

Identifying soldierflies and allies: awl-flies in family Xylophagidae

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

Version 1 at 26 May 2024

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

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

Other photographers included in this guide are Geoff Wilkinson, Ian Andrews, Janet Graham, Nigel Jones and Stewart Taylor

Distribution maps show the data held by the recording scheme on iRecord.

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. See also the recording scheme's [additional notes](#) to accompany the Stubbs and Drake keys.

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

For lots more 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



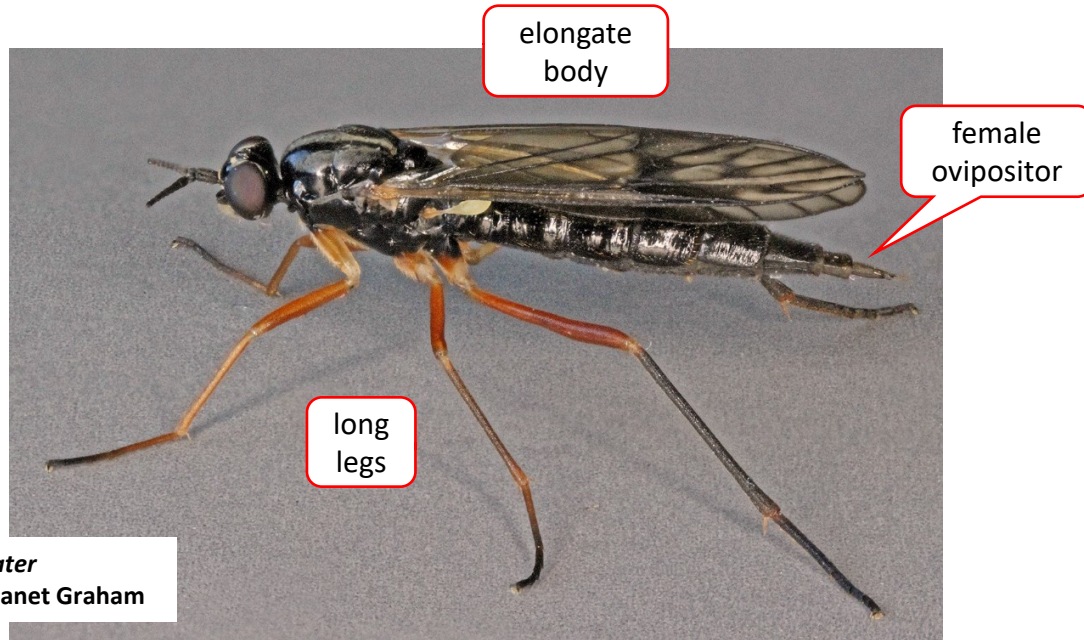
Recognising the family: Xylophagidae

There are just two, or perhaps three, UK species in family Xylophagidae, and all are in genus *Xylophagus*. They are relatively large flies (varying between 8 and 17mm long) with a narrow body shape that might lead to confusion with some of the parasitic wasps in family Ichneumonidae.

Only one of the species is at all widespread, with the other two confined to the Scottish Highlands. Identification features include the relative lengths of the antennal segments and the pattern of dusting on the thorax. Females have an obvious long ovipositor at the tip of the abdomen, and females of *X. cinctus* are immediately recognisable by the extensive red colouration on the abdomen – males of *cinctus* and both sexes of the other species have the body all black, with paler legs.

All three species are associated with trees, where their larvae feed under the bark of decaying wood ("*Xylophagus*" translates as "wood-eater", but there is evidence that they may also be predatory). The English name "awl-flies" also comes from the larvae, referring to their awl-shaped head. It can be easier to find the larvae than the adult flies, by looking under loose bark (this should be done sparingly so as not to damage the dead-wood habitat). See the [recording scheme website](#) for more information on larvae.

X. ater is fairly widespread (except in East Anglia), while *X. cinctus* is mainly associated with ancient Pine woodland in the Scottish Highlands, although it has also been found in more recent pine and spruce plantations. *X. junki* is known from one record in 1913, also in the Highlands at Glenmore Forest, and must be feared extinct, although its similarity to the other two species leaves open the possibility that it still occurs but has been overlooked.



X. ater
© Janet Graham



X. ater larva ©
Geoff Wilkinson

ID FEATURES	abdomen	top of thorax	1 st antennal segment
<i>X. ater</i>	black	with grey dusting (less obvious in male)	long
<i>X. cinctus</i> female	extensively red	with grey dusting	short
<i>X. cinctus</i> male	black	with grey dusting	short
<i>X. junki</i>	black	shiny	short



Awl-fly: antennae
divided into
about ten
segments

Ichneumon: very
long antennae
with many more
segments

X. ater © Ian
Andrews

An ichneumon wasp
(one of many species)
© Nigel Jones

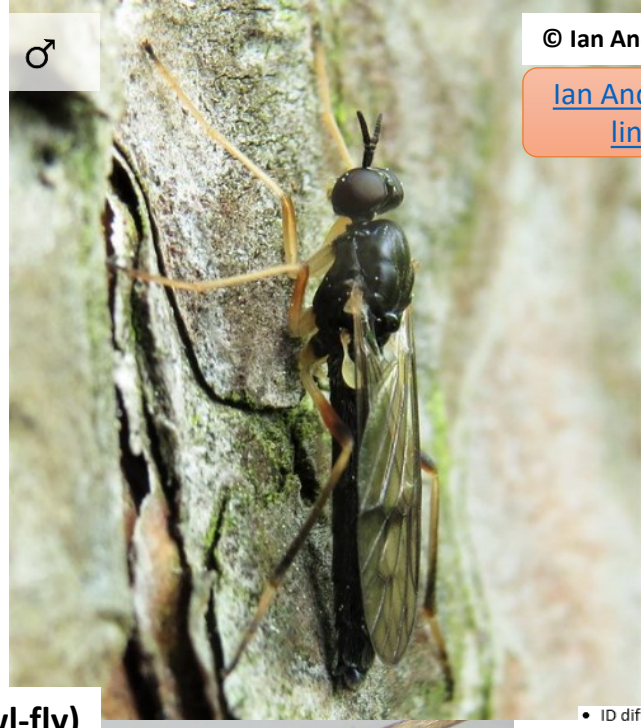
© Janet Graham

♀



[Janet Graham link](#)

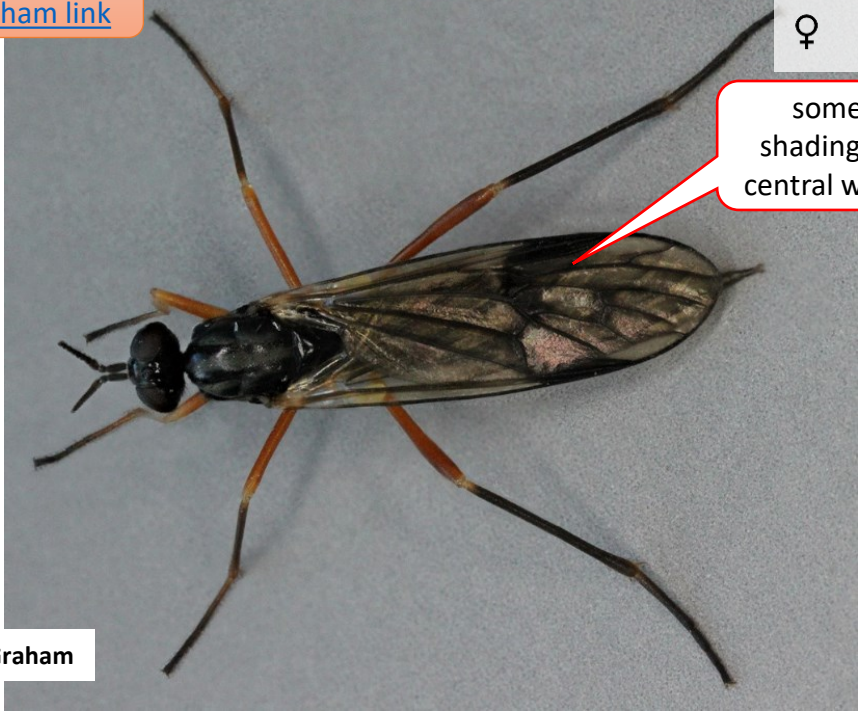
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© Ian Andrews
[Ian Andrews link](#)

Xylophagus ater (Common Awl-fly)

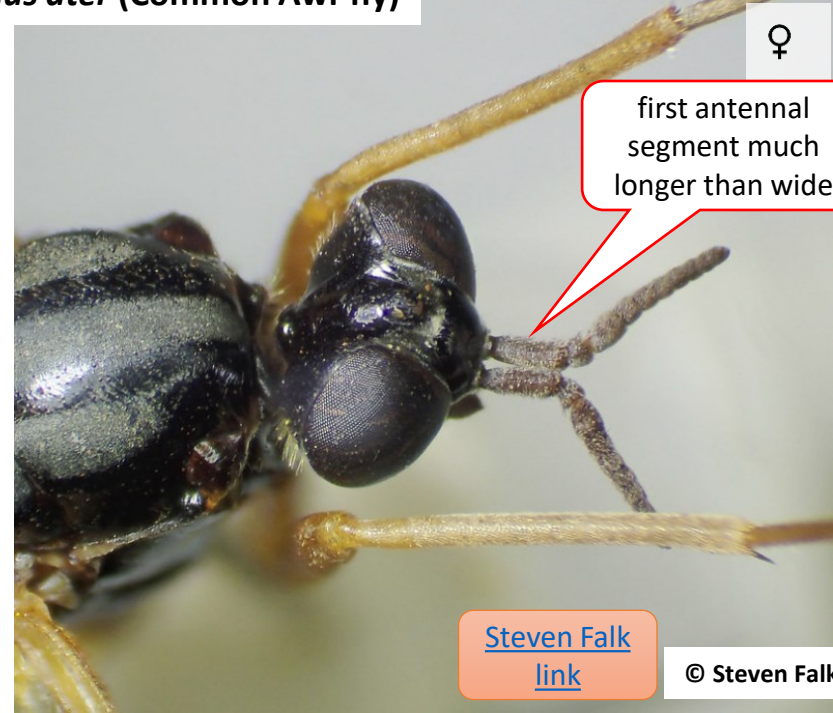
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some dark shading around central wing veins

© Janet Graham

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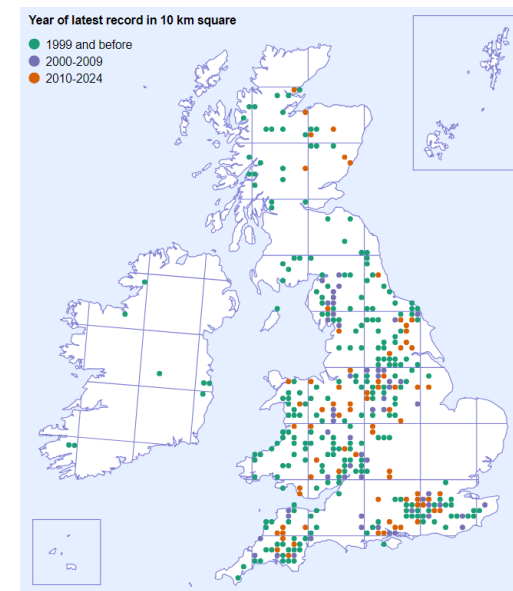


first antennal segment much longer than wide

[Steven Falk link](#)

© Steven Falk

- ID difficulty: 3
- Flight period: mid May to late Jun
- GB threat: Least Concern
- widespread except in east
- ancient woodland
- No. of records: 1233 • % since 2000: 20%



[Stewart Taylor link](#)

♀



♂



Note that *X. cinctus* males (shown on right) do **NOT** have the red band on the abdomen.

Both sexes have a short first antennal segment and grey striped dusting on top of the thorax (the very rare *X. junki* is shiny on top of the thorax).

Xylophagus cinctus (Red-belted Awl-fly)

♀



red band on abdomen (in **females only**)

[Steven Falk link](#)



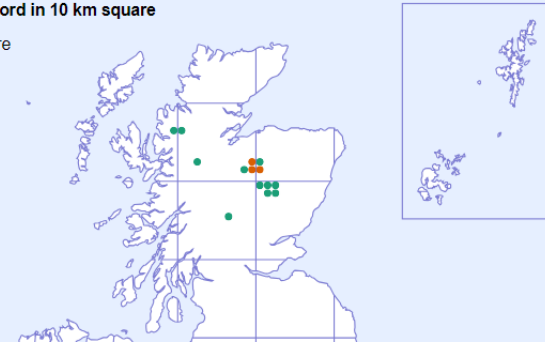
first antennal segment slightly longer than wide (both sexes)

♀

- ID difficulty: 3
- Flight period: Jun to Jul
- GB threat: Least Concern • GB rarity: Nationally Scarce
- Scotland
- pine woodland
- No. of records: 27 • % since 2000: 15%

Year of latest record in 10 km square

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



Apparently extinct in the UK.

Both sexes are all-black. They can be separated from *X. ater* by the much shorter first antennal segment (similar to *X. cinctus*); and from *X. cinctus* by the shiny top surface of the thorax (*X. cinctus* has grey-dust stripes on top of the thorax).

A photo of a female *X. junki* can be seen on Diptera.info

***Xylophagus junki* (Glenmore Awl-fly)**

- ID difficulty: 4
- Flight period: June
- GB threat: Regionally Extinct
- Scottish Highlands, one record, 1913
- No. of records: 1 • % since 2000: 0%

Year of latest record in 10 km square

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

