

***Britain's
Robberflies –
Diptera Asilidae***



Malcolm Smart

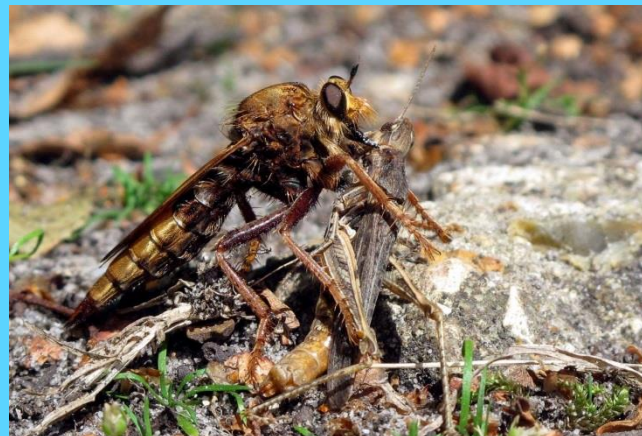


Asilidae – the **BIG CATS** of the Diptera World



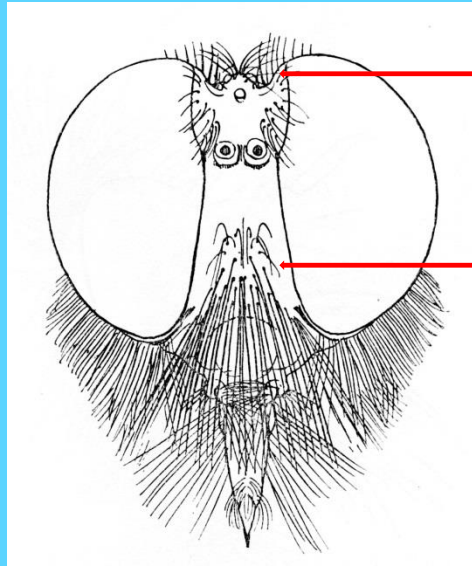
Adults exclusively carnivorous predators of other insects – mostly other Diptera

Larvae where known are also believed to be predatory



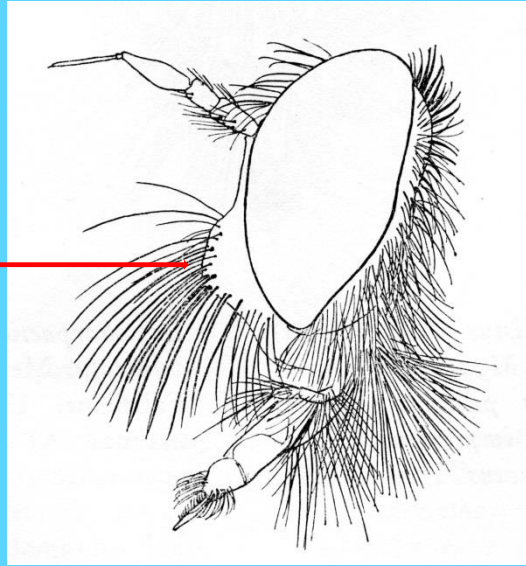
What distinguishes a Robber Fly (an Asilid) from other Diptera ???

Example based on drawings and photos of *Philonicus albiceps*



notch

mystax



Two primary characters:

- * Eyes separated in both sexes by a deep notch at the top of the head.
- * There is a central clump of down-curved bristles on the face above the upper mouth edge (called the mystax).



Typically large and robust Diptera with elongated bodies .

The proboscis is rigid and adapted for piercing insect cuticle.

Asilidae species count with examples

World
7000+

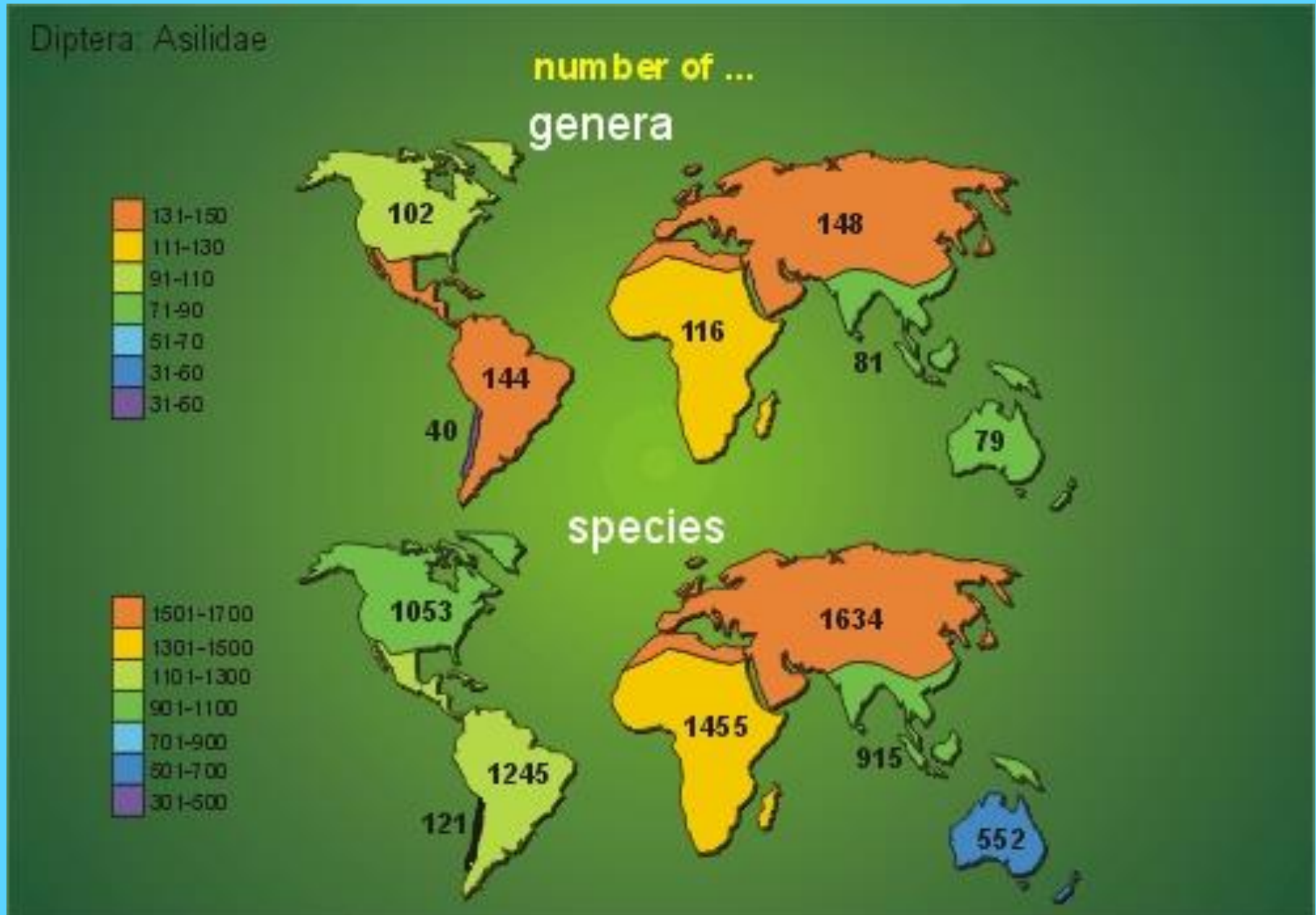
Britain
29

VCs surrounding Bedford
18

Bedfordshire VC
13



World distribution of Asilidae Genera and Species (after F. Geller-Grim)



An introduction to the British Asilidae fauna compiled using data primarily from the following sources

Data held by the Soldierflies and Allies Recording Scheme run by



& Distribution maps derived from it at October 2016 (15900 Asilidae records)



Photographs of Asilidae submitted to Facebook for identification or comment by: Lester Wareham, Mo Richards, Graham Dash, Martin Parr, Graham Brownlow, Mark Welch



Albums of Asilidae photographs submitted for public scrutiny by wildlife/dipterist specialists: Steven Falk, Janet Graham, Ian Andrews, Gail Hampshire



Pictures offered by or requested from: Nigel Jones, Martin Harvey, Alan Outen, Mike Taylor, Tim Ransom, Tim Hodge, Fritz Geller-Grimm

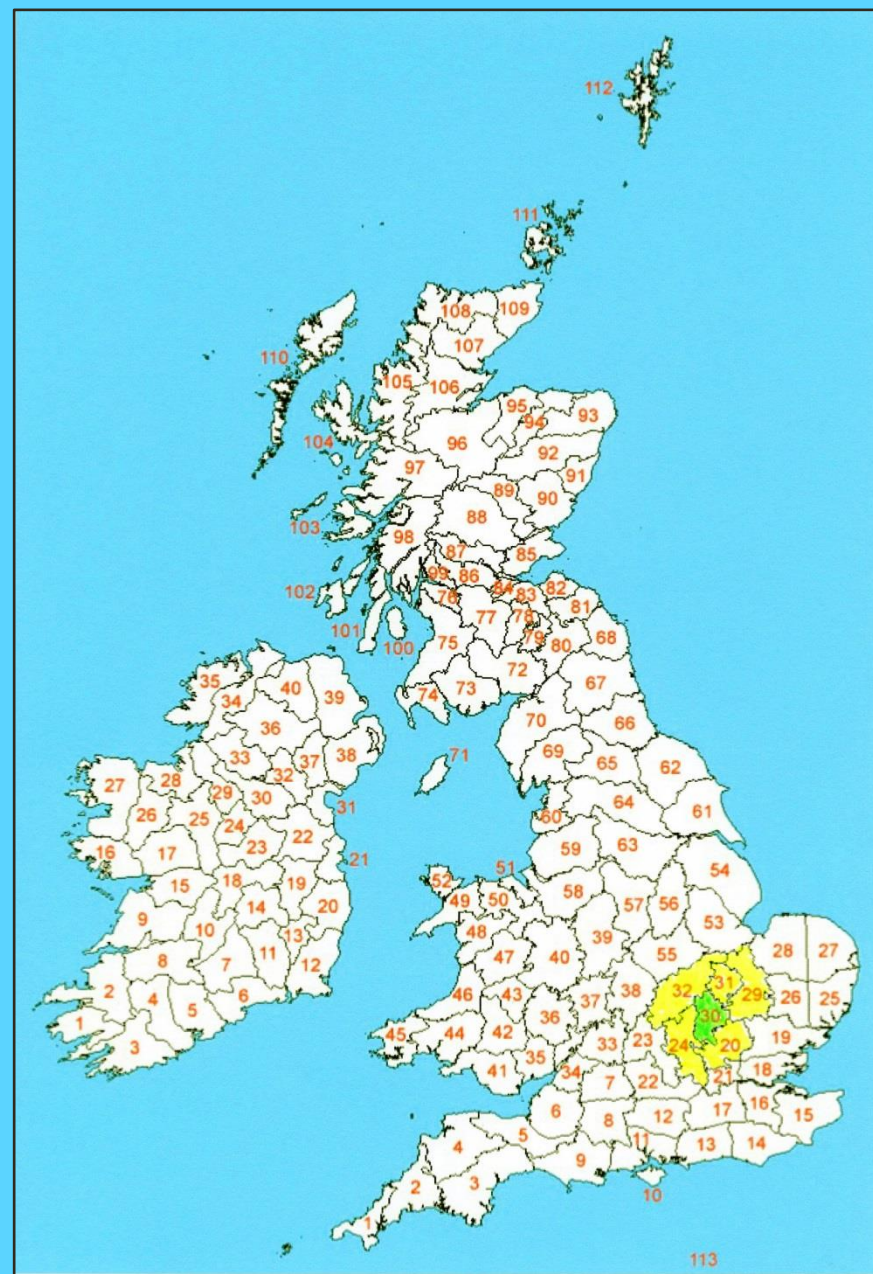


Free internet resources for further studies:

- * Downloadable photographic guide to Dutch/Belgian Asilidae
<https://waarneming.nl/download/fotogidsAsilidae.pdf>
- * Diptera website with a very extensive photo gallery
<http://www.diptera.info/photogallery.php>

Asilidae recorded in Britain, Bedfordshire and its neighbouring Vice-Counties

	British Isles	Bedford + adjacent VCs	Bedford
	All	20, 24, 29, 30, 31, 32	VC 30 only
1	<i>Asilus crabroniformis</i>	<i>Asilus crabroniformis</i>	<i>Asilus crabroniformis</i>
2	<i>Choerades gilvus</i> (extinct)		
3	<i>Choerades marginatus</i>	<i>Choerades marginatus</i>	<i>Choerades marginatus</i>
4	<i>Dasyopogon diadema</i> (extinct)		
5	<i>Dioctria atricapilla</i>	<i>Dioctria atricapilla</i>	<i>Dioctria atricapilla</i>
6	<i>Dioctria baumhaueri</i>	<i>Dioctria baumhaueri</i>	<i>Dioctria baumhaueri</i>
7	<i>Dioctria cothurnata</i>		
8	<i>Dioctria linearis</i>	<i>Dioctria linearis</i>	<i>Dioctria linearis</i>
9	<i>Dioctria oelandica</i>	<i>Dioctria oelandica</i>	
10	<i>Dioctria rufipes</i>	<i>Dioctria rufipes</i>	<i>Dioctria rufipes</i>
11	<i>Dysmachus trigonus</i>	<i>Dysmachus trigonus</i>	<i>Dysmachus trigonus</i>
12	<i>Eutolmus rufibarbis</i>	<i>Eutolmus rufibarbis</i>	
13	<i>Laphria flava</i>		
14	<i>Lasiopogon cinctus</i>	<i>Lasiopogon cinctus</i>	
15	<i>Leptarthrus brevirostris</i>	<i>Leptarthrus brevirostris</i>	<i>Leptarthrus brevirostris</i>
16	<i>Leptarthrus vitripennis</i>	<i>Leptarthrus vitripennis</i>	
17	<i>Leptogaster cylindrica</i>	<i>Leptogaster cylindrica</i>	<i>Leptogaster cylindrica</i>
18	<i>Leptogaster guttiventris</i>	<i>Leptogaster guttiventris</i>	<i>Leptogaster guttiventris</i>
19	<i>Machimus arthriticus</i>		
20	<i>Machimus atricapillus</i>	<i>Machimus atricapillus</i>	<i>Machimus atricapillus</i>
21	<i>Machimus cingulatus</i>	<i>Machimus cingulatus</i>	<i>Machimus cingulatus</i>
22	<i>Machimus cowini</i>		
23	<i>Machimus rusticus</i>	<i>Machimus rusticus</i>	
24	<i>Neoitamus cothurnatus</i>		
25	<i>Neoitamus cyanurus</i>	<i>Neoitamus cyanurus</i>	<i>Neoitamus cyanurus</i>
26	<i>Neomochtherus pallipes</i>		
27	<i>Pamponerus germanicus</i>		
28	<i>Philonicus albiceps</i>		
29	<i>Rhadiurgus variabilis</i>		
Total	29 species	18 species	13 species

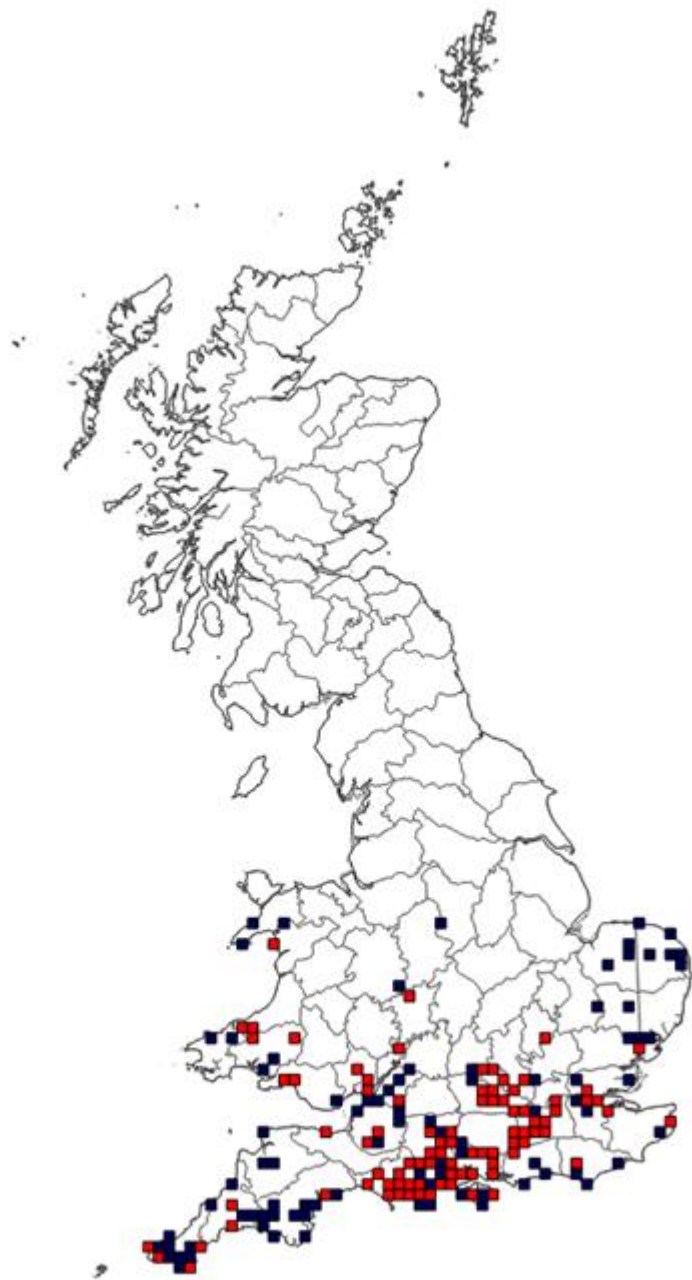


The 13 species of Asilidae of Vice-County 30 - Bedfordshire



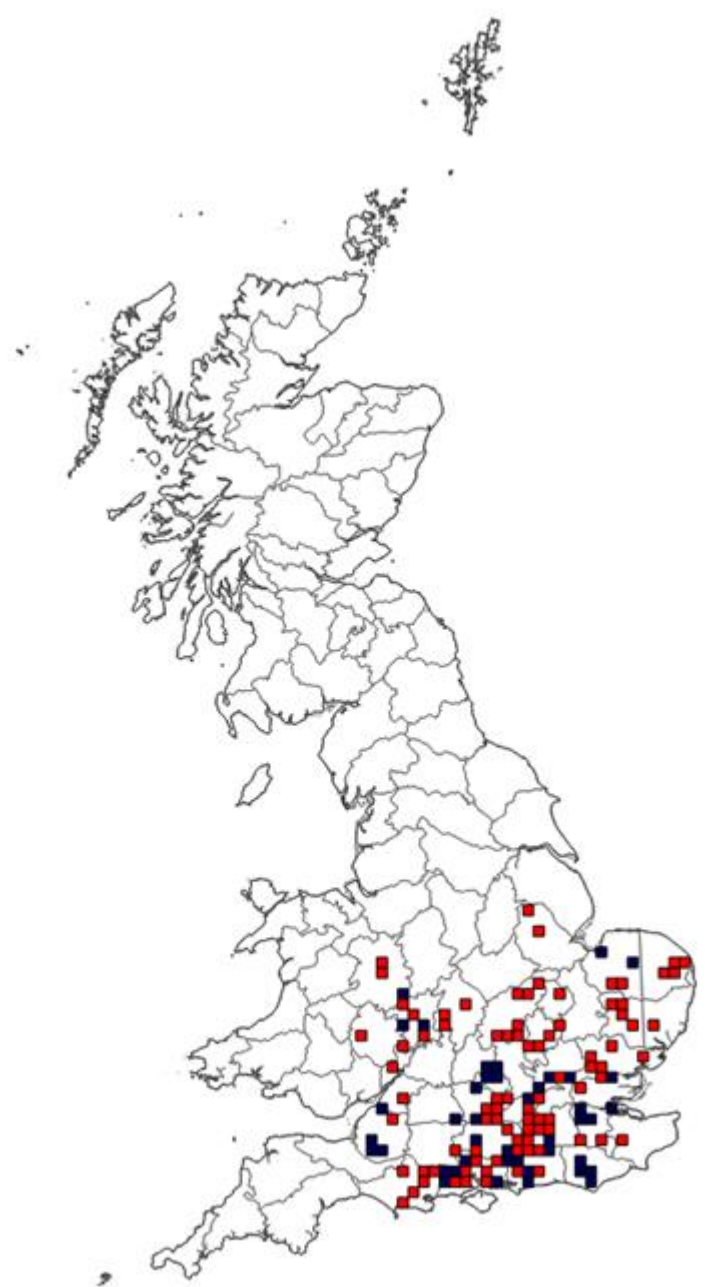


Asilus crabroniformis ♂



Asilus crabroniformis

■ = before 1990
■ = 1990 onwards



Choerades marginatus



Choerades marginatus ♀

Choerades marginatus ♂



Dioctria atricapilla ♂



Dioctria baumhaueri ♀



Dioctria linearis ♀





Dioctria linearis ♀

Dioctria rufipes ♂





Leptogaster cylindrica ♂



Leptogaster guttiventris ♀

Dysmachus trigonus ♀



Machimus atricapillus ♂

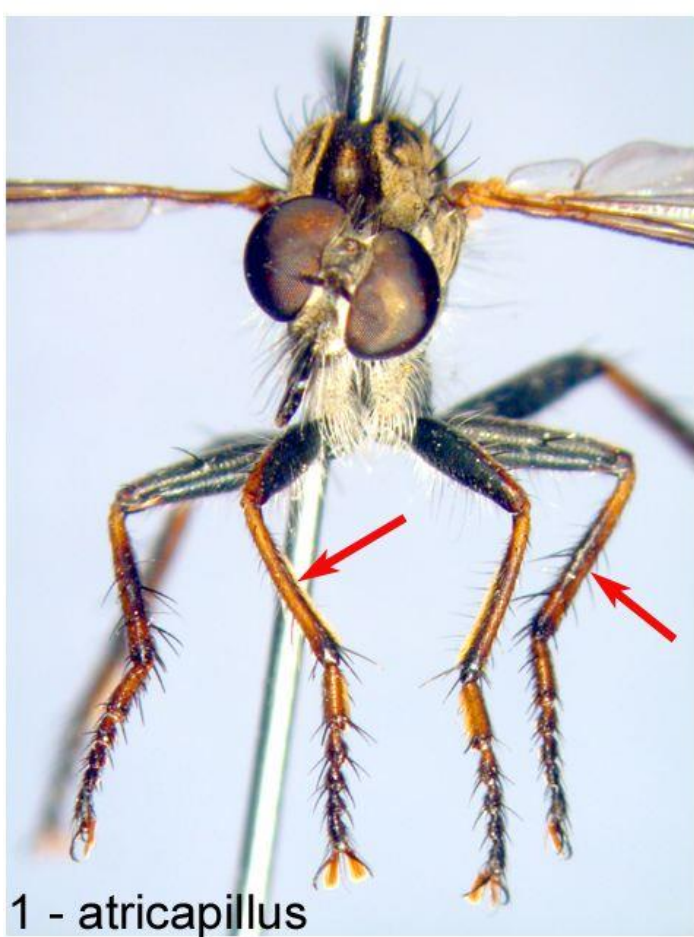


Machimus atricapillus ♀

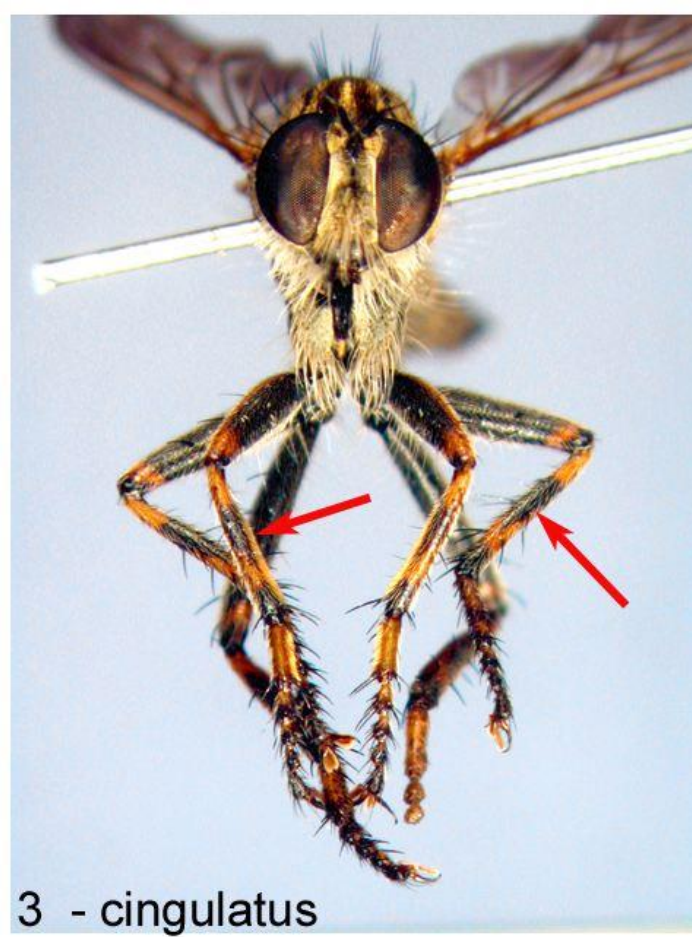


Machimus cingulatus ♂





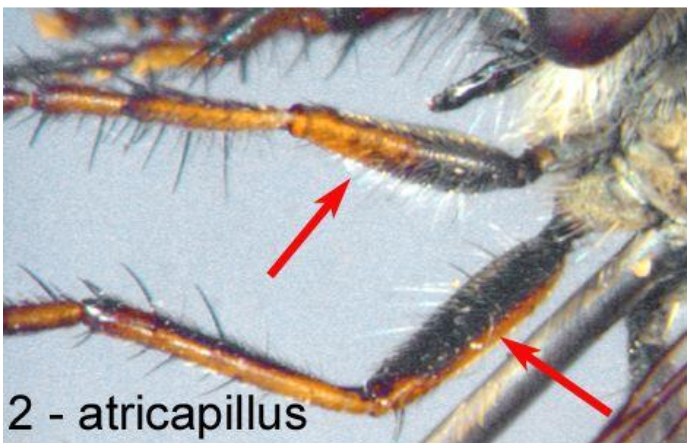
1 - atricapillus



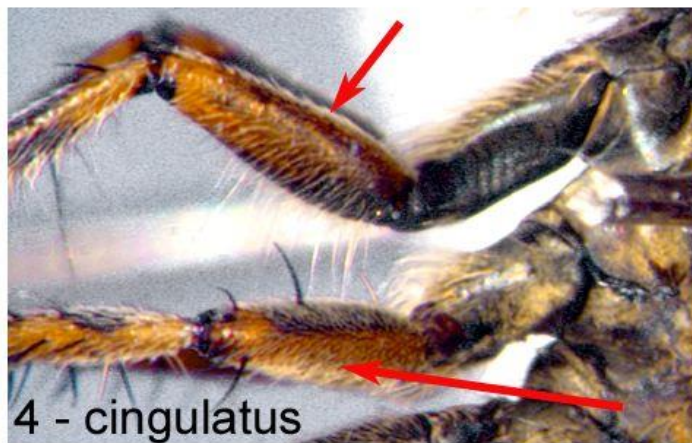
3 - cingulatus



5 - cowini



2 - atricapillus



4 - cingulatus



6 - cowini

Neoitamus cyanurus ♂





Neoitamus cyanurus ♀

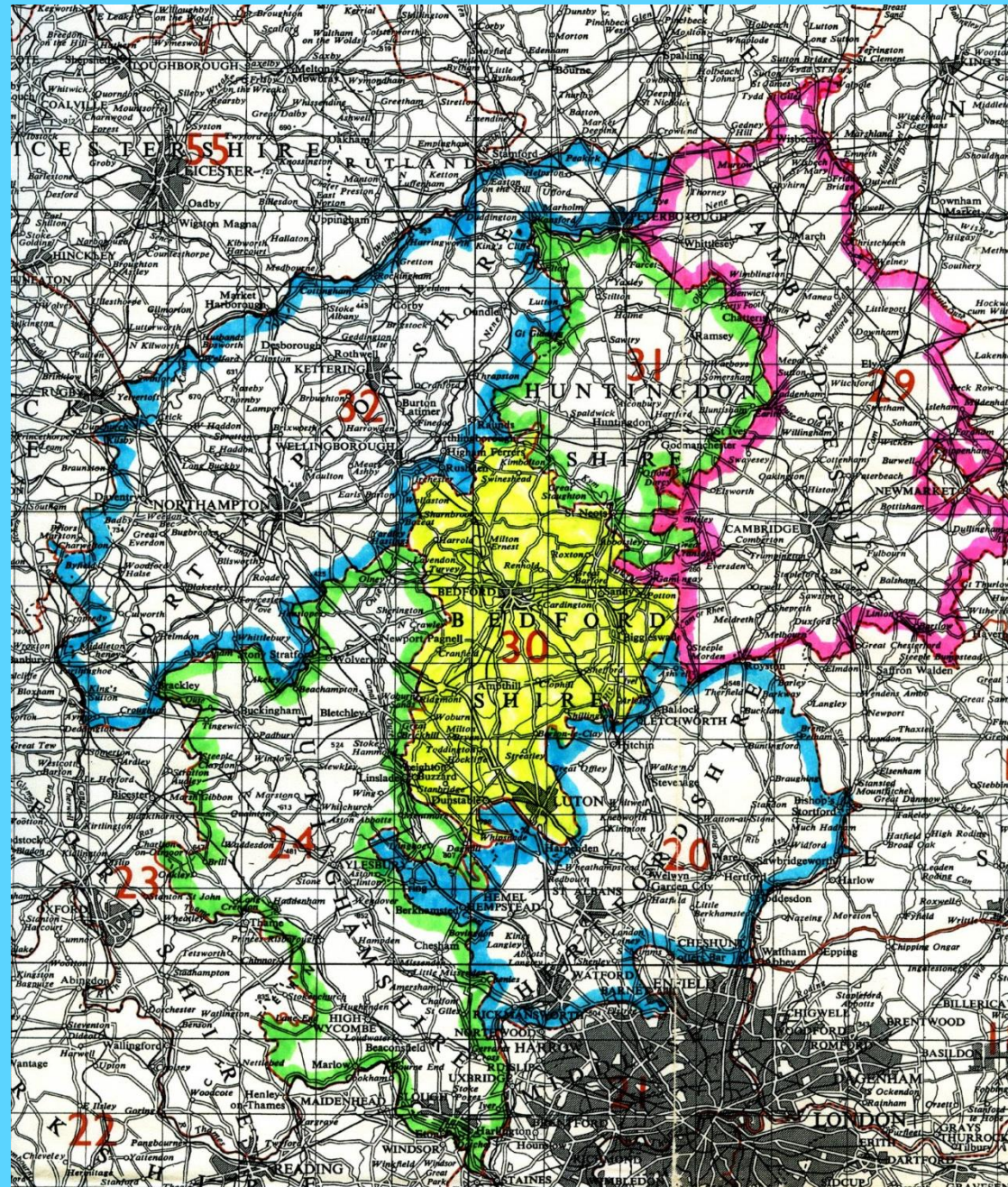


Leptarthrus brevirostris ♀

Leptarthrus brevirostris ♂



5 Additional Asilidae species recorded in VCs bordering Bedfordshire



32
Northamptonshire

24
Buckinghamshire

31
Huntingdonshire

29
Cambridgeshire

20
Hertfordshire



Leptarthrus vitripennis ♂

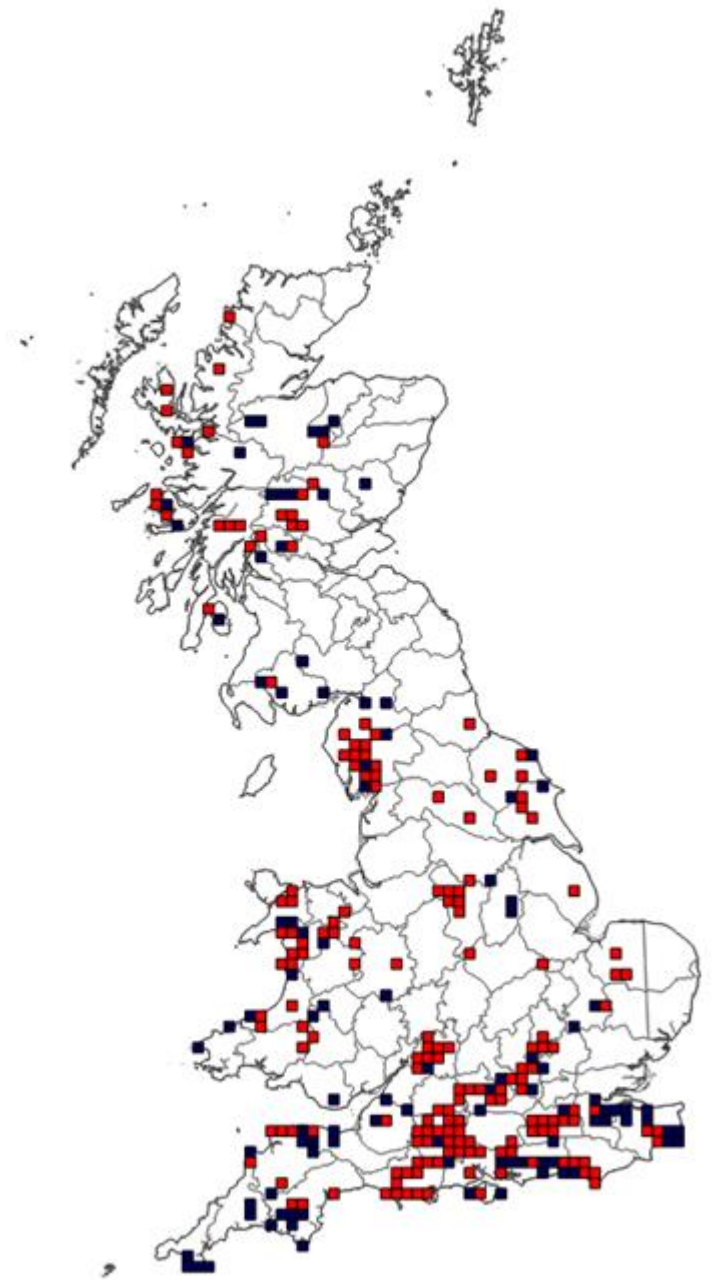
Leptarthrus vitripennis ♂





Leptarthrus vitripennis

- = before 1990
- = 1990 onwards



Leptarthrus brevisrostris

Dioctria Oelandica ♂



Lasiopogon cinctus ♂

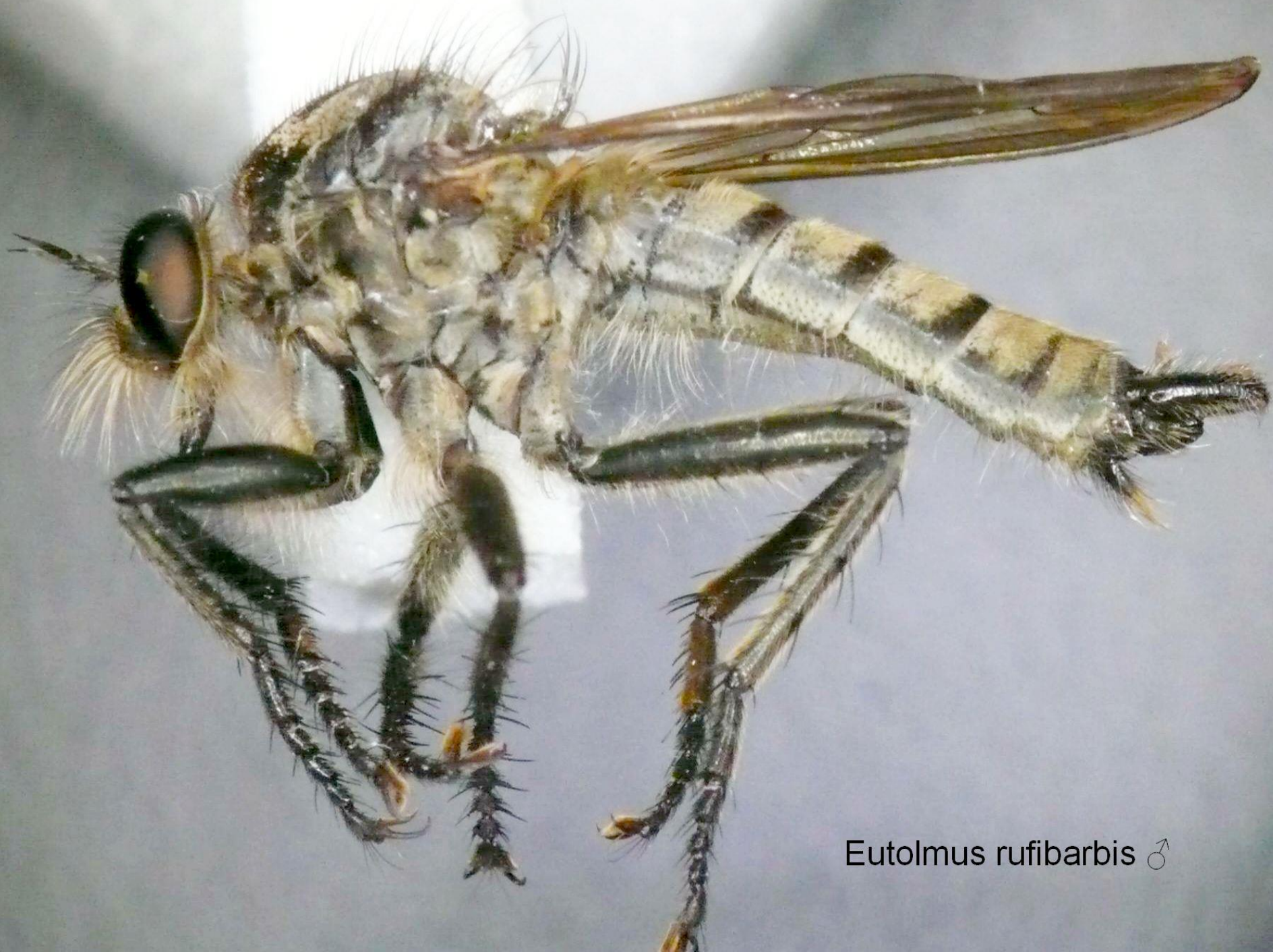


Lasiopogon cinctus ♀

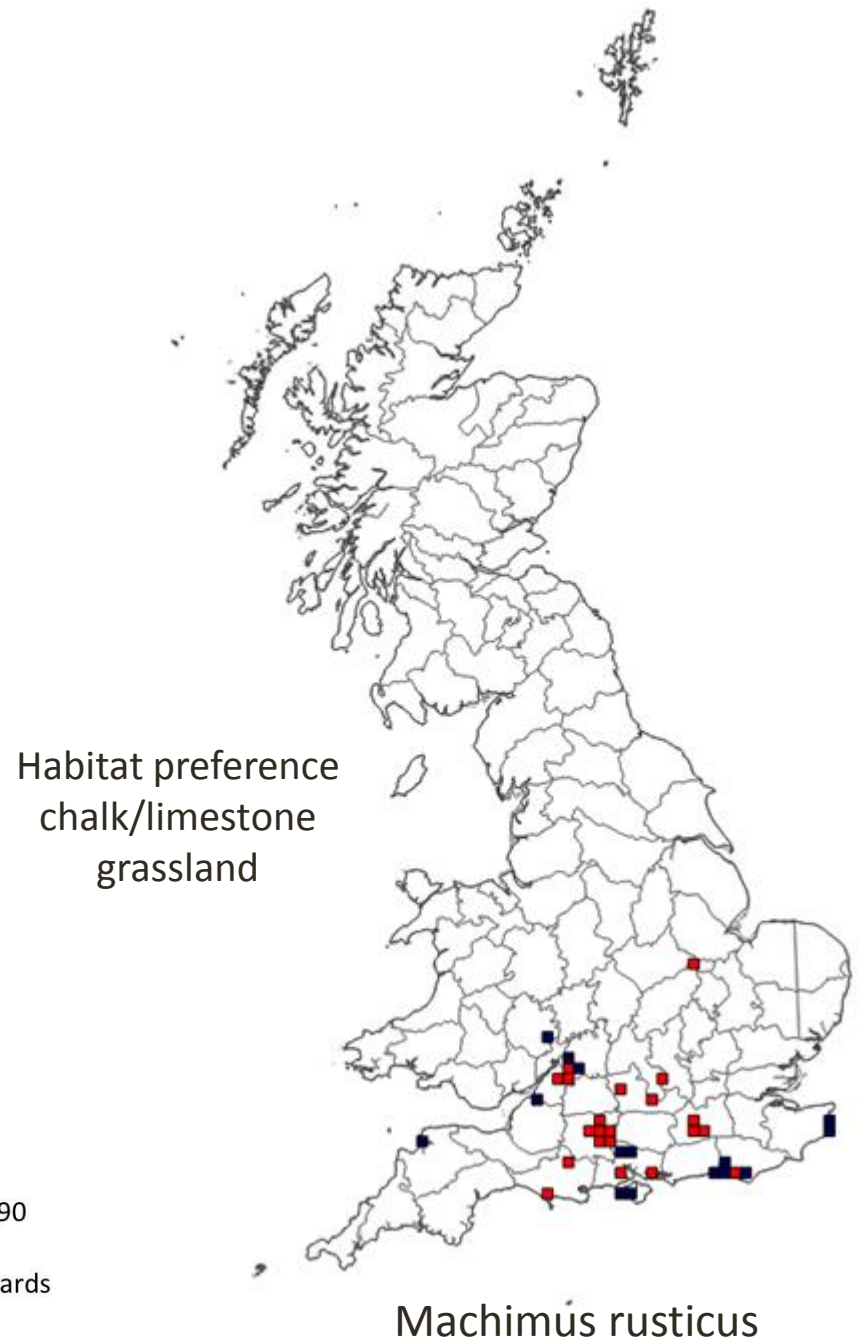
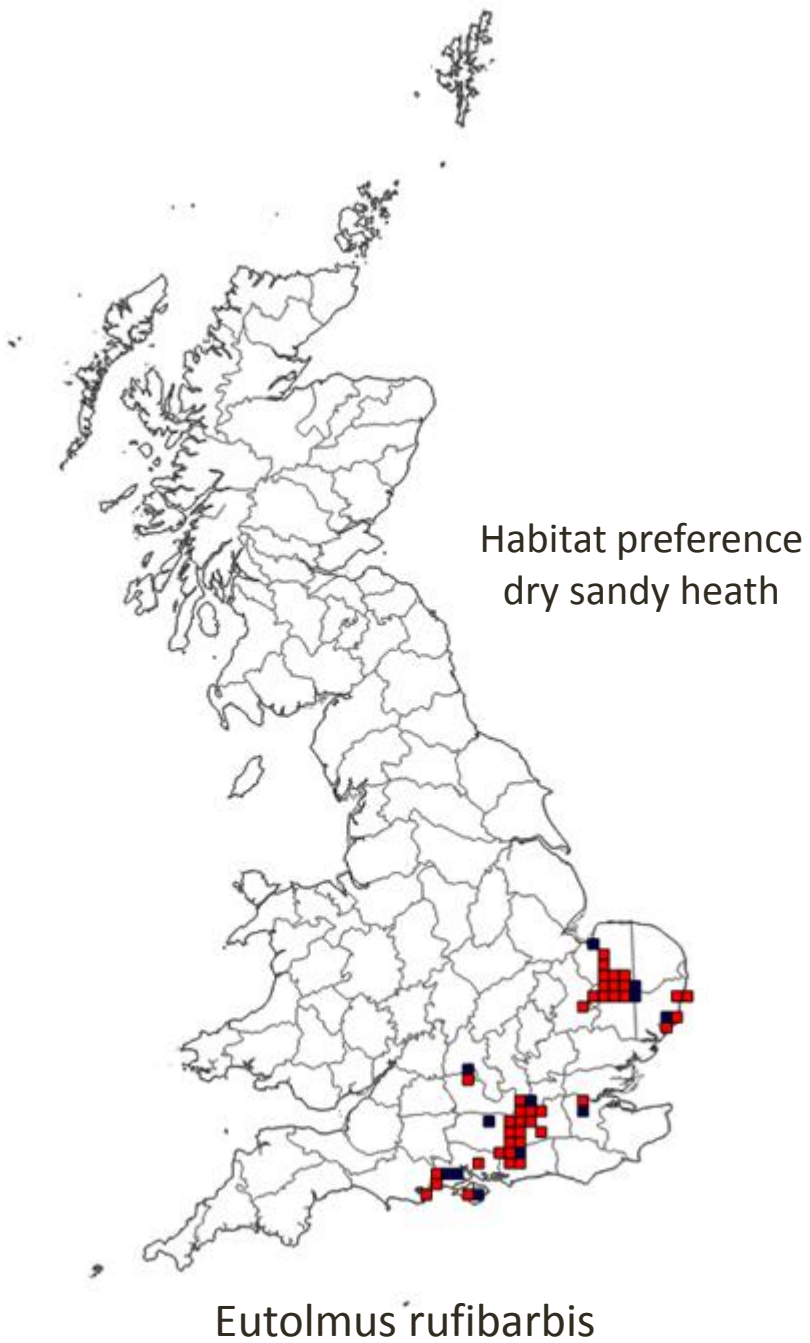


Eutolmus rufibarbis ♀





Eutolmus rufibarbis ♂



Machimus rusticus



Machimus rusticus



**British ASILIDAE not recorded from Bedfordshire
or the surrounding VCs**

11 more species including 2 believed to be extinct in Britain
And several species known from less than 5 sites



Choerades gilvus ♀

Choerades gilvus ♂ (1938)



First GB record 1938
Last GB record 1951
**Now considered to
be extinct in GB**

Choerades gilvus

Dioctria cothurnata ♂

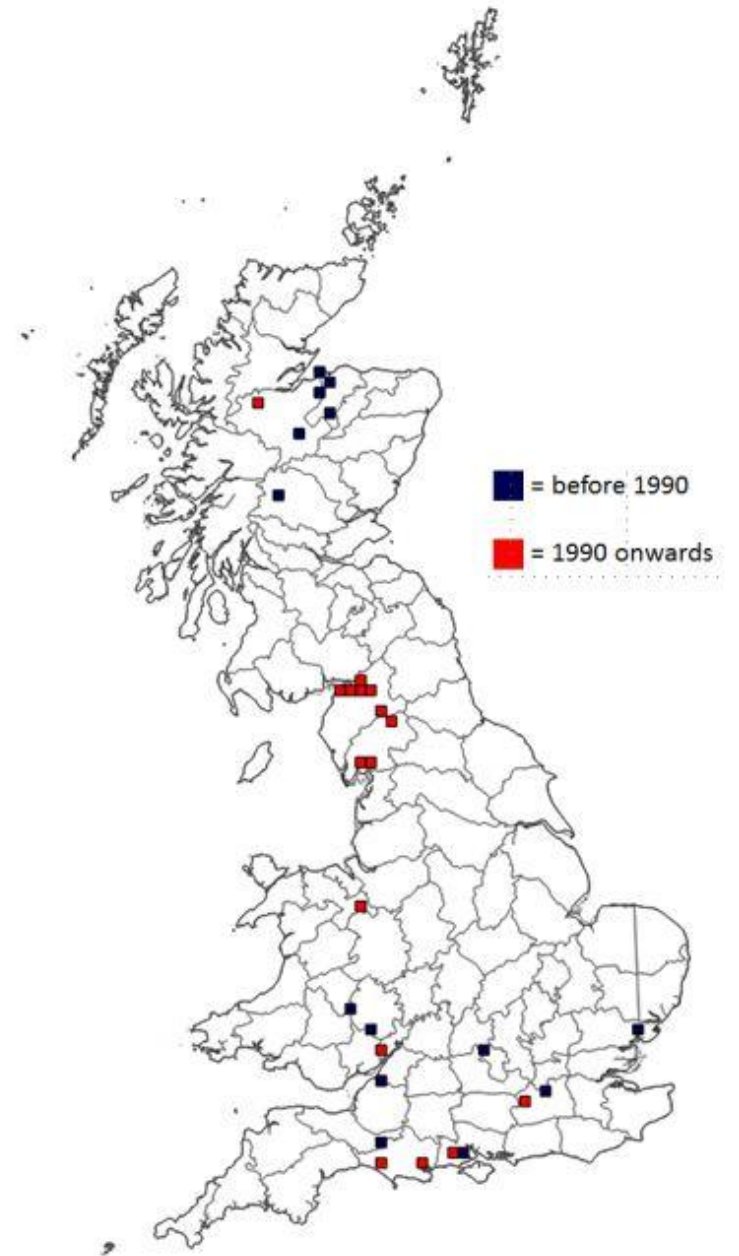


Dioctria cothurnata ♀





Dioctria cothurnata ♀

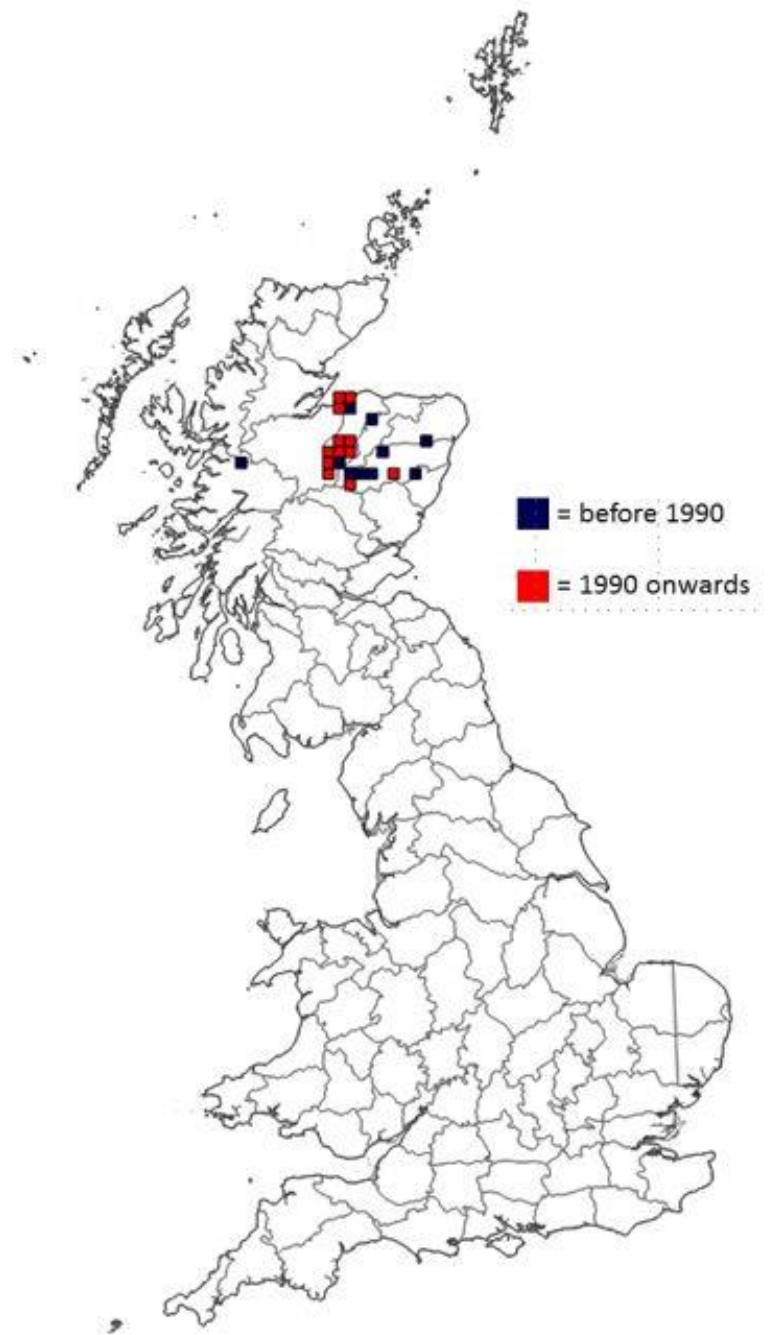


Laphria flava ♀





Laphria flava ♂



■ = before 1990
■ = 1990 onwards



Machimus arthriticus ♂



Machimus arthriticus ♀

All 32 British records
lie within a 34 km
diameter circle
centered close to
Thetford in the
Brecklands

Originally described
in 1946 from
specimens found in
the Isle of Man, *M.
cowini* was not
known on the British
mainland until 2006
when it was first
found in a small area
of the Cumbrian
coast

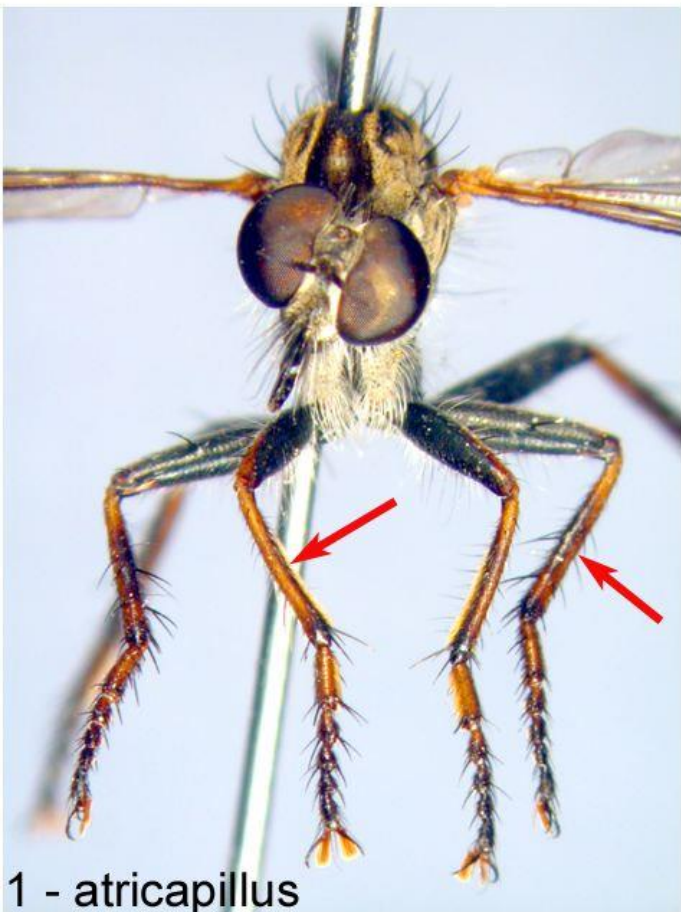
■ = before 1990
■ = 1990 onwards

Machimus arthriticus

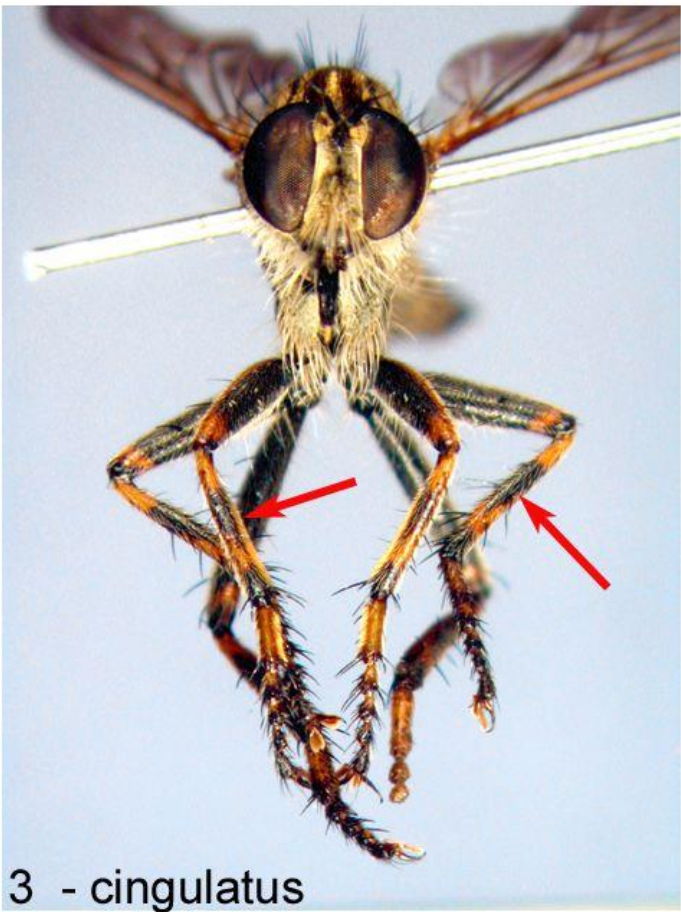
Machimus cowini

Machimus cowini ♂





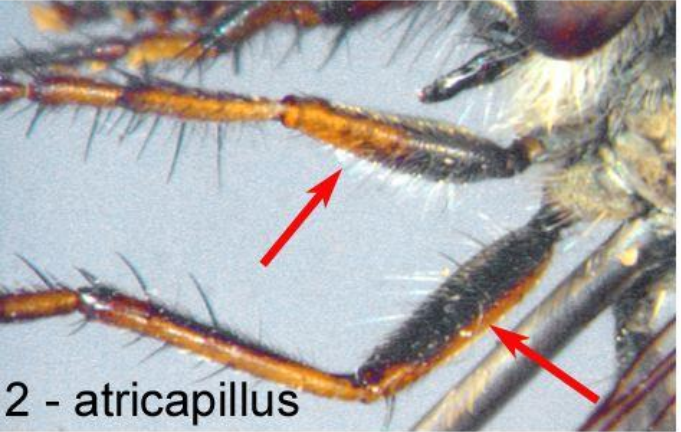
1 - atricapillus



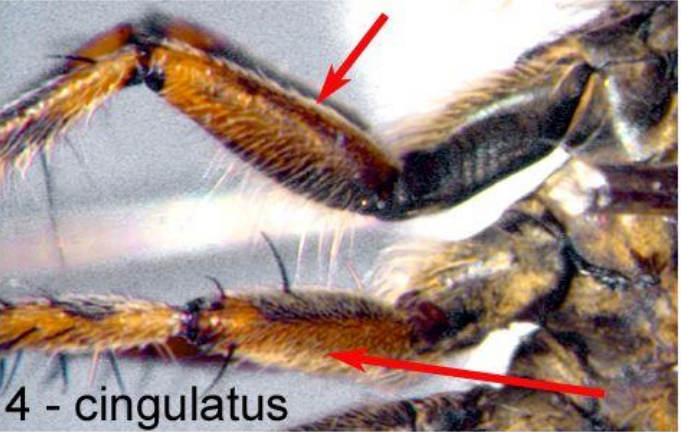
3 - cingulatus



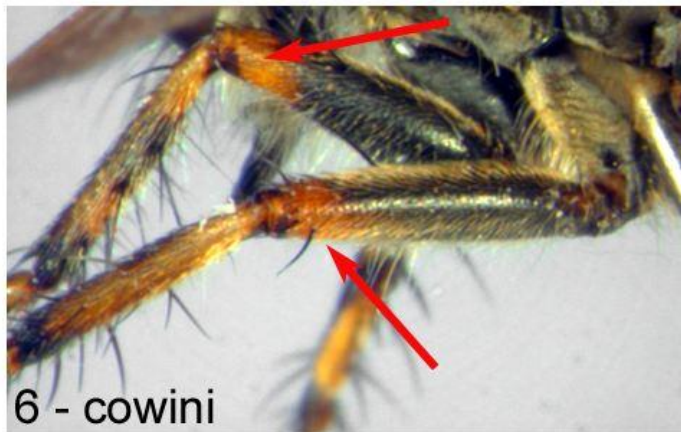
5 - cowini



2 - atricapillus

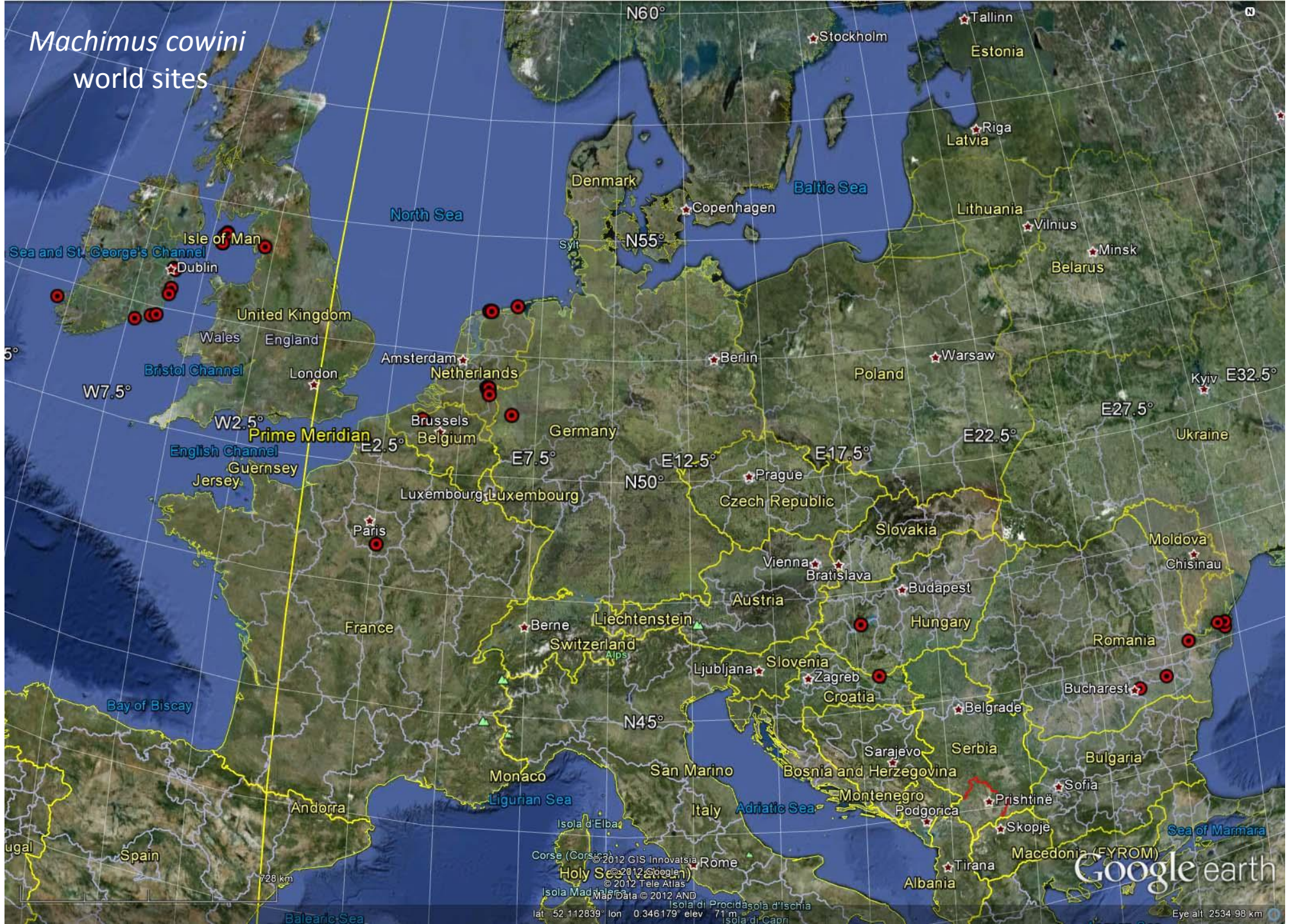


4 - cingulatus



6 - cowini

Machimus cowini world sites



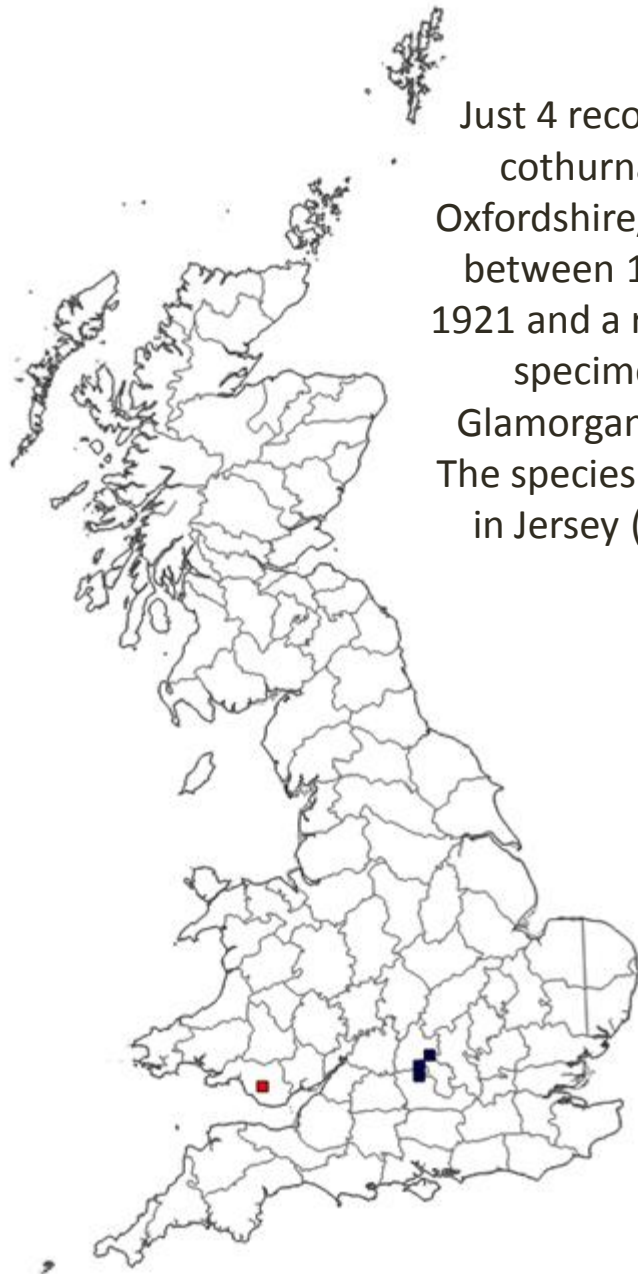


Rhine-Danube corridor

Neoitamus cothurnatus ♀



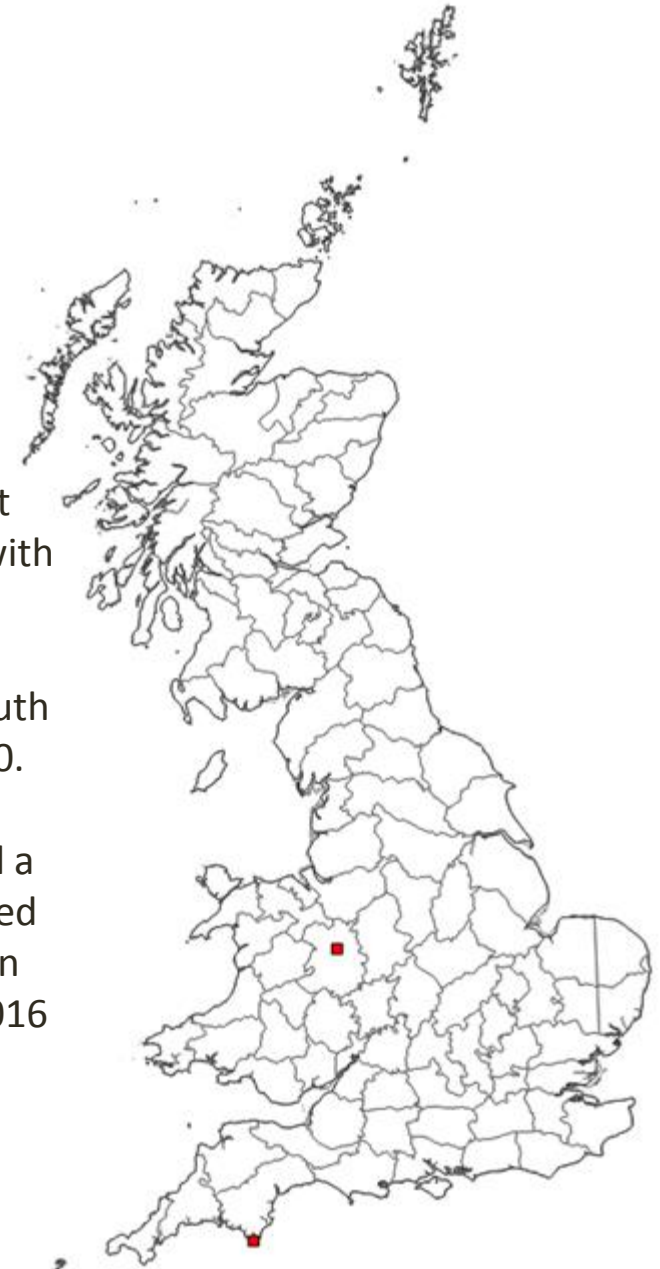
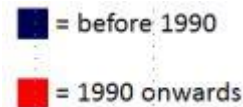
Just 4 records of *N. cothurnatus* in Oxfordshire/Berkshire between 1901 and 1921 and a record of 2 specimens in Glamorgan in 1997. The species is present in Jersey (picture)



Neoitamus cothurnatus

N. Pallipes was first recorded as British with a single captured specimen (others sighted) from the South Devon coast in 1990.

No others seen until a colony was discovered on a rocky hillside in Shropshire in July 2016



Neomochtherus pallipes

Neomochtherus pallipes ♀



Neomochtherus pallipes ♂

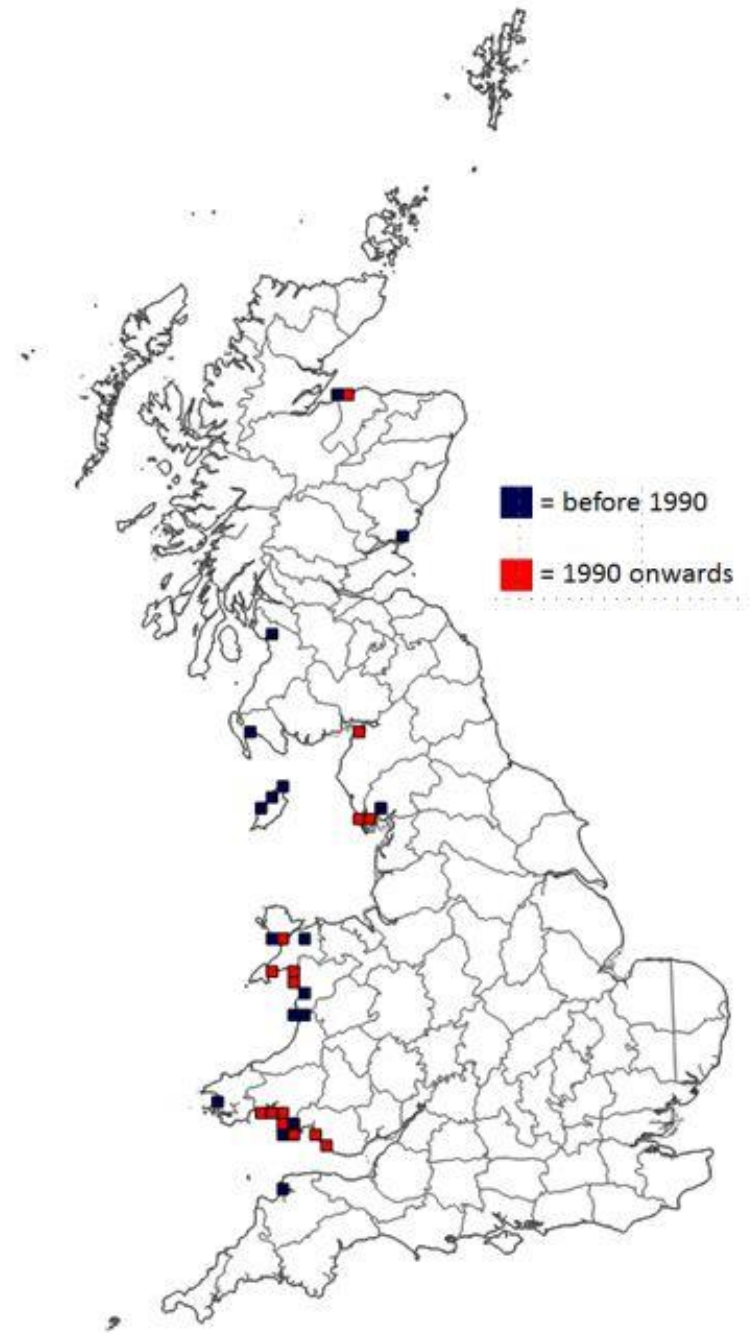




Pamponerus germanicus ♂



*Pamponerus
germanicus*



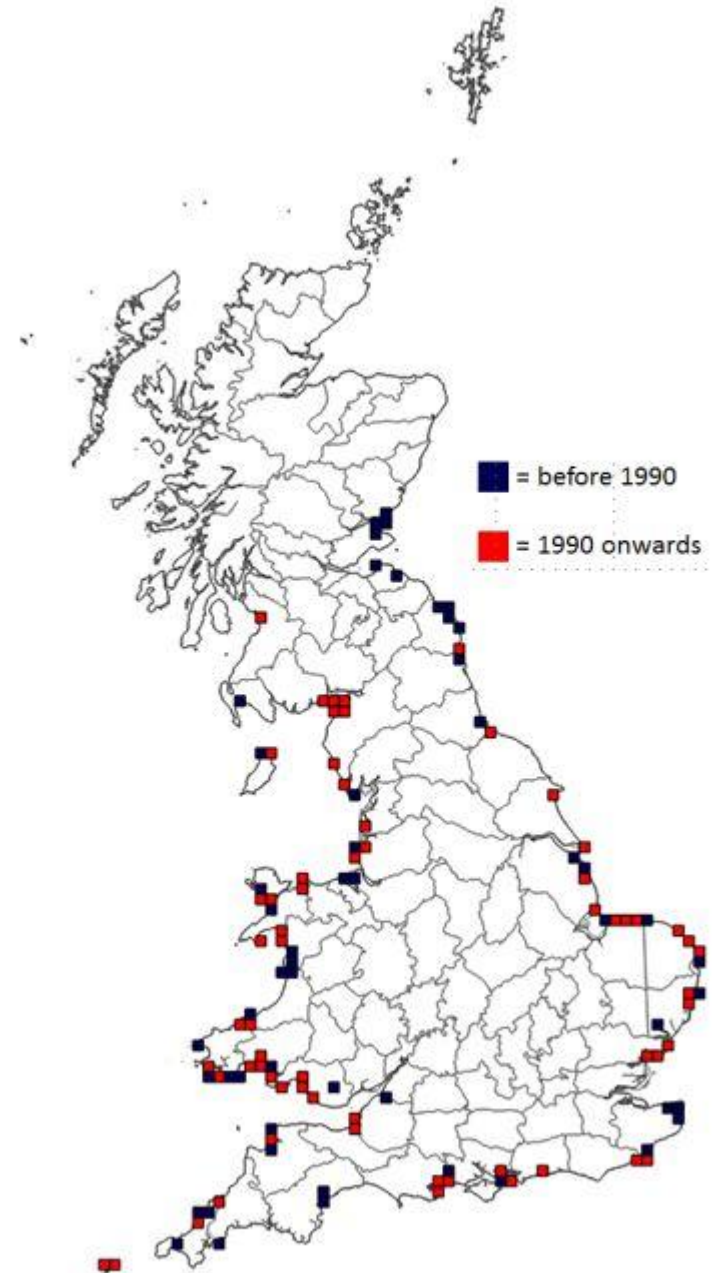
Philonicus albiceps ♀



Philonicus albiceps

Male terminalia
view from above
showing large gap
between claspers

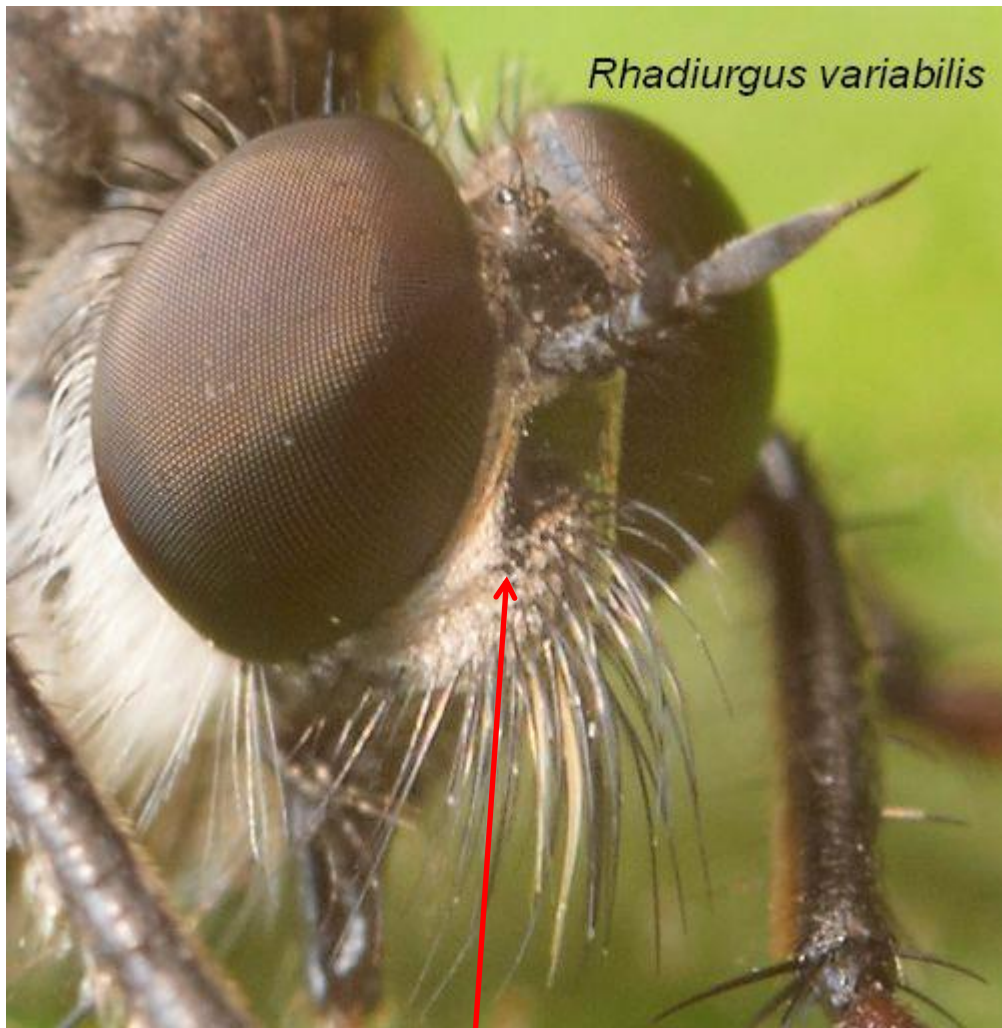
Female terminalia
showing spines at
end



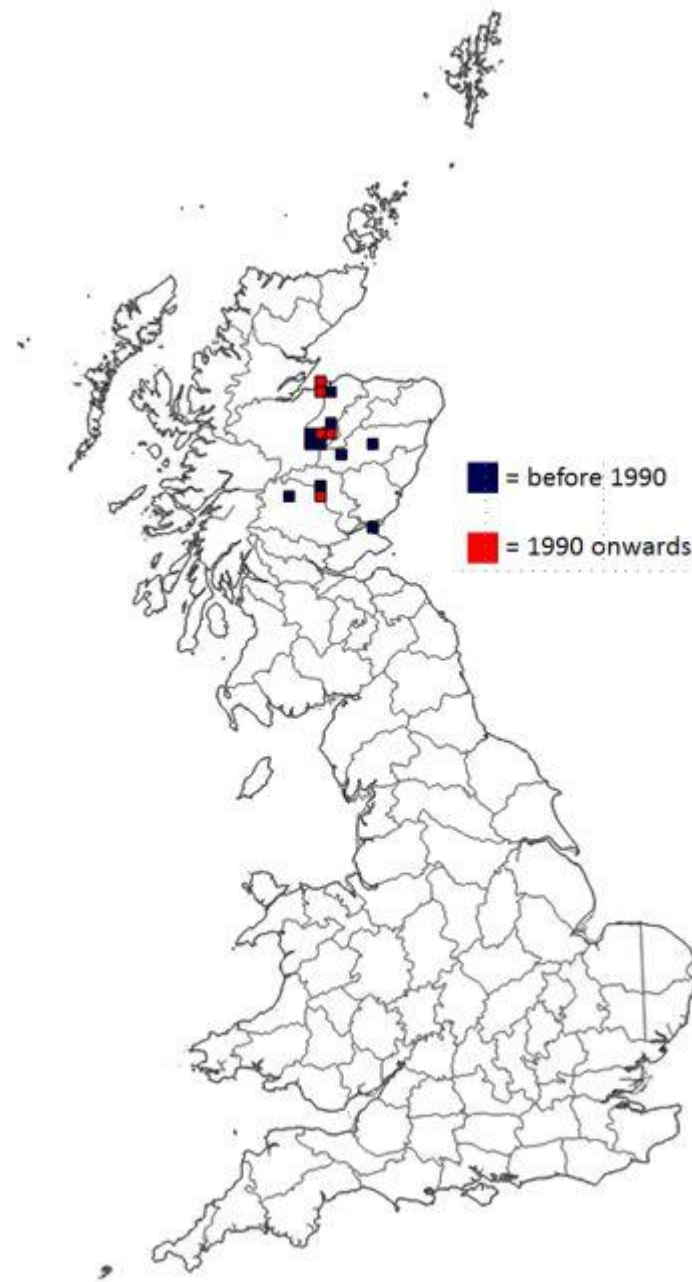
Rhadiurgus variabilis ♂



Rhadiurgus variabilis



The roughly square shining black undusted area between mystax and antennal tubercle is characteristic of this species



Dasyopogon Diadema



Reported in historic literature to have been present near Bristol (1827), Swansea (1846) and later at Barmouth

Dioctria hyalipennis



That's it folks

