falk link](#)

See [comparison with Machimus rusticus](#); also similar to [Philonicus](#) (sand dunes)



© Steven Falk

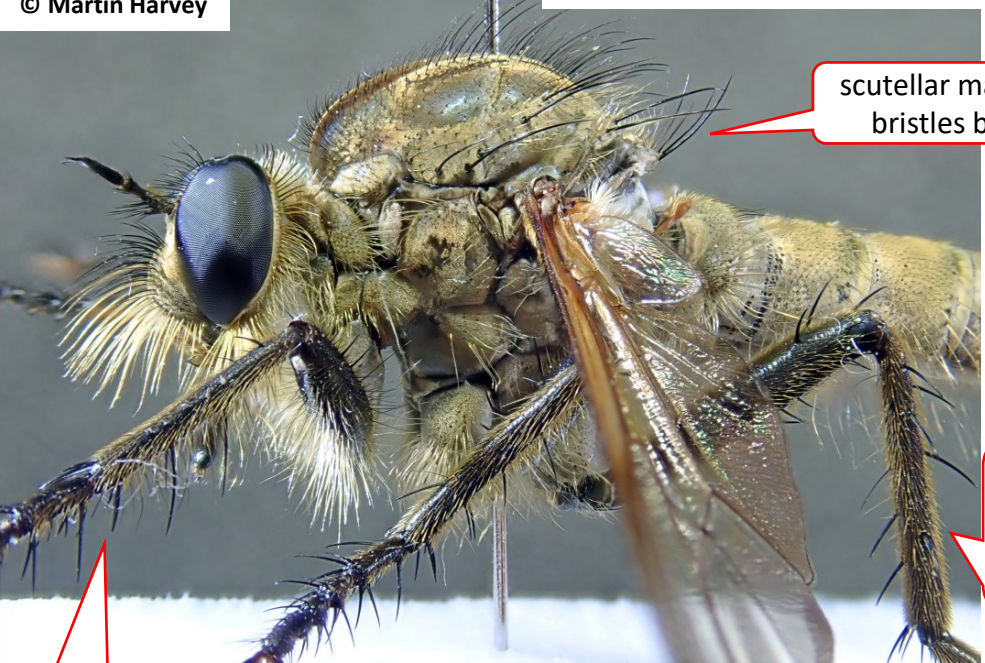
(parts of legs are covered by short yellow hairs but underlying colour is black)

[↑ back to genus list](#)



© Martin Harvey

### *Eutolmus rufibarbis* (Fan-bristled Robberfly)



scutellar marginal bristles black

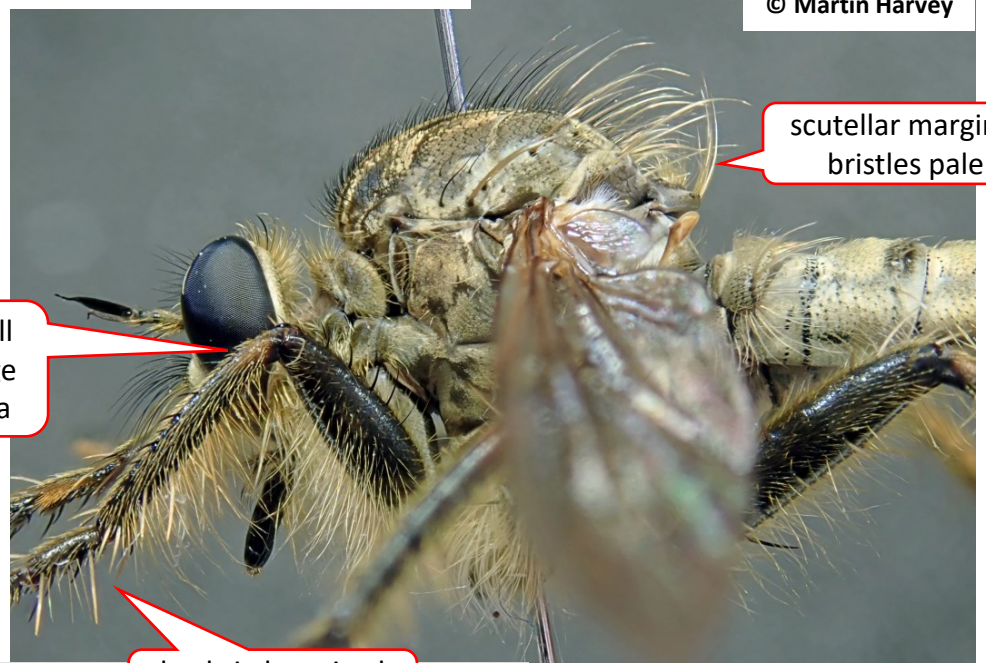
leg bristles black

legs all black (but covered with yellow hairs in parts)

♀ © Steven Falk

### *Machimus rusticus* (Downland Robberfly)

© Martin Harvey



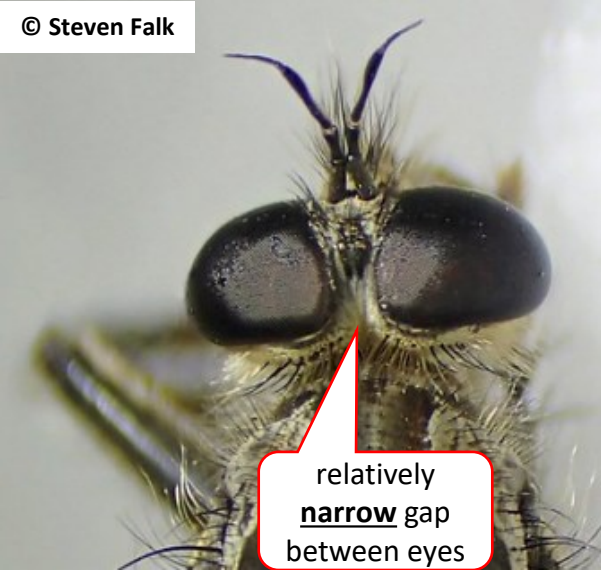
scutellar marginal bristles pale

often has small patch of orange at base of tibia

leg bristles mixed black and white

♀ © Steven Falk

© Steven Falk

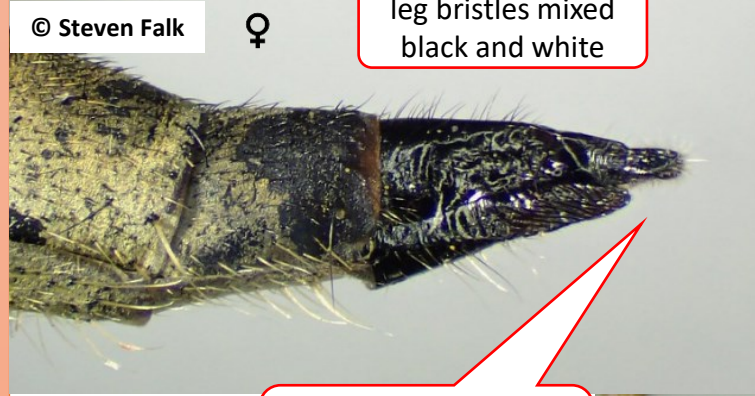


relatively **narrow** gap between eyes

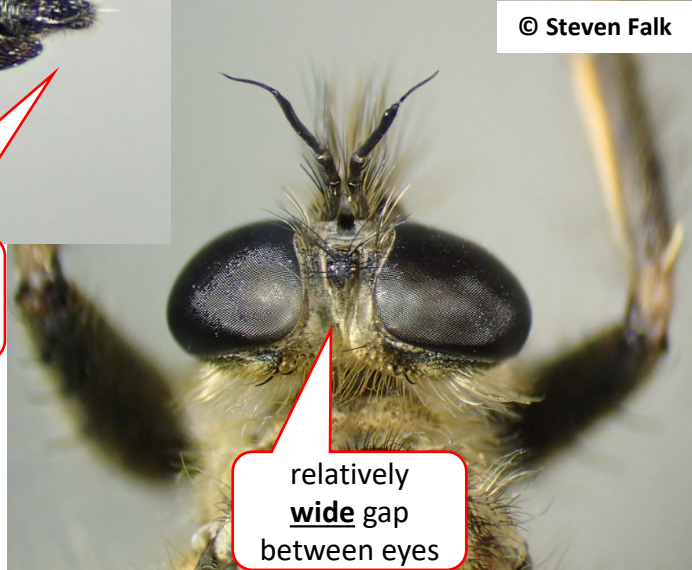


distinctive flattened ovipositor textured with small grooves (compare with *Dysmachus trigonus*)

© Steven Falk



female ovipositor typical for *Machimus* species



relatively **wide** gap between eyes

[↑ back to genus list](#)

© Mark Gurney  
via [iRecord](#)



♂

swollen hind femora

Large (15–24 mm long) and distinctive bumblebee mimic, north-east Scotland only

[Steven Falk link](#)

© Steven Falk



♀

R1 joins with R2+3 before wing margin

- ID difficulty: 2
- Flight period: late May to Sep, peak in early Jul
- GB threat: Least Concern • GB rarity: Nationally Scarce
- Scottish Highlands
- ancient pine woods

### *Laphria flava* (Bumblebee Robberfly)



♂

gold hairs covering abdomen

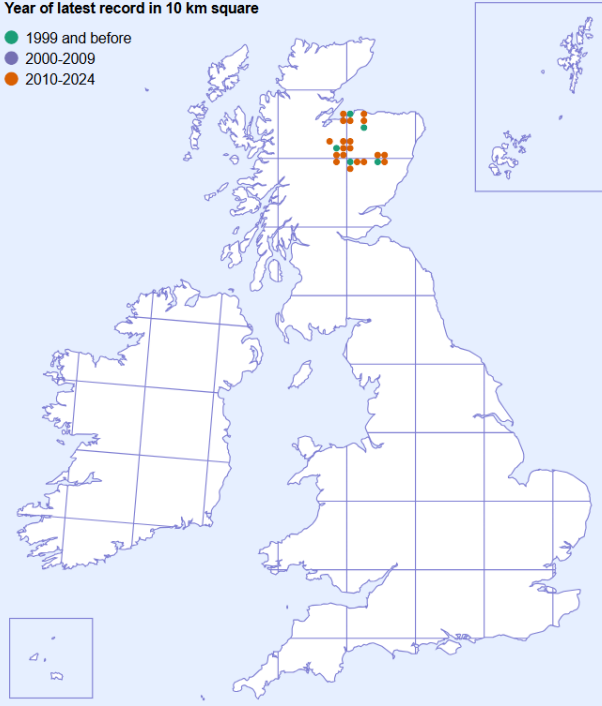


♀

antennae blunt-tipped, with no arista

Year of latest record in 10 km square

- 1999 and before
- 2000-2009
- 2010-2024



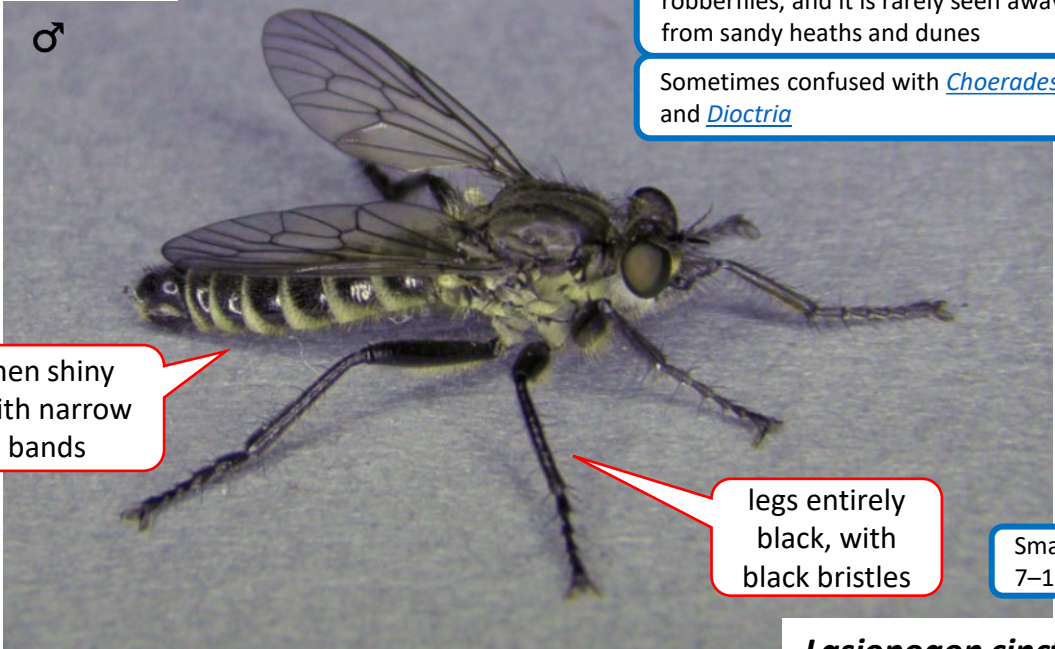
© Steven Falk

[↑ back to genus list](#)

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© Martin Harvey

♂



abdomen shiny black with narrow dust bands

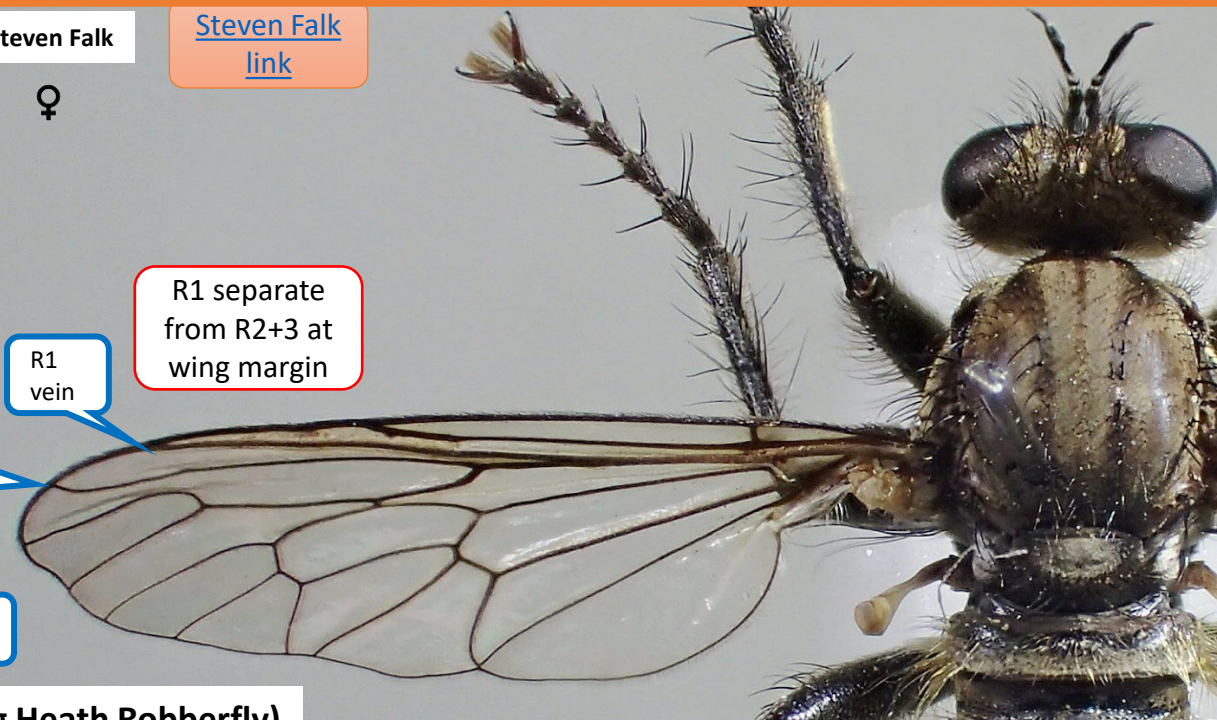
legs entirely black, with black bristles

Flight period is earlier than most other robberflies, and it is rarely seen away from sandy heaths and dunes

Sometimes confused with *Choerades* and *Dioctria*

© Steven Falk

♀



R1 separate from R2+3 at wing margin

R1 vein

R2+3 vein

Small species, 7–12 mm long

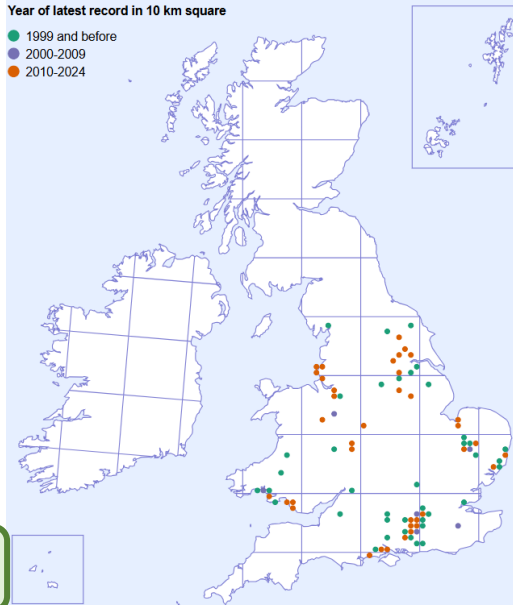
[Steven Falk link](#)

### *Lasiopogon cinctus* (Spring Heath Robberfly)

- ID difficulty: 3
- Flight period: mid Apr to early Aug, peak mid May to early Jun
- GB threat: Least Concern • GB rarity: Nationally Scarce
- mainly southern, north to Cumbria
- dry sandy soils, heaths and dunes

Year of latest record in 10 km square

- 1999 and before
- 2000-2009
- 2010-2024



[↑ back to genus list](#)

© Ian Andrews

♂



thorax has fairly long dark bristles

Males and females are similar

[Ian Andrews link](#)

♀



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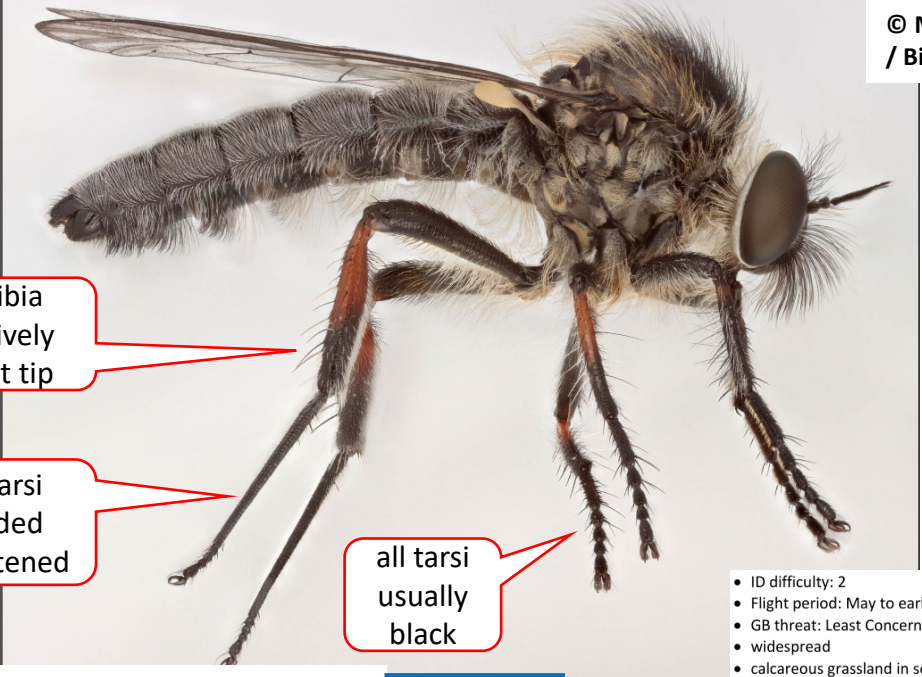
R1 separate from R2+3 at wing margin

R1 vein

R2+3 vein

[Biolmages link](#)

© Malcolm Storey / Biolmages



hind tibia extensively black at tip

hind tarsi extended and flattened

all tarsi usually black

Small species, 9–12mm long

- ID difficulty: 2
- Flight period: May to early Sept, peak Jun and Jul
- GB threat: Least Concern
- widespread
- calcareous grassland in south, sometimes found by springs or pools, in more acidic and wooded conditions in west and north

***Leptarthrus brevirostris* (Slender-footed Robberfly) - MALE**

[go to female](#)

long hairs covering thorax



face with long dark hairs

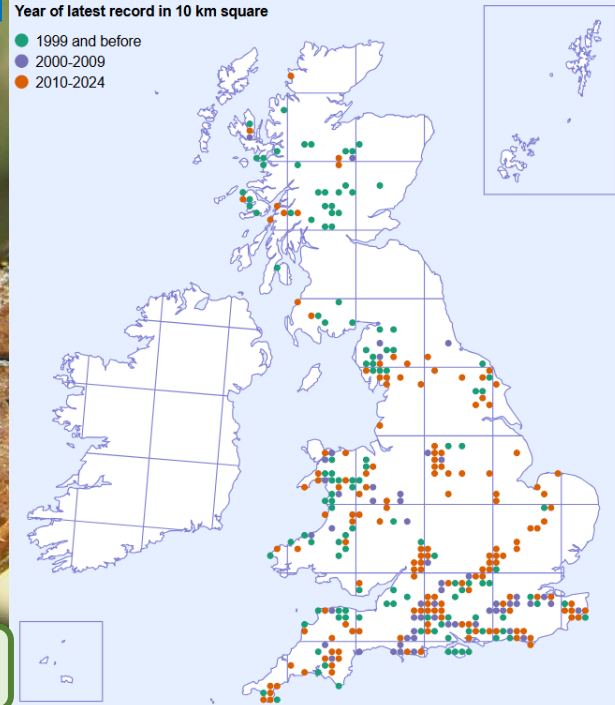
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[Steven Falk link](#)



[back to genus list](#)





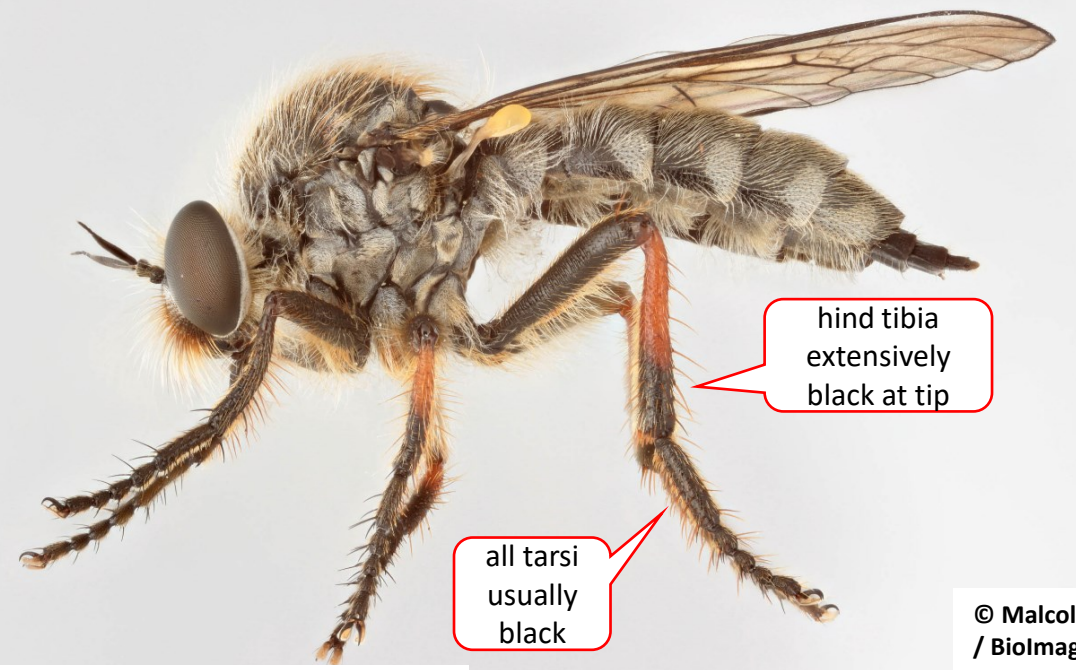
[Biolimages link](#)

R1 vein

R2+3 vein

R1 separate from R2+3 at wing margin

© Malcolm Storey / Biolimages



hind tibia extensively black at tip

all tarsi usually black

© Malcolm Storey / Biolimages

***Leptarthrus brevirostris* (Slender-footed Robberfly) - FEMALE** [go to male](#)



long pale hairs covering thorax

face with long pale hairs

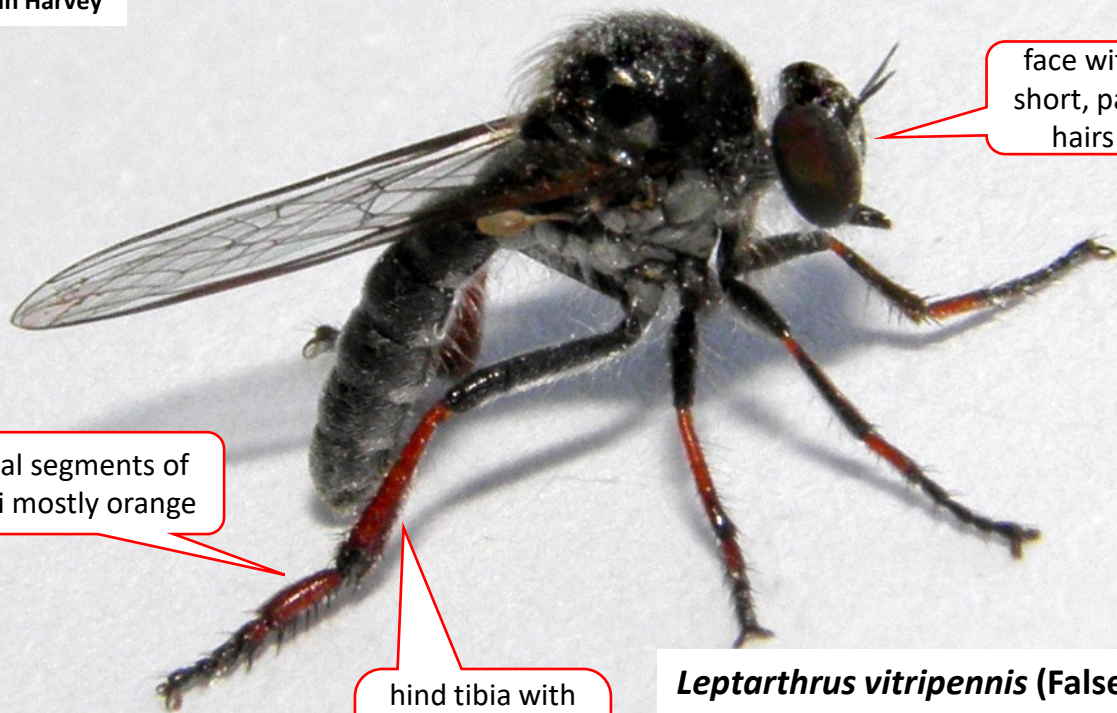
© Malcolm Storey / Biolimages



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[Steven Falk link](#)

[↑ back to genus list](#)



face with short, pale hairs

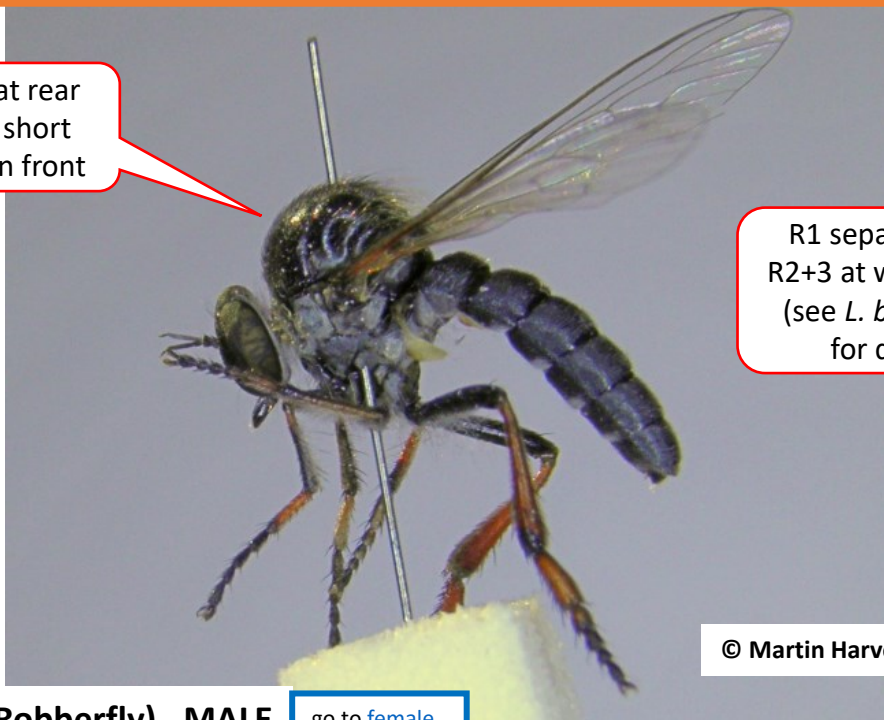
long hairs at rear of thorax, short dark hairs in front

basal segments of tarsi mostly orange

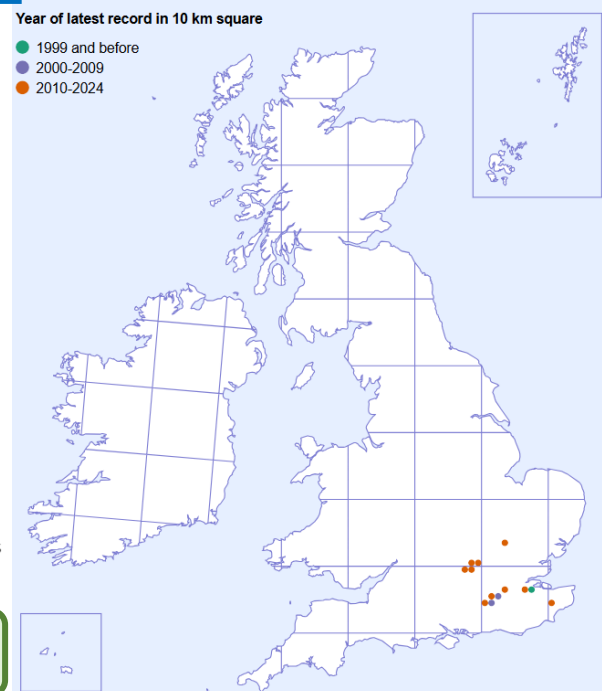
hind tibia with narrower and 'neater' black band at tip

*Leptarthrus vitripennis* (False Slender-footed Robberfly) - MALE

[go to female](#)



R1 separate from R2+3 at wing margin (see *L. brevisrostris* for details)



Small species, 6–12 mm long

- ID difficulty: 2
- Flight period: Jun to Aug
- GB threat: Least Concern • GB rarity: Nationally Rare
- south-east England
- calcareous grassland, recently found in floodplain grasslands

[↑ back to genus list](#)

R1 separate from R2+3  
at wing margin (see [L. brevirostris](#) for details)

hind tibia with 'neater'  
black band at tip

basal segments of  
tarsi mostly orange

long hairs at rear  
of thorax, short  
hairs in front, all  
hairs pale

***Leptarthrus vitripennis* (False Slender-footed Robberfly) - FEMALE**

[go to male](#)

face with  
short pale  
hairs

© Sue Taylor

© Sue Taylor

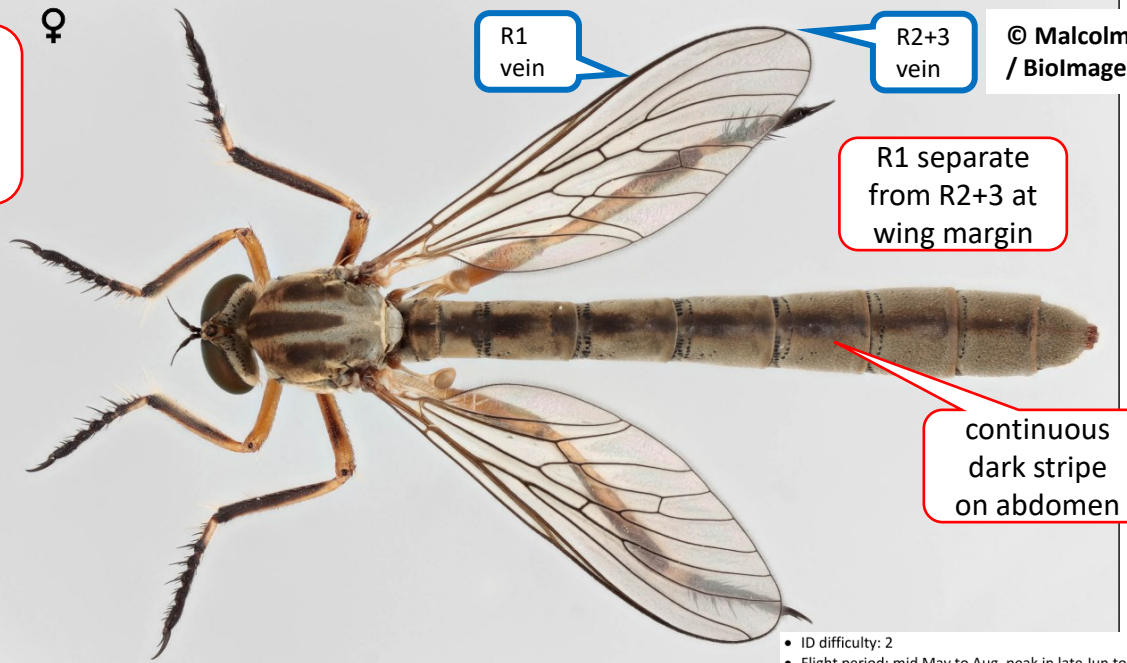
[↑ back to  
genus list](#)



see also Steven Falk's [comparison of \*L. cylindrica\* and \*L. guttiventris\*](#)

© Malcolm Storey / Biolimages

[Biolimages link](#)



R1 vein

R2+3 vein

R1 separate from R2+3 at wing margin

continuous dark stripe on abdomen

© Malcolm Storey / Biolimages

♀

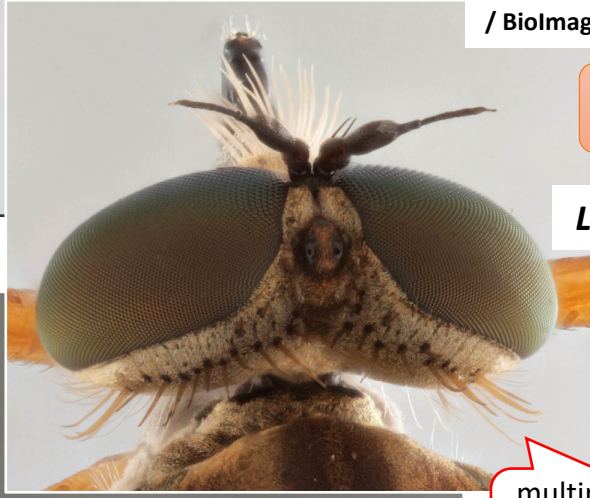
♀

### *Leptogaster cylindrica* (Striped Slender Robberfly)

- ID difficulty: 2
- Flight period: mid May to Aug, peak in late Jun to mid Jul
- GB threat: Least Concern
- widespread in England, especially south, more local in Wales, rare in Scotland
- tall, open grassland on dry soils

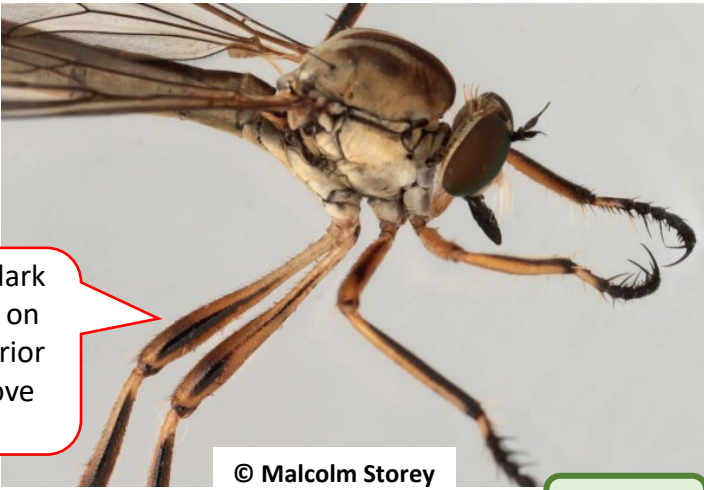
Variable size, 9–18 mm long

[Steven Falk link](#)

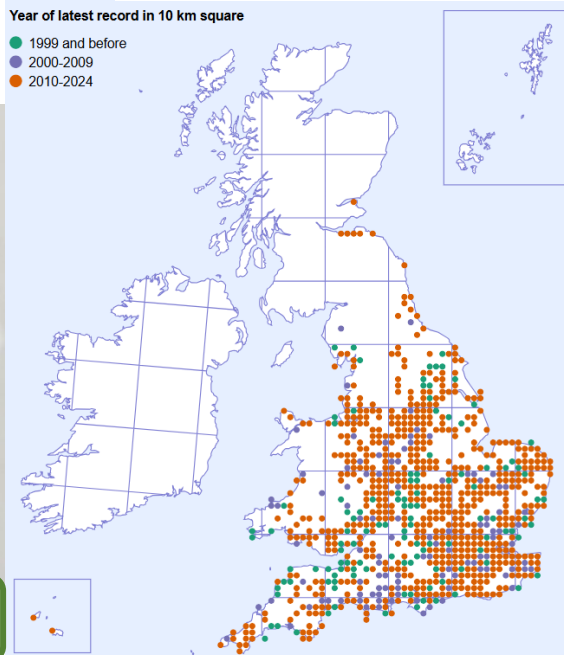


multiple row of yellow bristles behind eyes

hind femora with dark longitudinal stripe on anterior and posterior surfaces (pale above and below)



© Malcolm Storey / Biolimages



♂

© Janet Graham

[Janet Graham link](#)

[back to genus list](#)



© Steven Falk

[Steven Falk link](#)

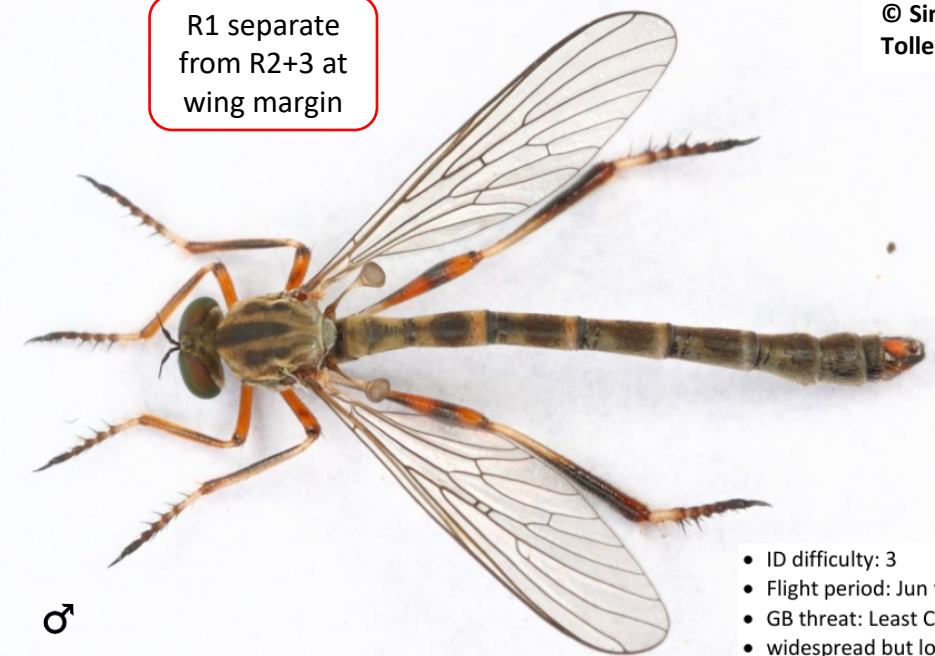


♀

dark marks separated by pale bands on abdomen

see also Steven Falk's [comparison of \*L. cylindrica\* and \*L. guttiventris\*](#)

R1 separate from R2+3 at wing margin



♂

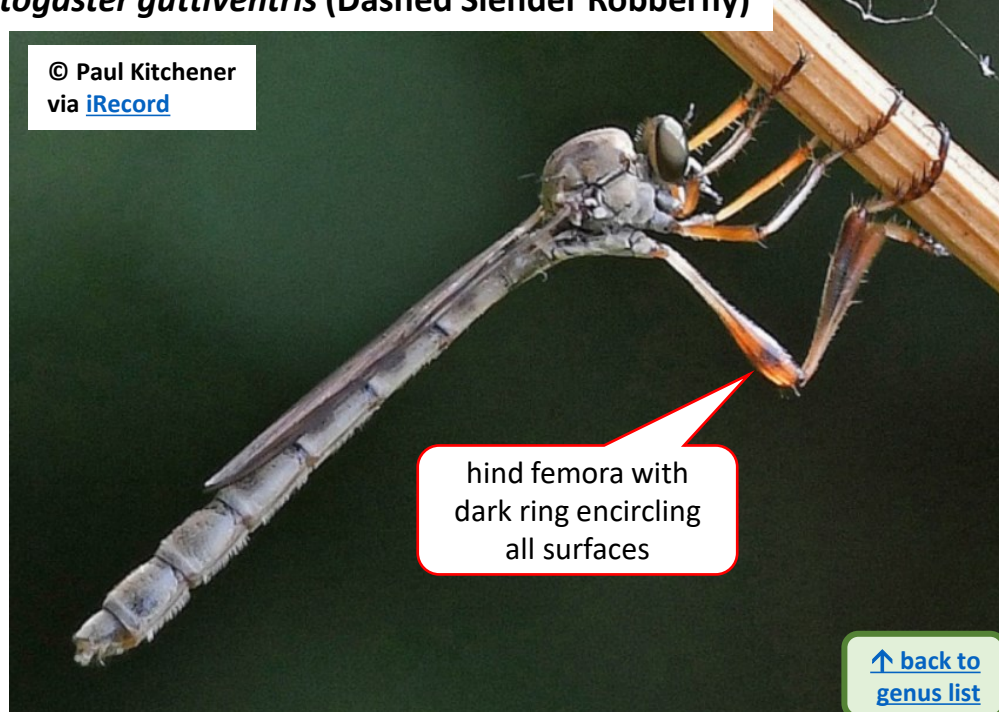
© Simon Van Toller via [iRecord](#)

8–15 mm long

- ID difficulty: 3
- Flight period: Jun to mid Sep, peak in Jun and Jul
- GB threat: Least Concern
- widespread but local
- scrub and woodland edge

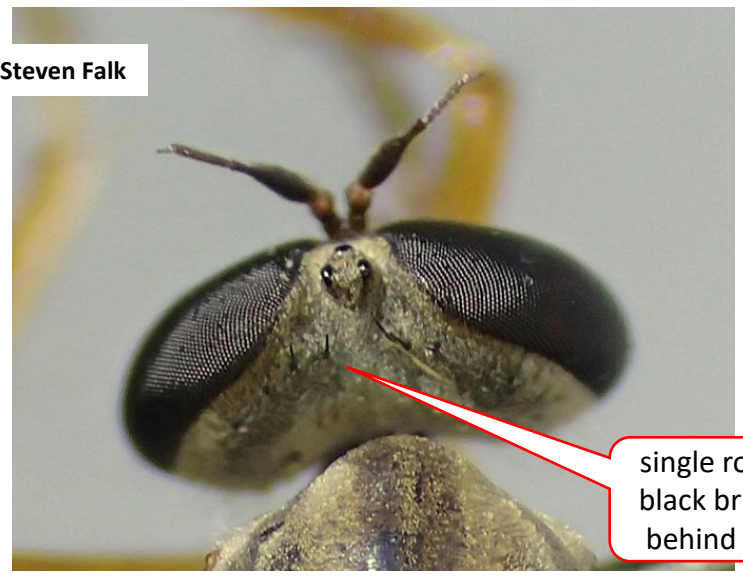
### *Leptogaster guttiventris* (Dashed Slender Robberfly)

© Paul Kitchener via [iRecord](#)

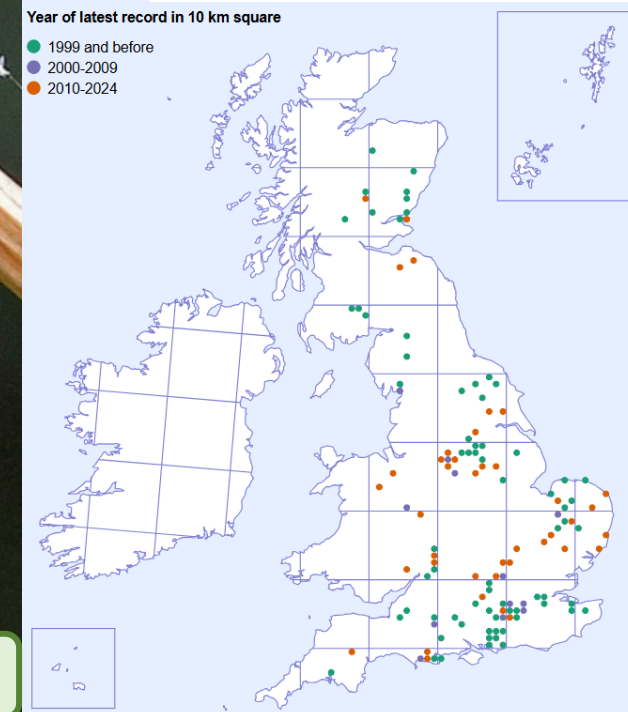


hind femora with dark ring encircling all surfaces

© Steven Falk



single row of black bristles behind eyes



[↑ back to genus list](#)

© Steven Falk



leg bristles mostly whitish

[Steven Falk link](#)

Known only from the Breckland area of East Anglia

© Steven Falk



lacks a 'kite-tail' extension

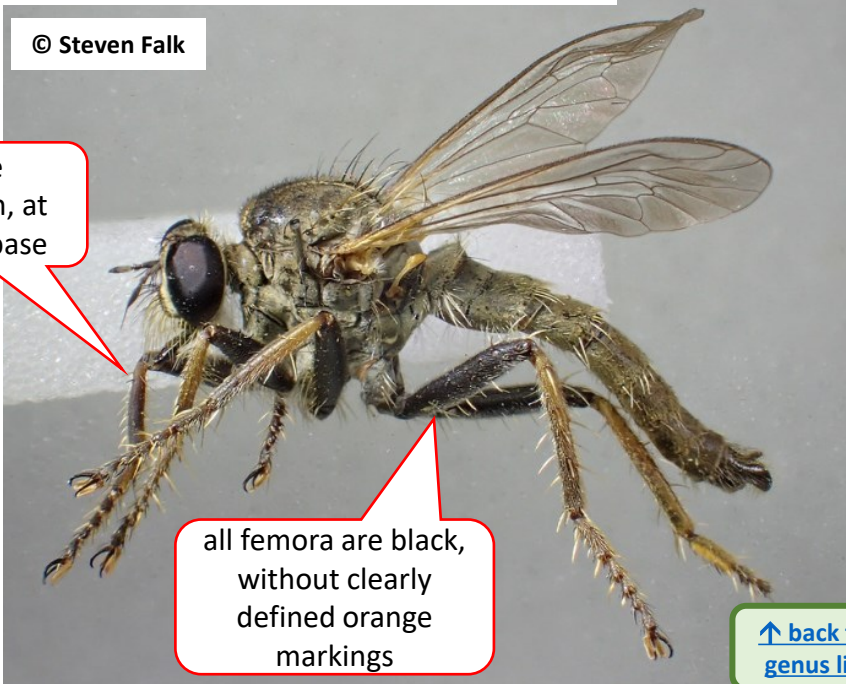
15-18 mm long

- ID difficulty: 4
- Flight period: late Jun to early Aug
- GB threat: Endangered • GB rarity: Nationally Rare
- East Anglia
- Breckland, sandy soil

### *Machimus arthriticus* (Breck Robberfly) - MALE

[go to female](#)

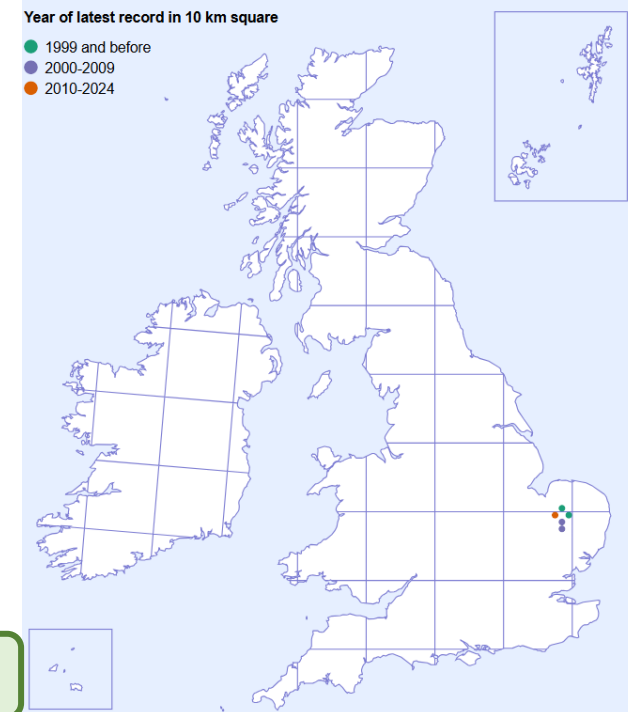
© Steven Falk



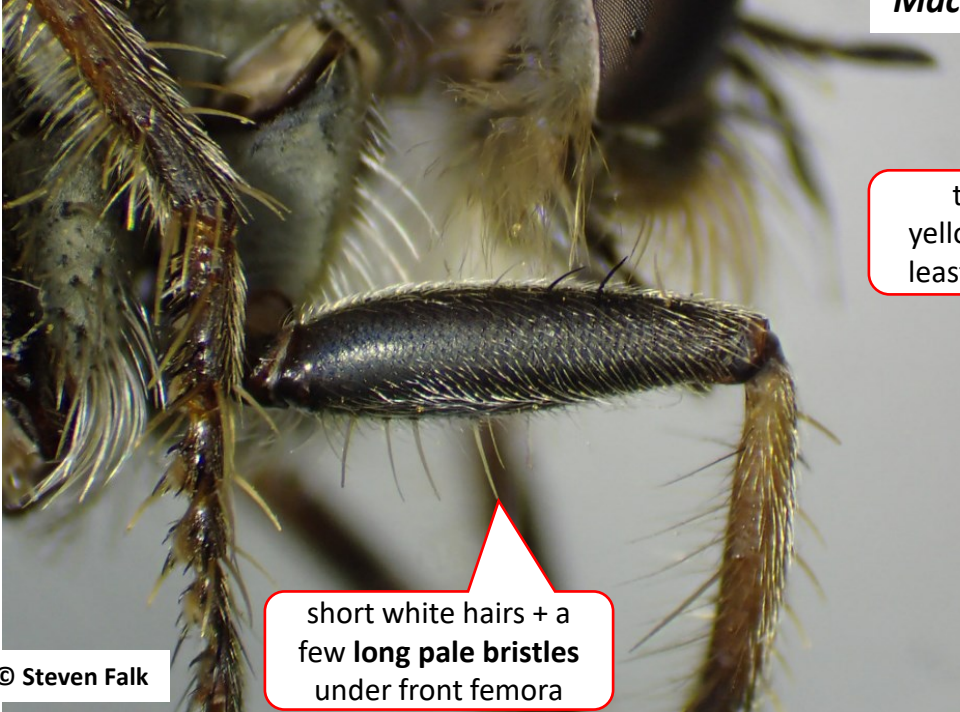
tibiae yellowish, at least at base

all femora are black, without clearly defined orange markings

[back to genus list](#)



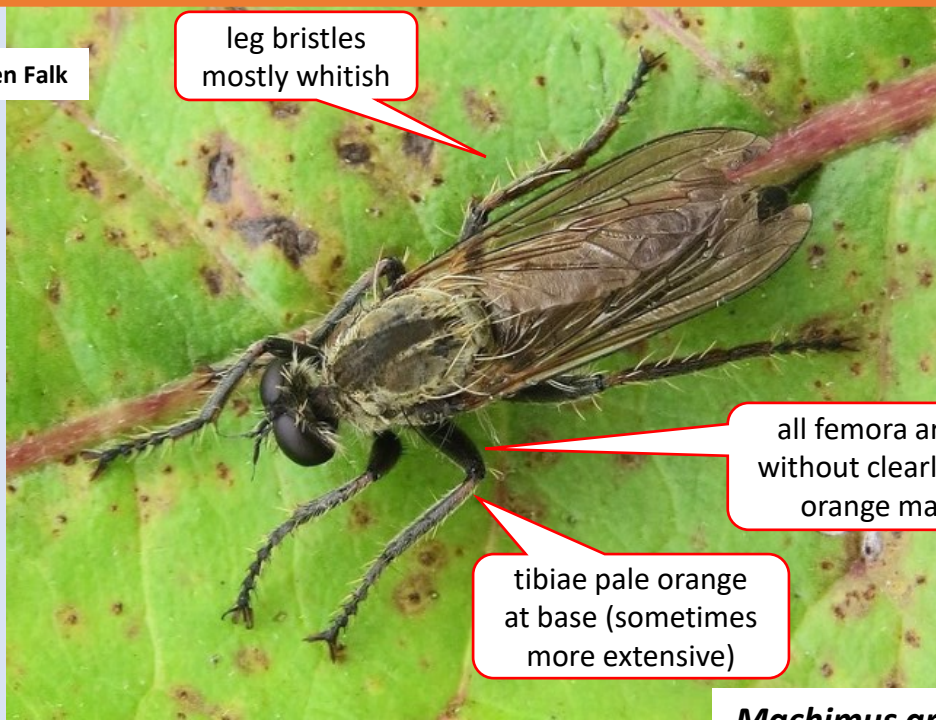
© Steven Falk



short white hairs + a few long pale bristles under front femora

© Steven Falk

leg bristles  
mostly whitish

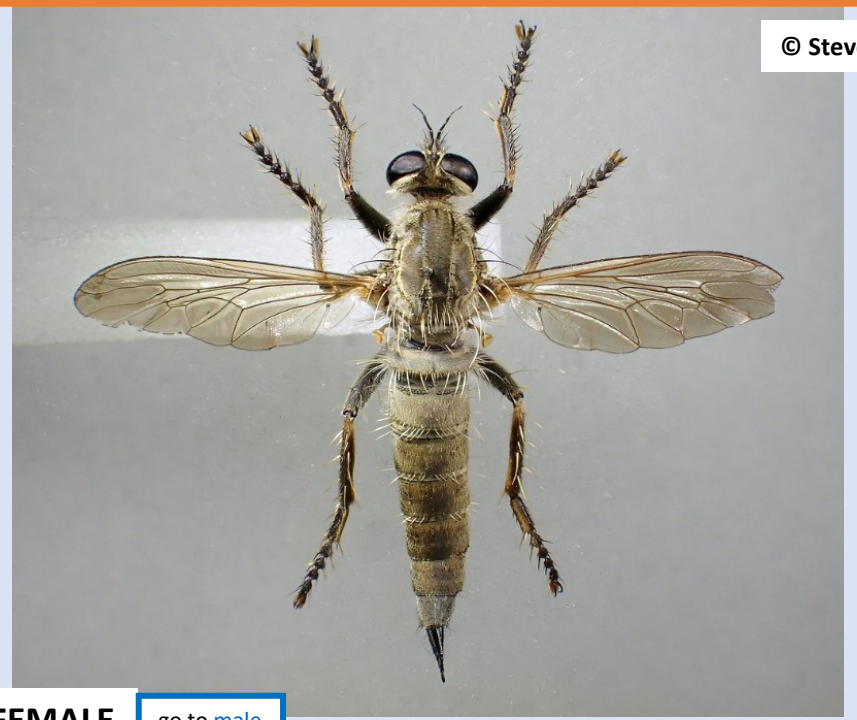


[Steven Falk link](#)

Known only from the  
Breckland area of East Anglia

all femora are black,  
without clearly defined  
orange markings

tibiae pale orange  
at base (sometimes  
more extensive)

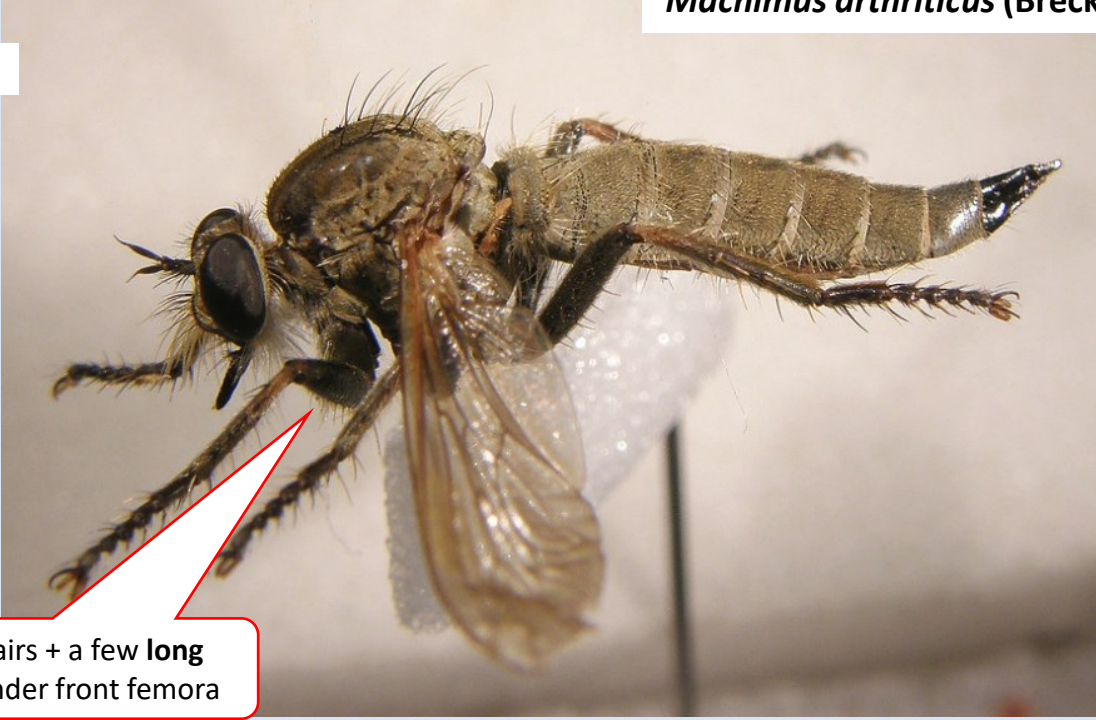


© Steven Falk

*Machimus arthriticus* (Breck Robberfly) - FEMALE

[go to male](#)

© Steven Falk

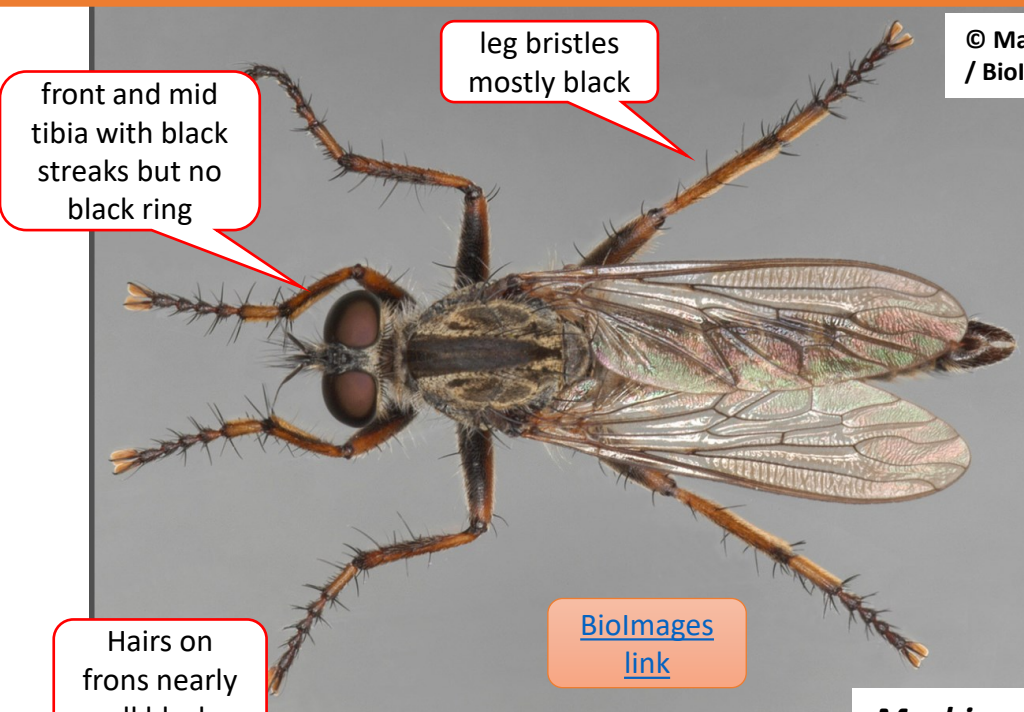


short white hairs + a few long  
pale bristles under front femora

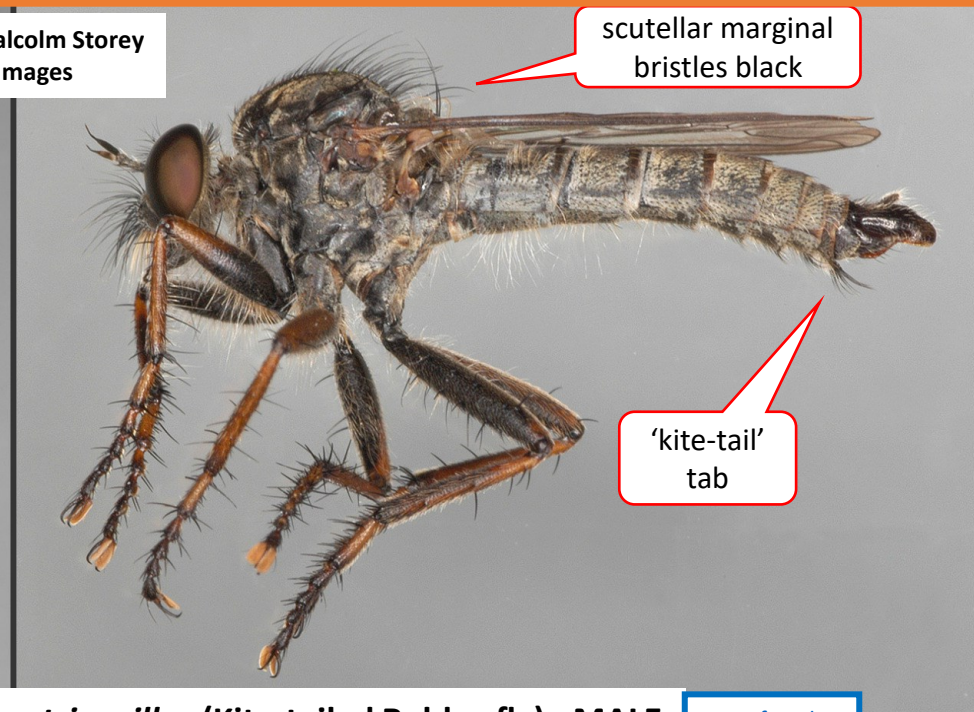
© Steven Falk



[↑ back to  
genus list](#)



© Malcolm Storey / Biolimages



- ID difficulty: 3
- Flight period: late May to late Oct, peak in late Jul and Aug
- GB threat: Least Concern
- widespread in south, becoming rare north to Scotland
- open habitats on dry soils, with some shelter

Year of latest record in 10 km square

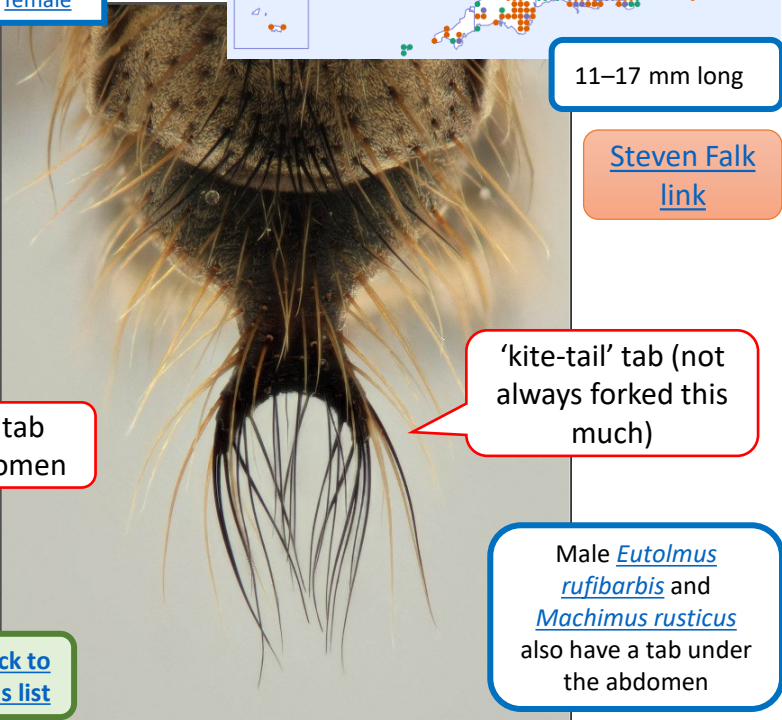
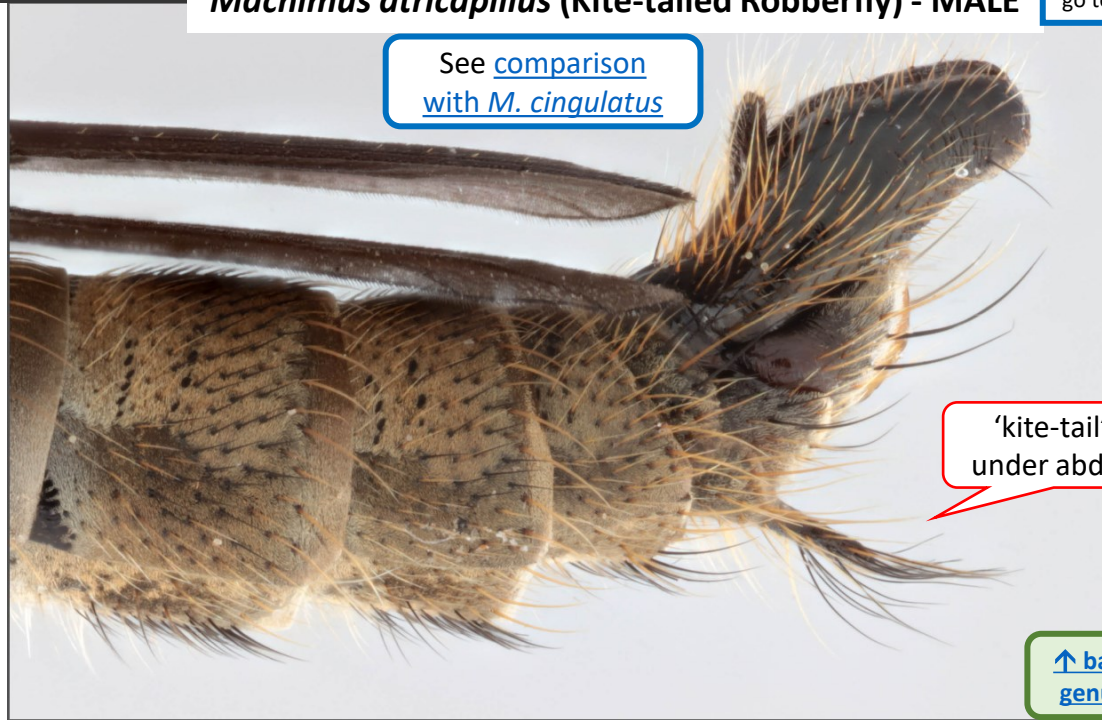
- 1999 and before
- 2000-2009
- 2010-2024

11-17 mm long

[Steven Falk link](#)

***Machimus atricapillus* (Kite-tailed Robberfly) - MALE** [go to female](#)

See [comparison with \*M. cingulatus\*](#)

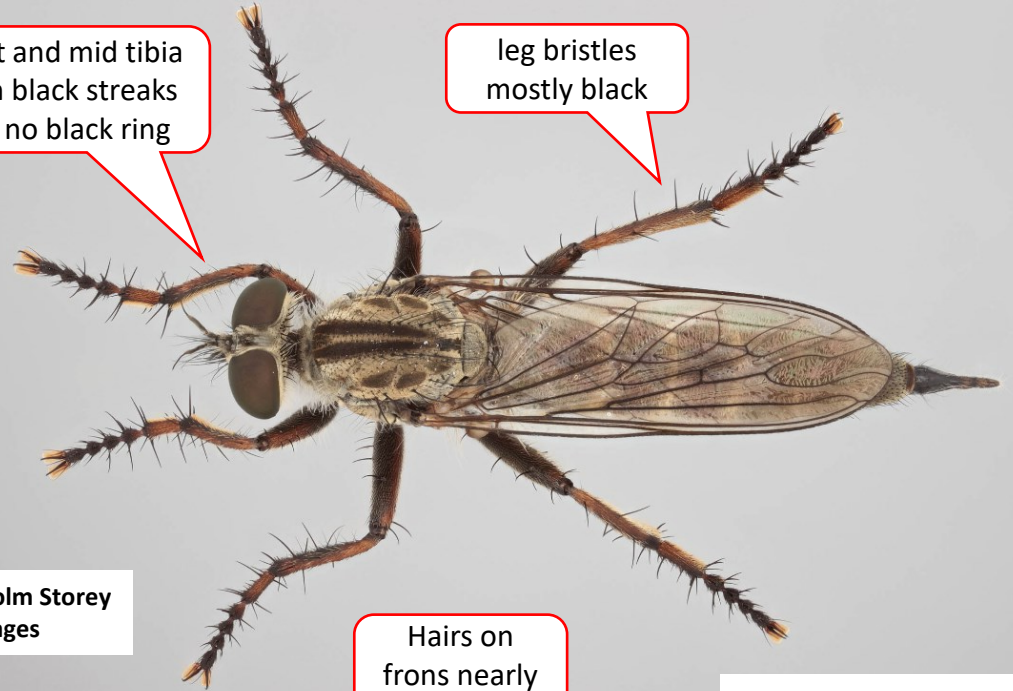


[↑ back to genus list](#)

Male *Eutolmus rufibarbis* and *Machimus rusticus* also have a tab under the abdomen

front and mid tibia with black streaks but no black ring

leg bristles mostly black



[BioImages link](#)

scutellar marginal bristles black



© Malcolm Storey / BioImages

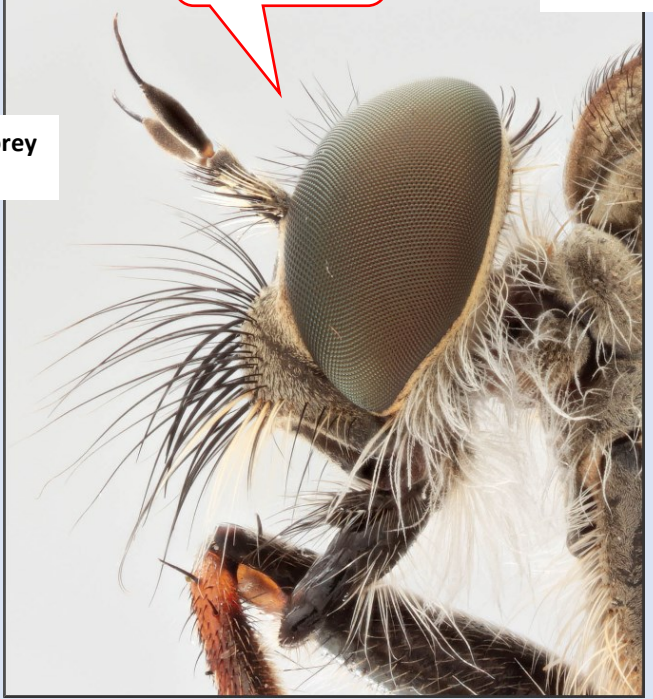
© Malcolm Storey / BioImages

Hairs on frons nearly all black

***Machimus atricapillus* (Kite-tailed Robberfly) - FEMALE**

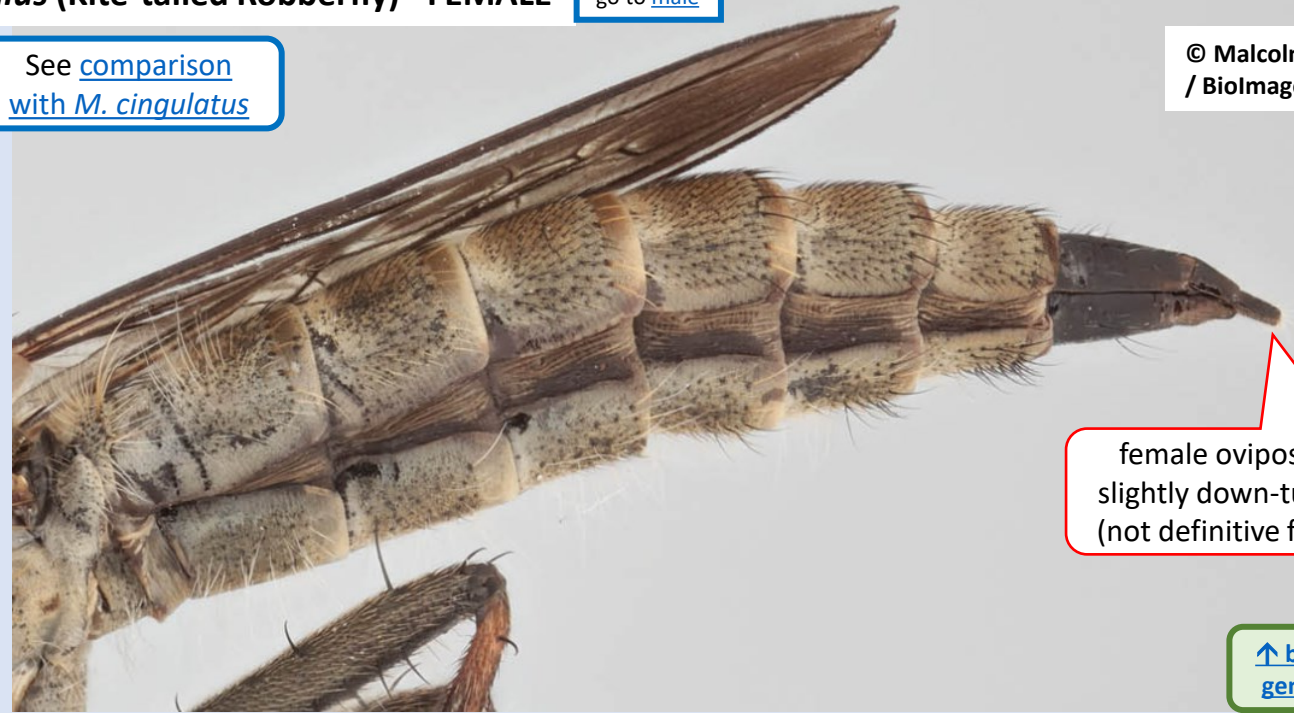
[go to male](#)

© Malcolm Storey / BioImages



See [comparison with \*M. cingulatus\*](#)

© Malcolm Storey / BioImages



female ovipositor slightly down-turned (not definitive for ID)

[Steven Falk link](#)

[↑ back to genus list](#)

***Machimus atricapillus***  
(Kite-tailed Robberfly)



hairs at sides of frons nearly all black

mystax ('moustache') with black bristles more numerous and denser

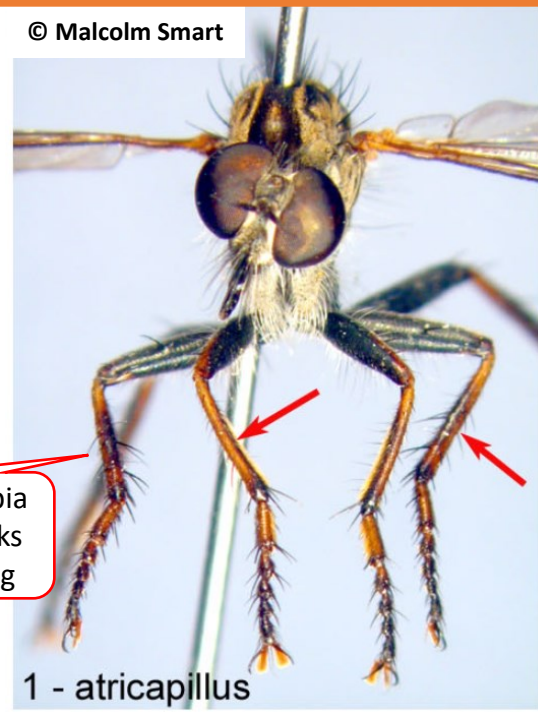
male has 'kite-tail' tab

female ovipositor slightly down-turned (not definitive for ID)

body colour greyish (not always easy to judge)

front and mid tibia with black streaks but no black ring

© Martin Harvey



© Malcolm Smart

1 - atricapillus

***Machimus cingulatus***  
(Brown Heath Robberfly)



hairs at sides of frons mostly white

mystax ('moustache') with black bristles less numerous and sparser

male without 'kite-tail' tab

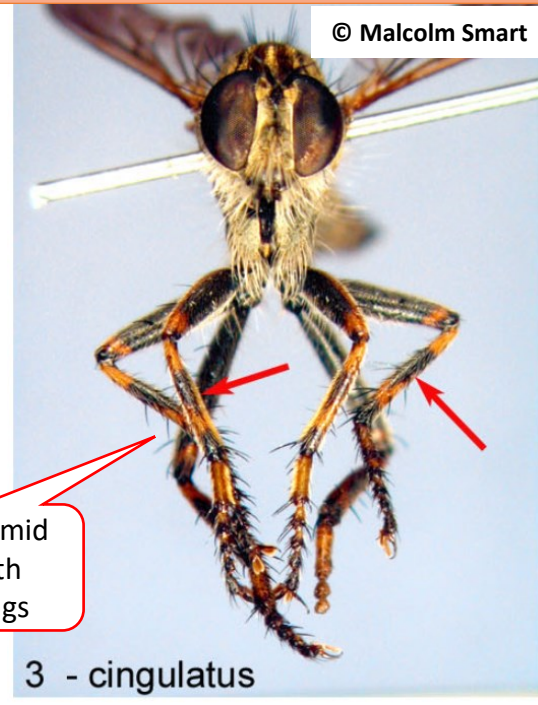
female ovipositor straighter (not definitive for ID)

body colour brownish (not always easy to judge)

front and mid tibia with black rings

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[↑ back to genus list](#)



© Malcolm Smart

3 - cingulatus



leg bristles mostly black

[Biolmages link](#)

femora black with orange streaks (more extensive orange than for *M. cowini*)



no 'kite-tail' extension

10–15 mm long

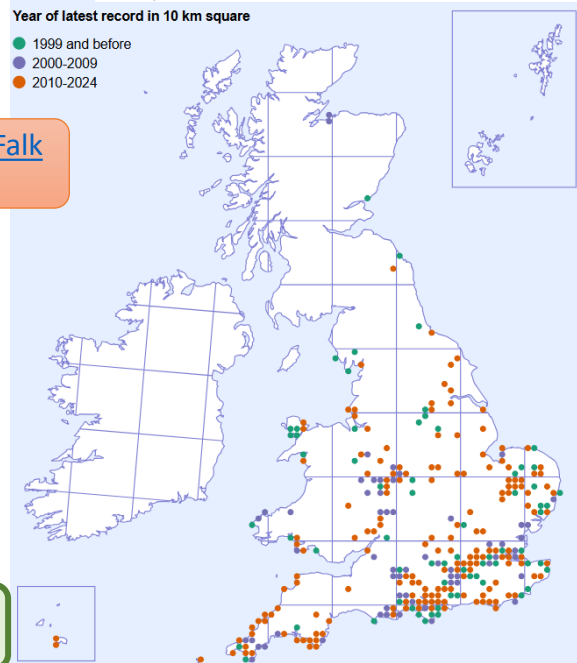
See [comparison with M. atricapillus](#)

About half the hairs on frons white

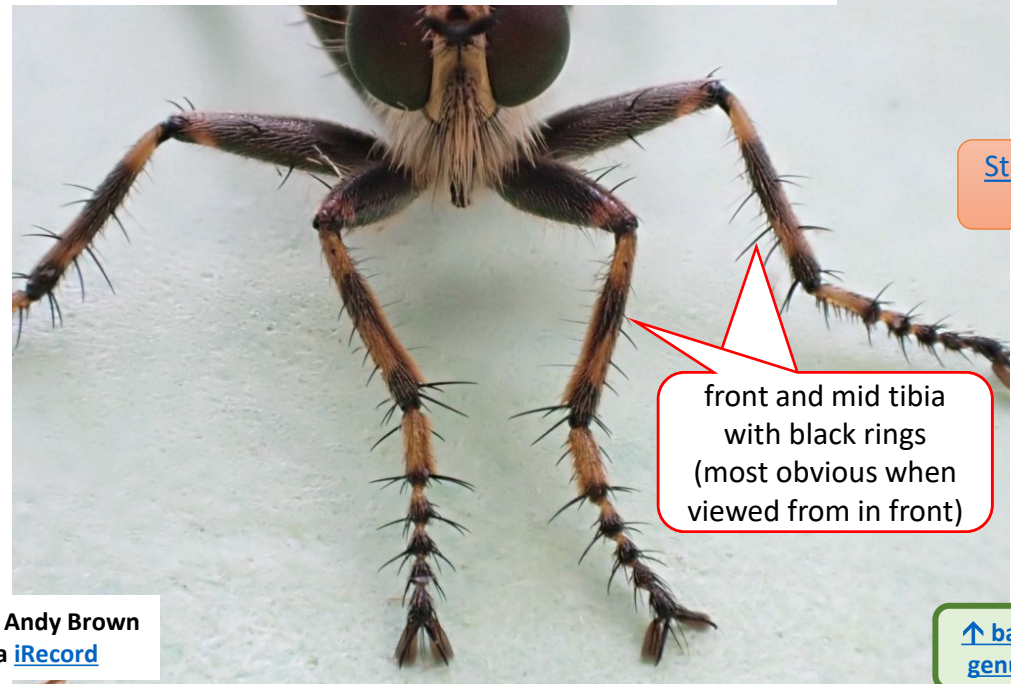
### *Machimus cingulatus* (Brown Heath Robberfly) - MALE

[go to female](#)

- ID difficulty: 3
- Flight period: early Jun to mid Oct, peak in early Aug to early Sep
- GB threat: Least Concern
- widespread in south, becoming rare north to Scotland
- sandy heaths and dunes, coastal in north and west



[Steven Falk link](#)



front and mid tibia with black rings (most obvious when viewed from in front)

[back to genus list](#)

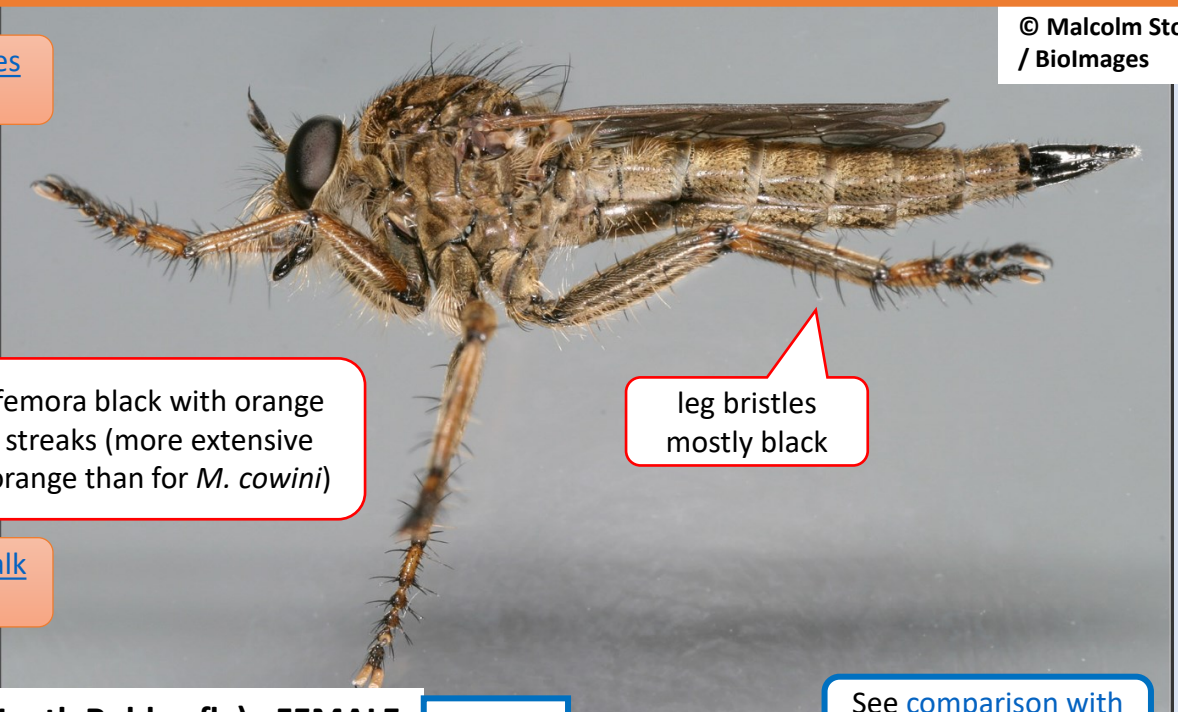


front and mid tibia with black rings



[BiolImages link](#)

femora black with orange streaks (more extensive orange than for *M. cowini*)



leg bristles mostly black

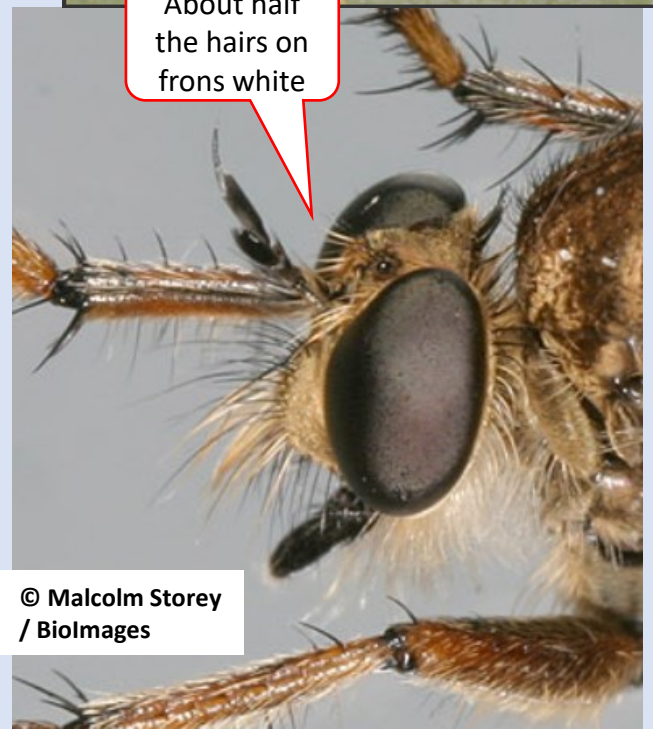
[Steven Falk link](#)

***Machimus cingulatus* (Brown Heath Robberfly) - FEMALE**

[go to male](#)

See [comparison with \*M. atricapillus\*](#)

About half the hairs on frons white



female ovipositor straighter (not definitive for ID)

[↑ back to genus list](#)



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front and mid tibia with black rings

leg bristles mostly black

lacks a 'kite-tail' tab

11-16 mm long

mid femora

hind femora

hind femora

[Steven Falk link](#)

femora almost entirely black, orange at tip (hind femora may have orange at base as well)

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### *Machimus cowini* (Irish Robberfly) - MALE

[go to female](#)

currently known only from Ireland, the Isle of Man, and a few sites around Morecambe Bay

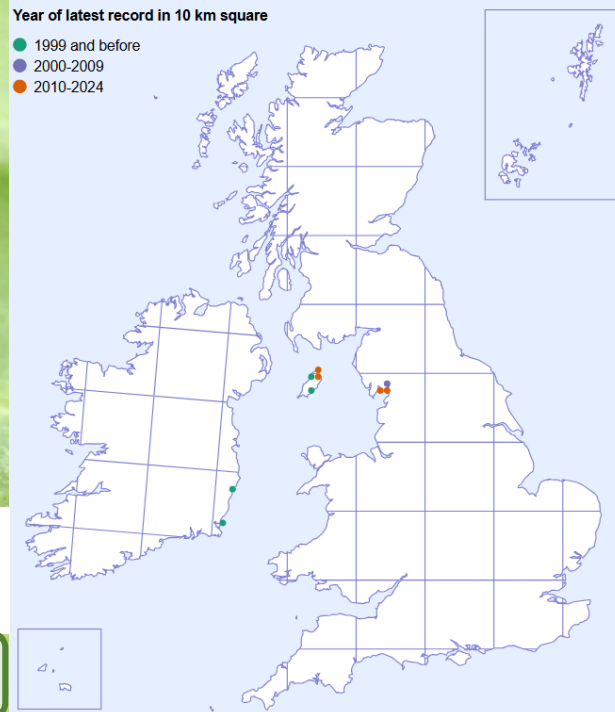


hairs at sides of frons nearly all black



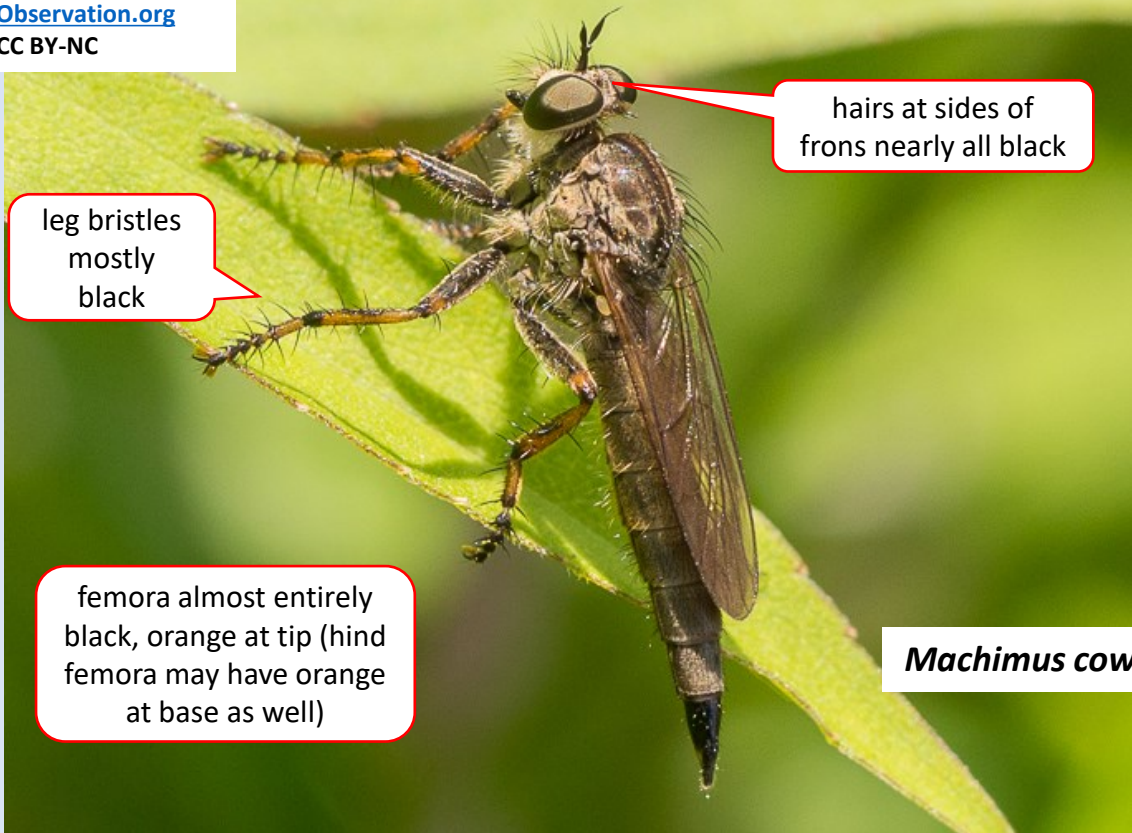
- ID difficulty: 4
- Flight period: late Jun to late Aug
- GB threat: Endangered • GB rarity: Nationally Rare
- Ireland, Isle of Man, Cumbrian coast
- sandy soils with low scrubby vegetation

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[back to genus list](#)

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leg bristles  
mostly  
black

hairs at sides of  
frons nearly all black

femora almost entirely  
black, orange at tip (hind  
femora may have orange  
at base as well)

***Machimus cowini* (Irish Robberfly) - FEMALE**

[go to male](#)

currently known only from Ireland,  
the Isle of Man, and a few sites  
around Morecambe Bay

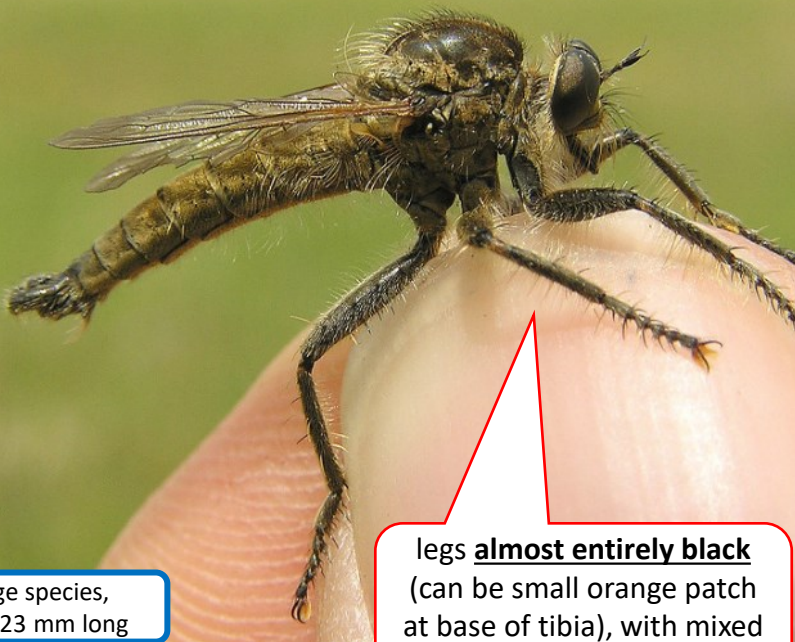


front and mid  
tibia with  
black rings

[Steven Falk  
link](#)

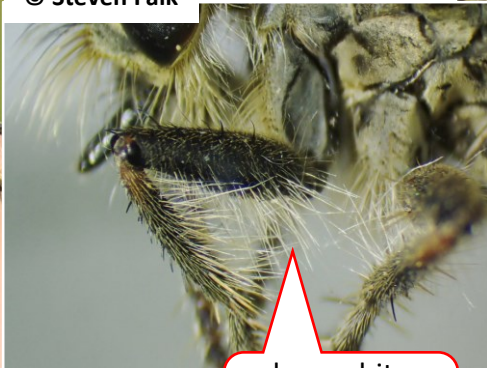


[↑ back to  
genus list](#)

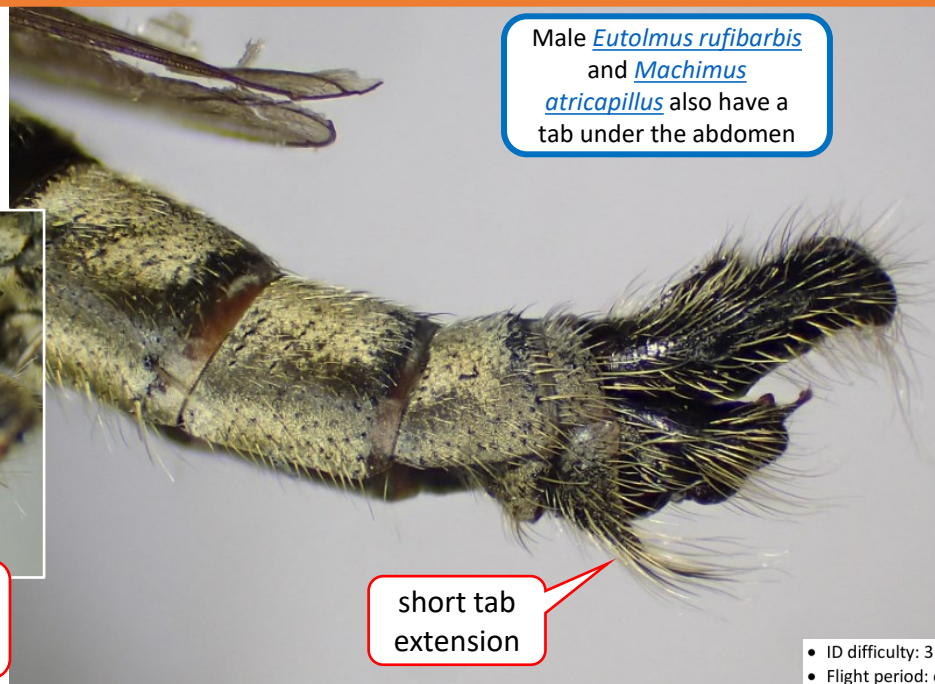


[Steven Falk link](#)

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long white hairs under front femora



short tab extension



© Steven Falk

tab under abdomen – 'end-on' view

Male *Eutolmus rufibarbis* and *Machimus atricapillus* also have a tab under the abdomen

legs **almost entirely black** (can be small orange patch at base of tibia), with mixed **white and black bristles**

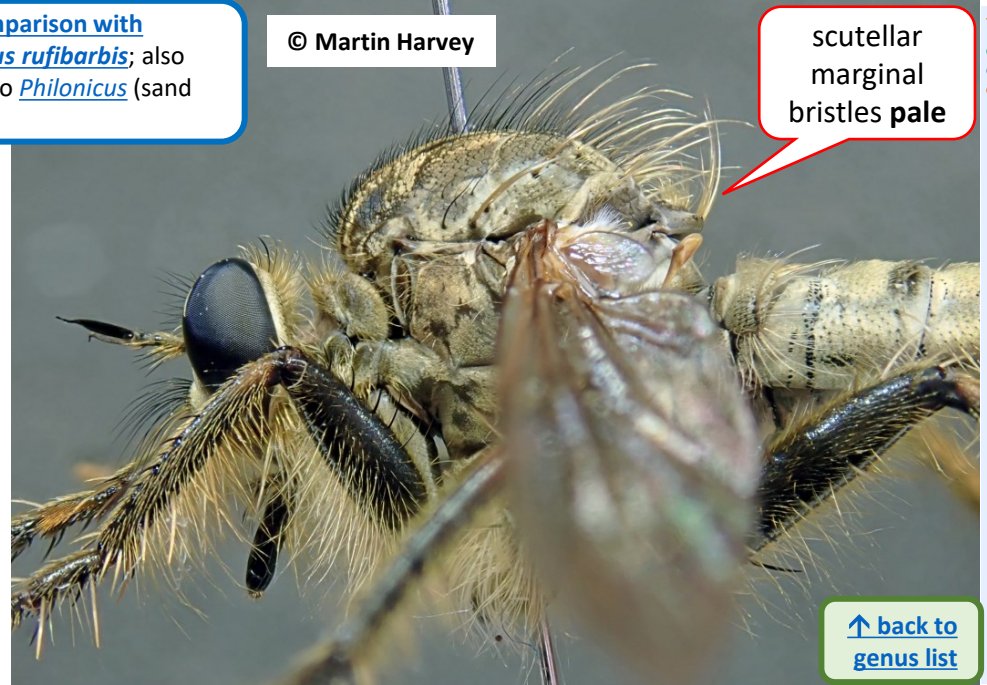
Large species, 15–23 mm long

### *Machimus rusticus* (Downland Robberfly) - MALE

[go to female](#)

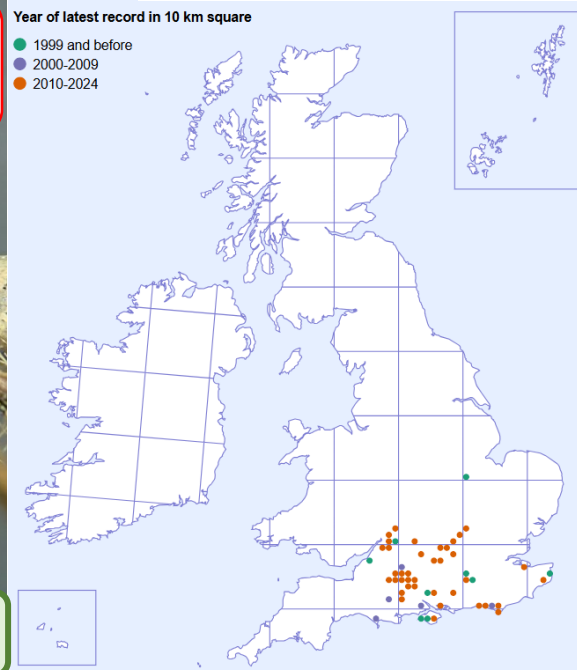
See [comparison with \*Eutolmus rufibarbis\*](#); also similar to *Philonicus* (sand dunes)

© Martin Harvey



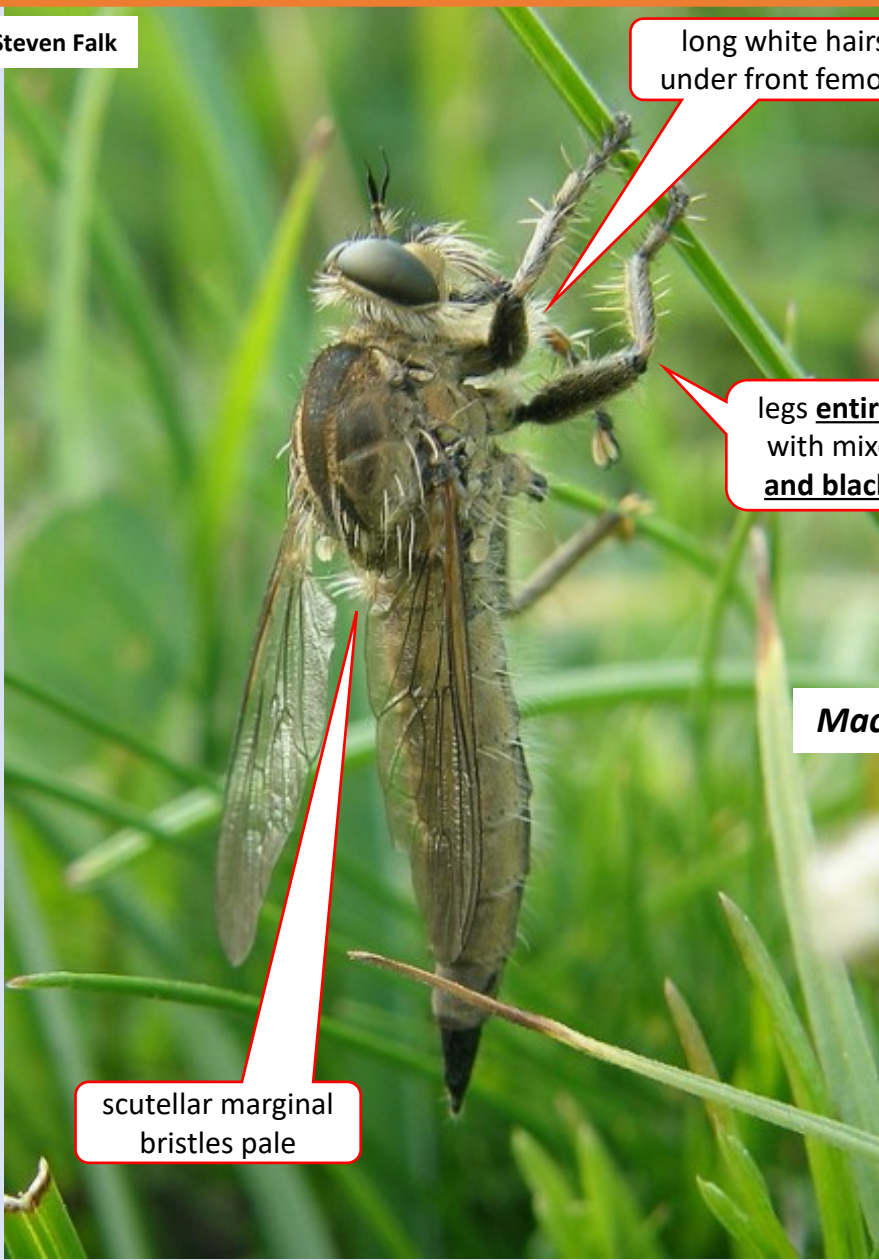
scutellar marginal bristles **pale**

- ID difficulty: 3
- Flight period: early Jun to Aug
- GB threat: Least Concern • GB rarity: Nationally Scarce
- south-east England
- calcareous grasslands



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[↑ back to genus list](#)



long white hairs under front femora

legs **entirely black**, with mixed **white and black bristles**

scutellar marginal bristles pale

[Steven Falk link](#)

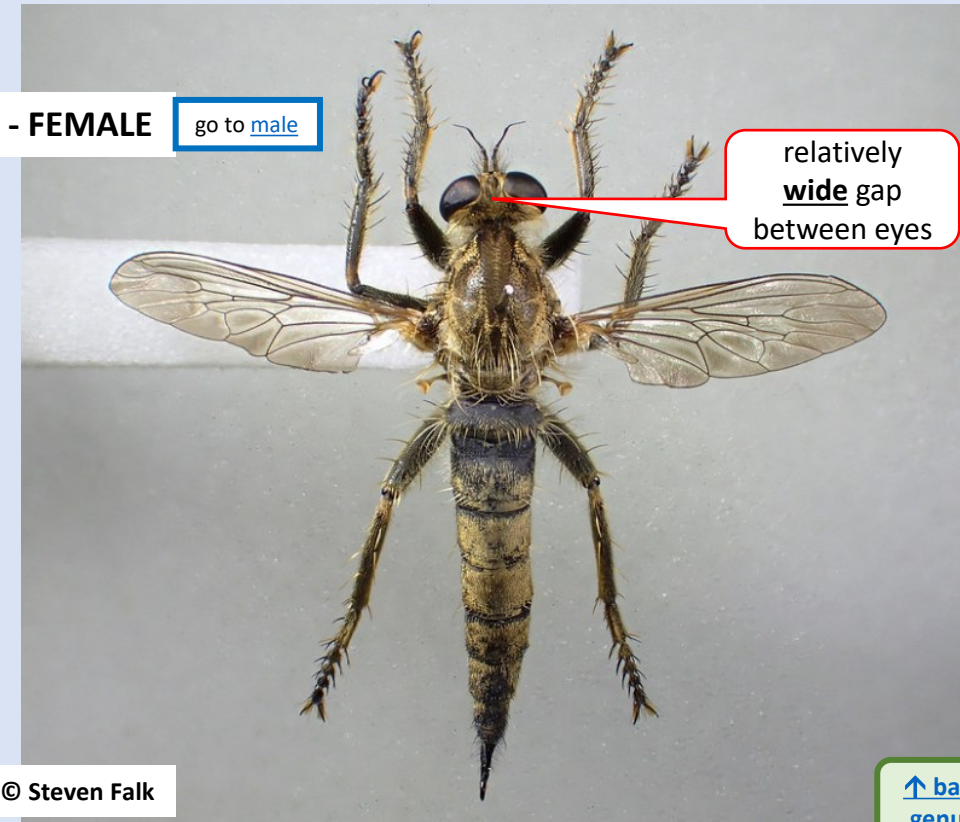
***Machimus rusticus* (Downland Robberfly) - FEMALE**

[go to male](#)

See [comparison with \*Etolmus rufibarbis\*](#); also similar to [Philonicus](#) (sand dunes)

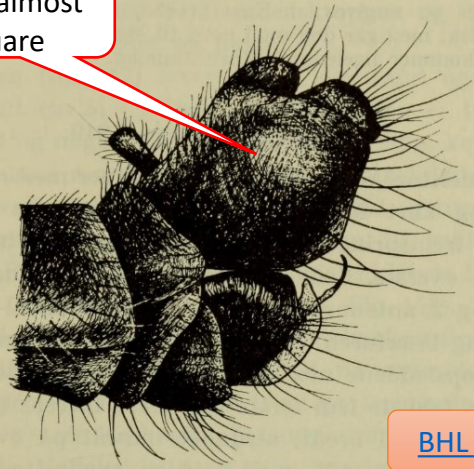


typical narrow *Machimus* ovipositor



relatively **wide** gap between eyes

male genital lobes almost square



[BHL link](#)

Very similar to the common *Neoitamus cyanurus*. The colour of the leg bristles and basitarsi provide an initial indication that you may have the rarer species - males can be confirmed from their genitalia, females need to be examined under a microscope to check the microtrichia in the first basal cell of the wing.

There are no confirmed UK records since 1997, and any new record will need to be supported by clear, close-up photos or a specimen.

12-17 mm long

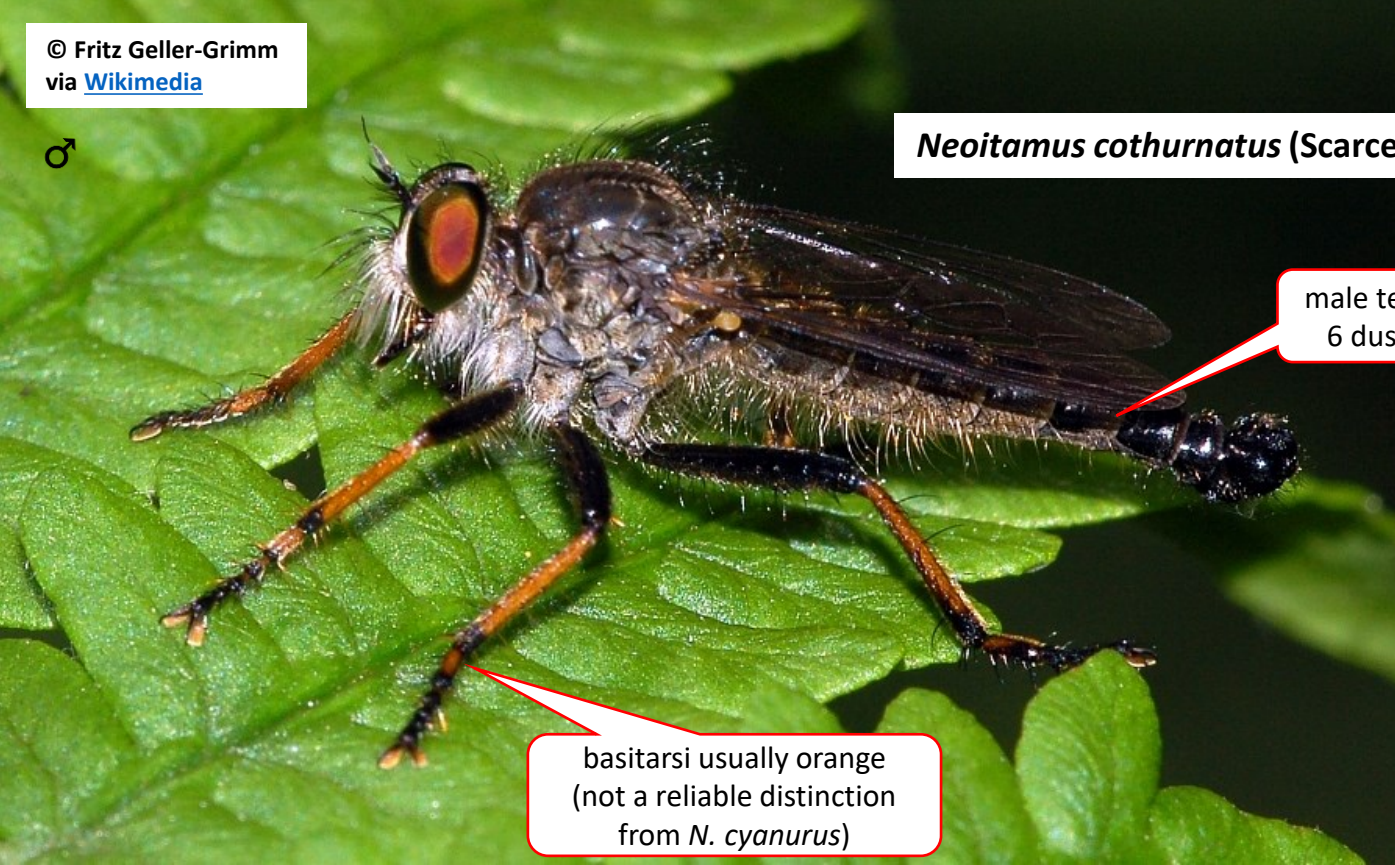
© Jody Robert via [iRecord](#)



long pale bristles behind fore and mid tibia

© Fritz Geller-Grimm via [Wikimedia](#)

♂



### *Neoitamus cothurnatus* (Scarce Awl Robberfly)

male tergite 6 dusted

basitarsi usually orange (not a reliable distinction from *N. cyanurus*)

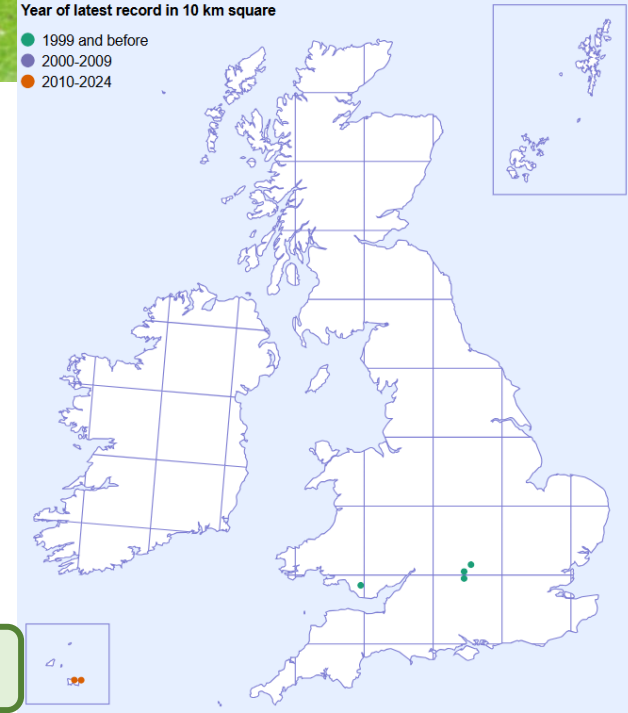
- ID difficulty: 4
- Flight period: early Jun
- GB threat: Critically Endangered • GB rarity: Nationally Rare
- south Wales (formerly in woods near Oxford)
- open woodland, bracken slopes

Year of latest record in 10 km square

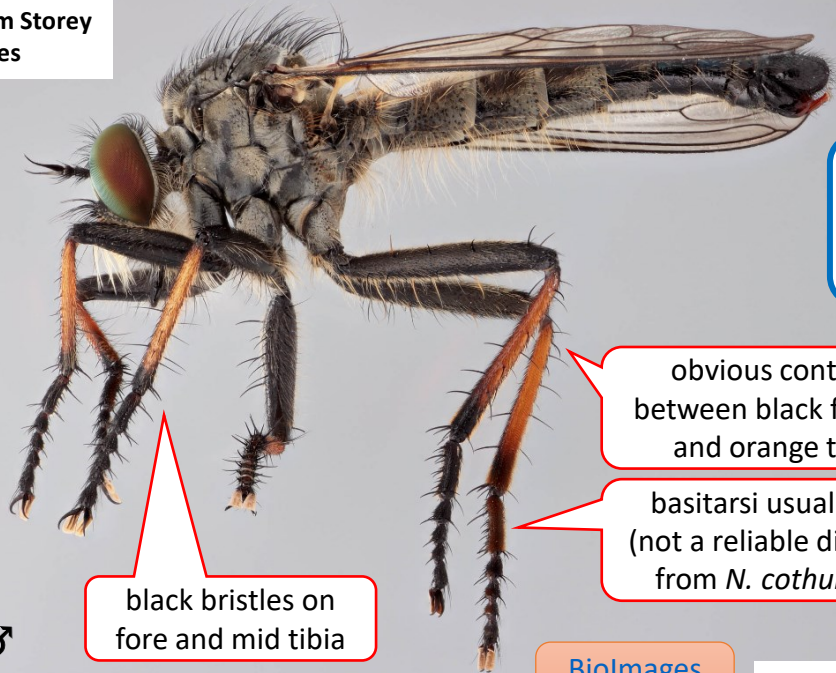
● 1999 and before

● 2000-2009

● 2010-2024



[↑ back to genus list](#)



♂

black bristles on fore and mid tibia

obvious contrast between black femora and orange tibia

basitarsi usually black (not a reliable distinction from *N. cothurnatus*)

Males and females are similar in colour. For differences between the two species in this genus see the much rarer *N. cothurnatus*.

[Biolimages link](#)

[Steven Falk link](#)



♀

female has very long 'awl-shaped' ovipositor

- ID difficulty: 3
- Flight period: mid May to early Oct, peak in mid Jun to mid Jul
- GB threat: Least Concern
- widespread, rarer in north
- woodland, especially ancient, usually along rides

### *Neoitamus cyanurus* (Common Awl Robberfly)

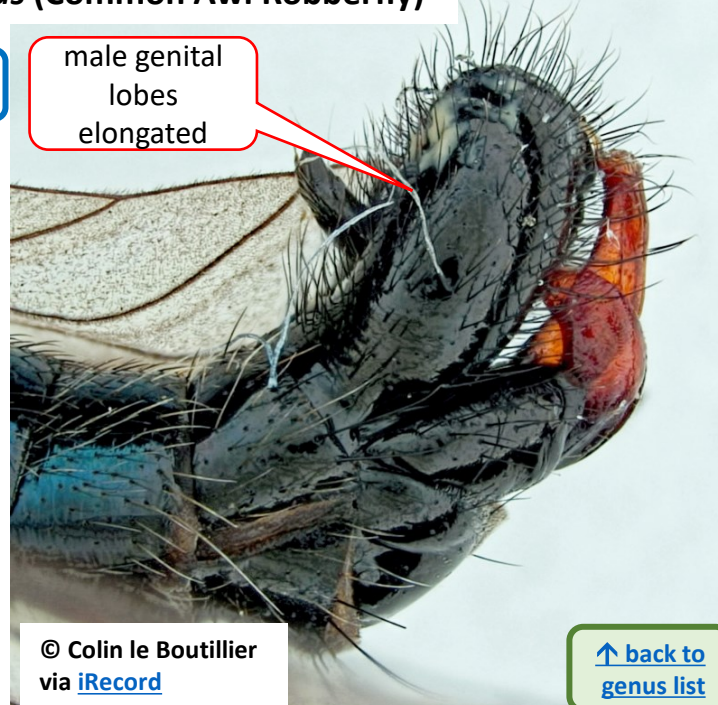
12–17 mm long

male genital lobes elongated

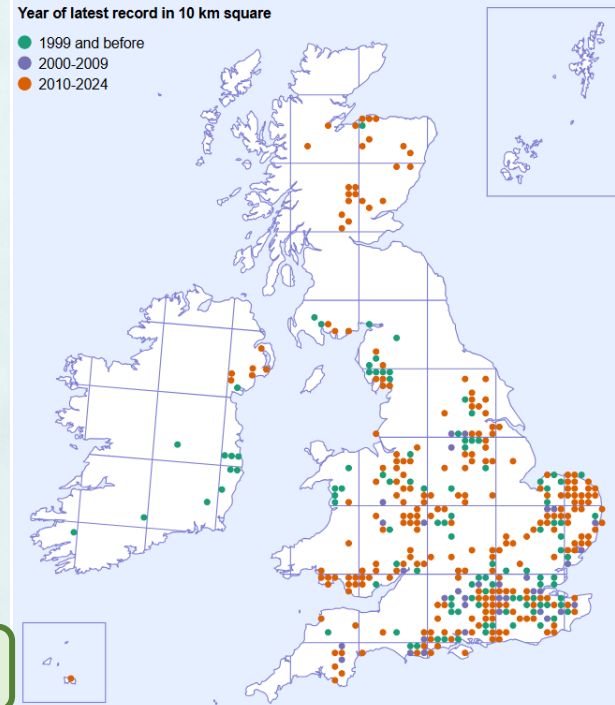
male tergite 6 shining



♂

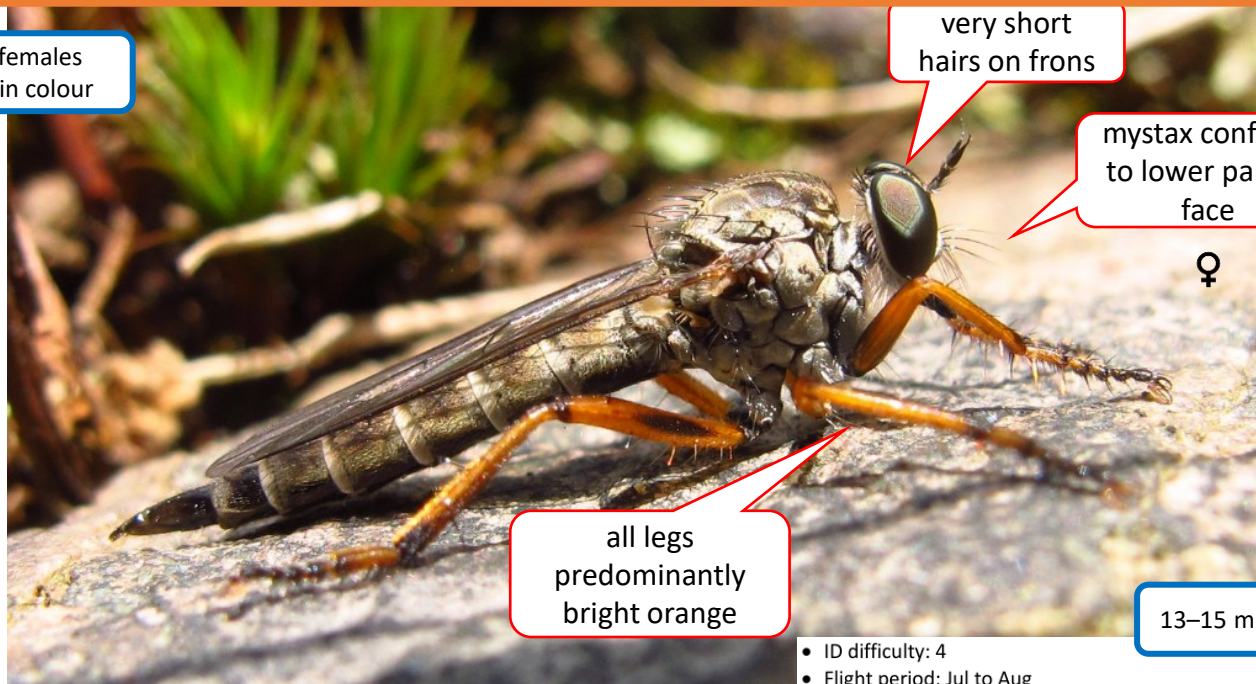


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Males and females are similar in colour



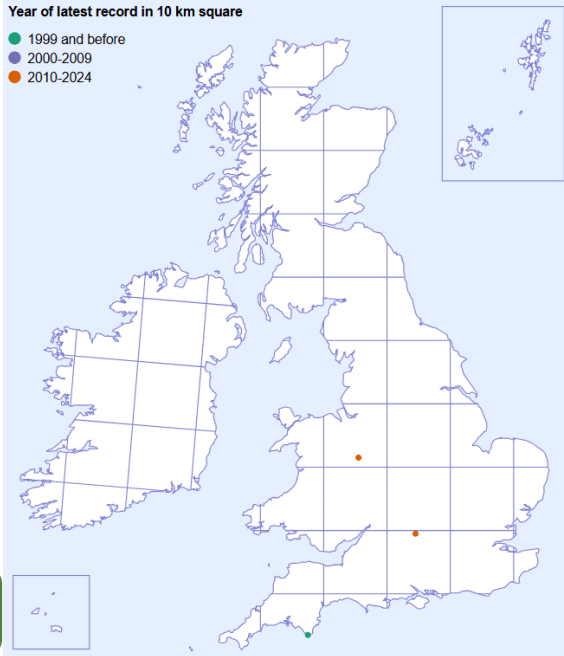
### *Neomochtherus pallipes* (Devon Red-legged Robberfly)



- ID difficulty: 4
- Flight period: Jul to Aug
- GB threat: Critically Endangered • GB rarity: Nationally Rare
- Devon (1990), Berkshire (2012), Shropshire (2016-2020)
- grassland with exposed rock, on sandy soils

Year of latest record in 10 km square

- 1999 and before
- 2000-2009
- 2010-2024



[↑ back to genus list](#)

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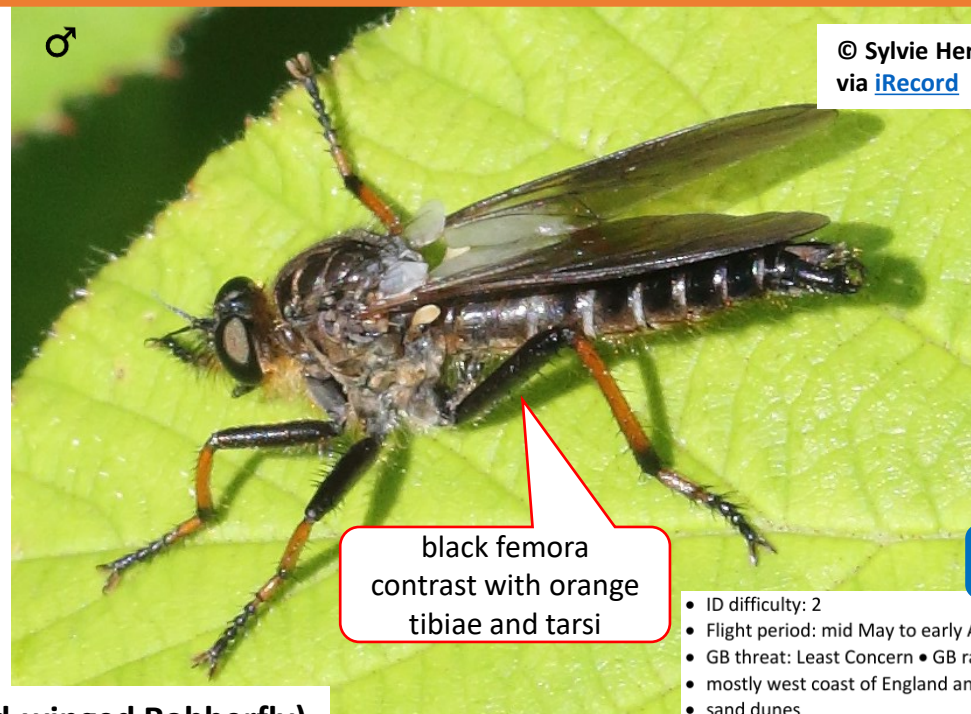
♂



Males and females are similar in colour.

wings tinted brown on outer part, whitish at base (not always obvious in photos, and usually clearer in the males)

♂



© Sylvie Herault via [iRecord](#)

black femora contrast with orange tibiae and tarsi

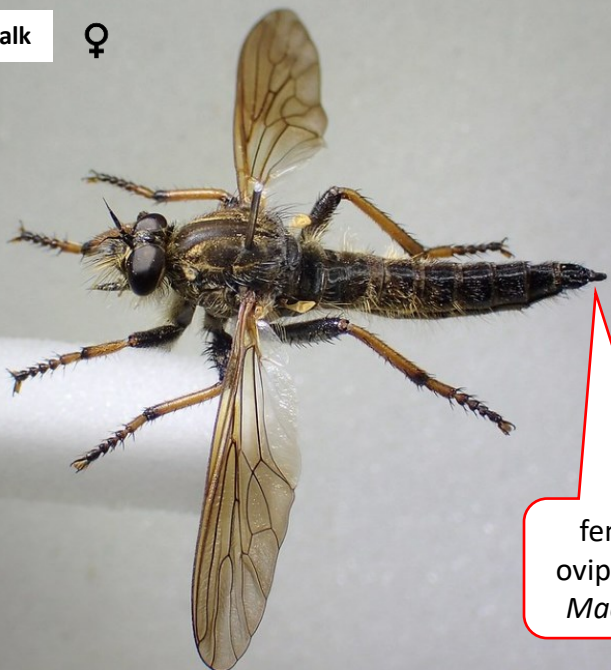
Large species, 16–21 mm long

- ID difficulty: 2
- Flight period: mid May to early Aug, peak in Jun
- GB threat: Least Concern • GB rarity: Nationally Scarce
- mostly west coast of England and Wales, north to Scotland
- sand dunes

### *Pamponerus germanicus* (Pied-winged Robberfly)

© Steven Falk

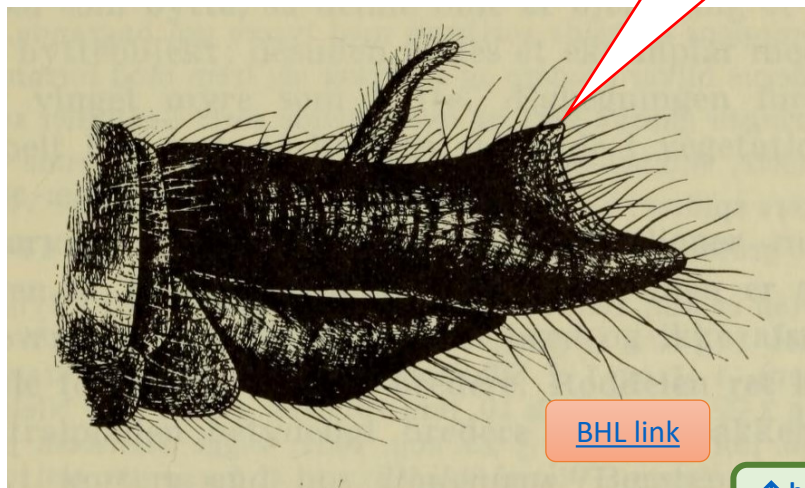
♀



[Steven Falk link](#)

female has short ovipositor, similar to *Machimus* females

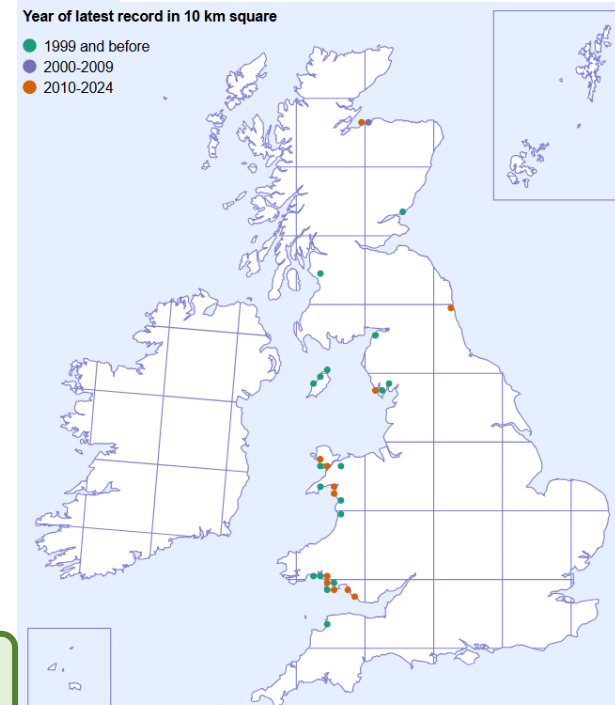
male genital lobes toothed on upper edge



[BHL link](#)

Year of latest record in 10 km square

- 1999 and before
- 2000-2009
- 2010-2024



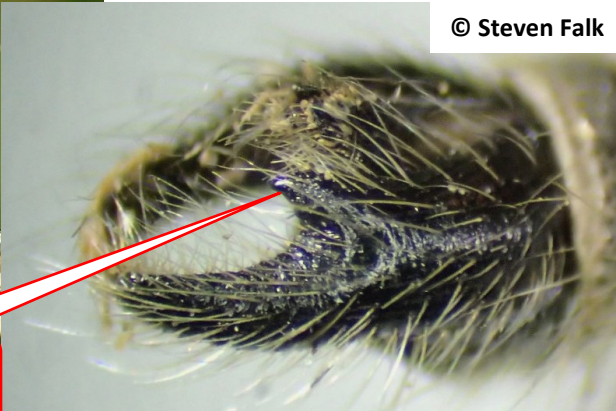
[↑ back to genus list](#)



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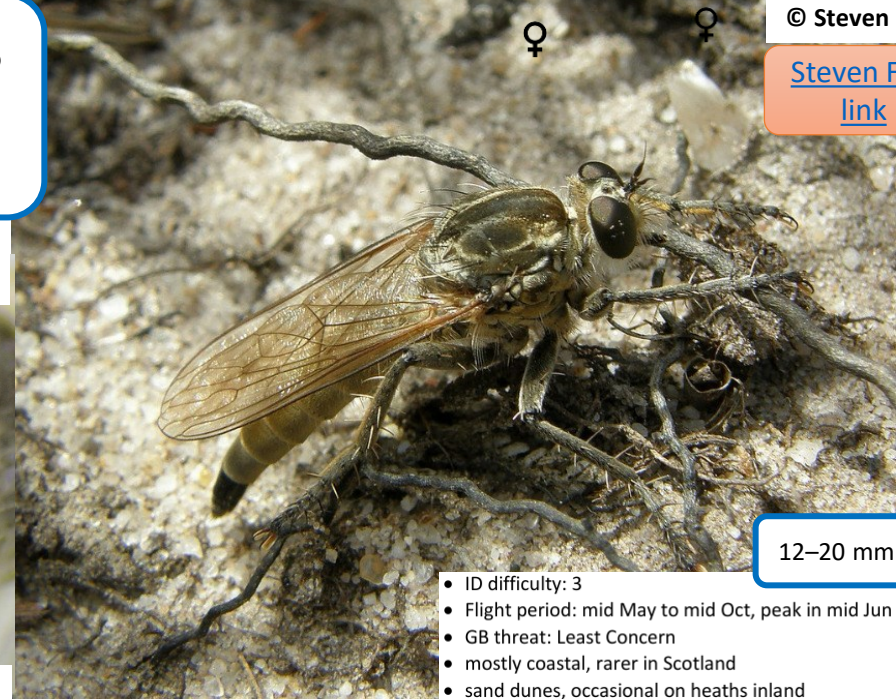
male genital lobes toothed on upper edge



© Steven Falk

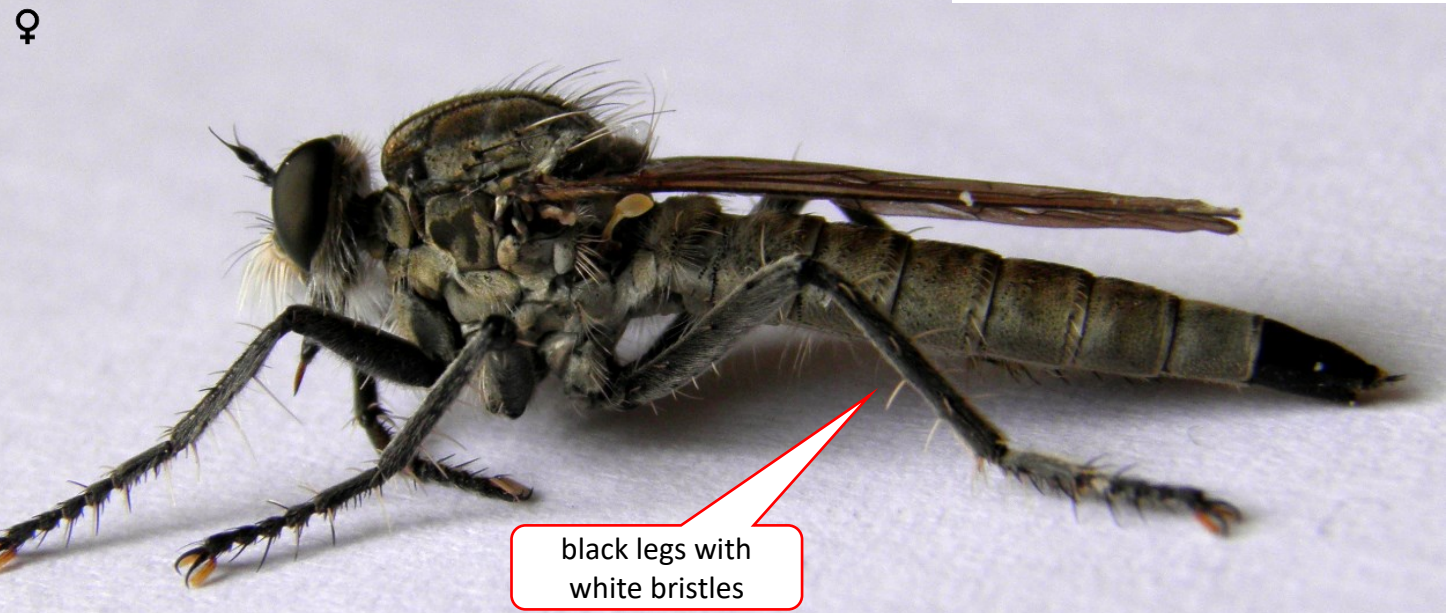
Males and females are similar in colour. Some *Machimus* species have a similar shape and also have black legs with pale bristles, but these are not sand-dune species. The genitalia/ovipositor provide confirmation if in doubt. See also *Eutolmus* and *Rhadiurgus*.

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[Steven Falk link](#)



12–20 mm long

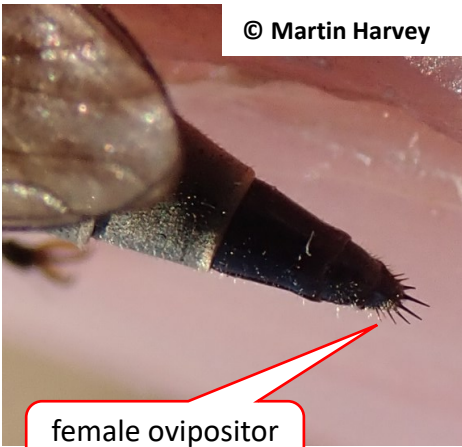
- ID difficulty: 3
- Flight period: mid May to mid Oct, peak in mid Jun to mid Jul
- GB threat: Least Concern
- mostly coastal, rarer in Scotland
- sand dunes, occasional on heaths inland



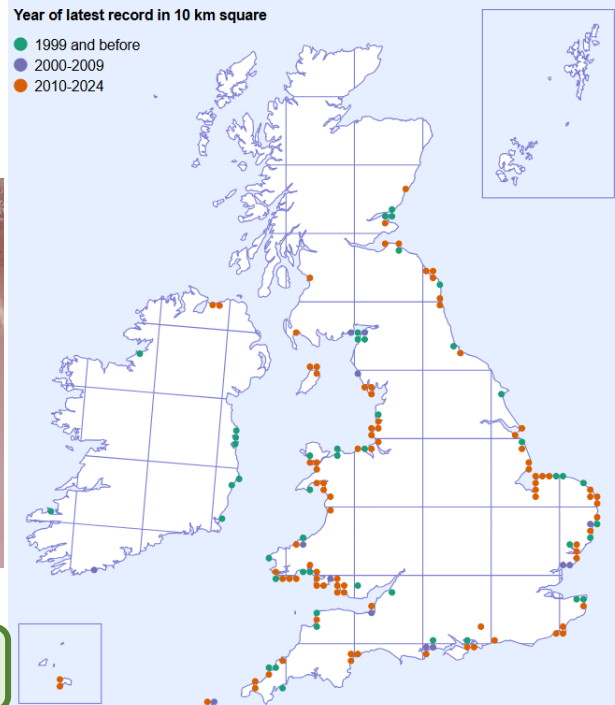
black legs with white bristles

© Martin Harvey

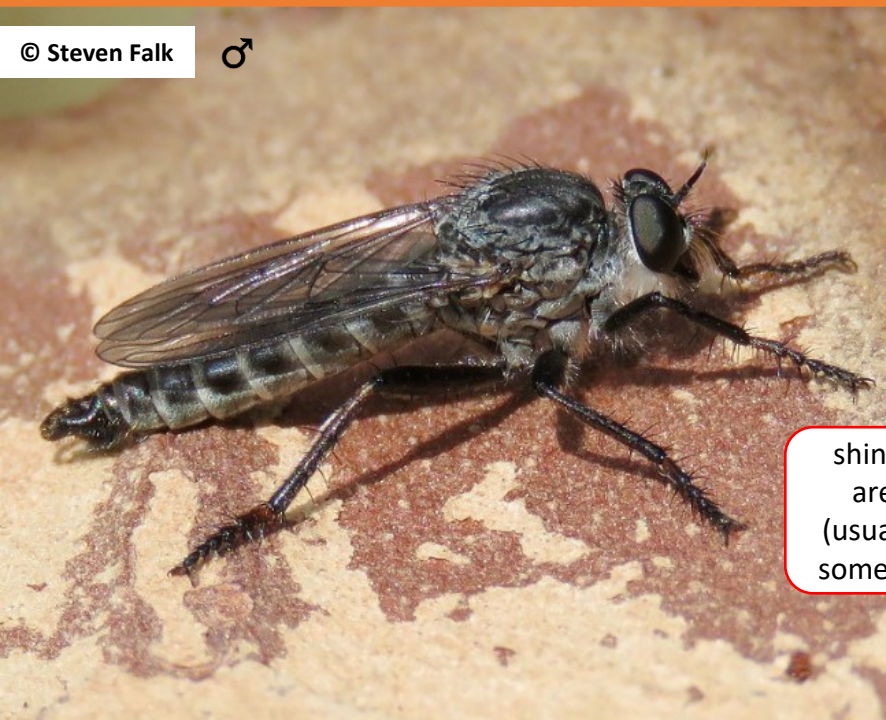
© Martin Harvey



female ovipositor with spines



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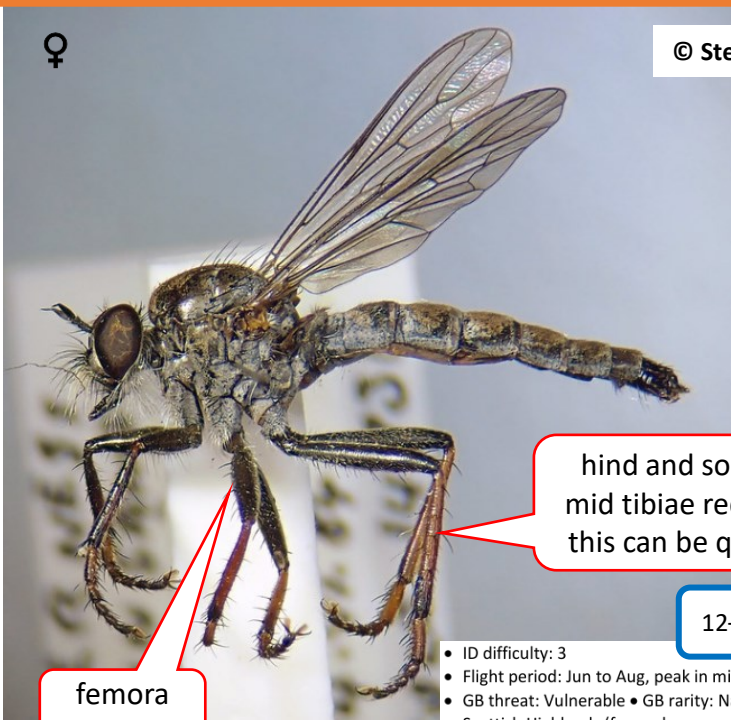
♂

shiny undusted area on face  
(usually blackish, sometimes paler)



© Steven Falk

♂



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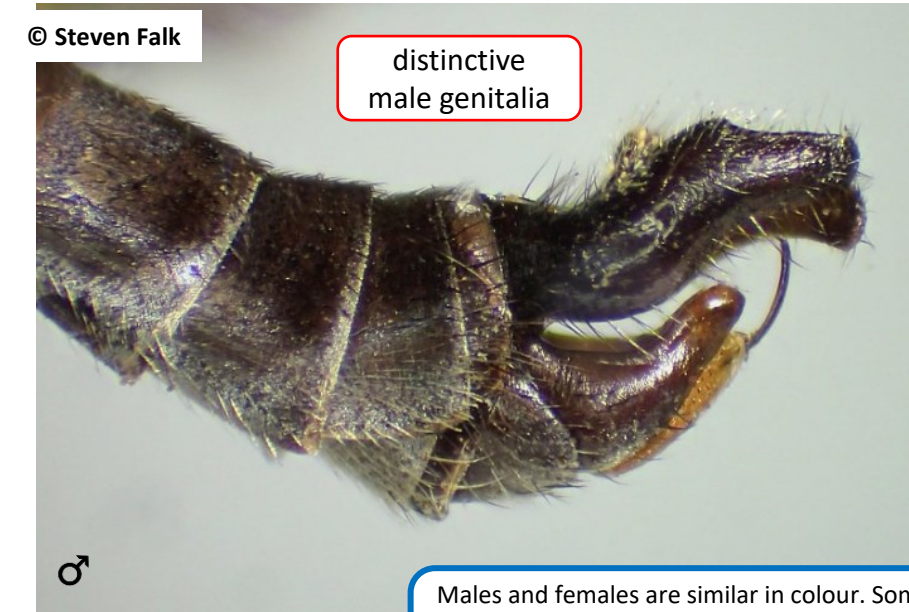
hind and sometimes mid tibiae reddish (but this can be quite dark)

12–15 mm long

femora all black

- ID difficulty: 3
- Flight period: Jun to Aug, peak in mid Jun to mid Jul
- GB threat: Vulnerable • GB rarity: Nationally Rare
- Scottish Highlands (formerly more widespread in Scotland)
- forest glades and margins, and wooded river margins

***Rhadiurgus variabilis* (Northern Robberfly)**



© Steven Falk

distinctive male genitalia

♂

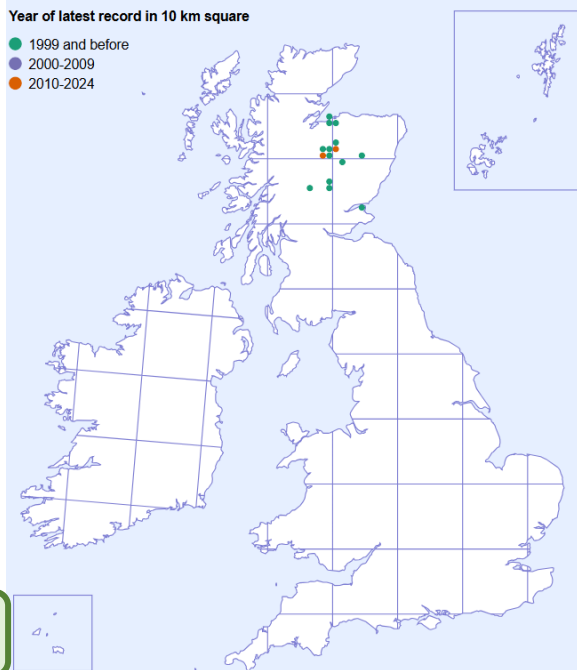
[Steven Falk link](#)



♀

female ovipositor short and blunt

© Steven Falk



Males and females are similar in colour. Some *Machimus* species look similar, but those with black femora also have black tibiae. The genitalia/ovipositor provide confirmation if in doubt. See also *Eutolmus* and *Philonicus*.

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