

# Identifying soldierflies and allies: bee-flies in genus *Villa*

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

*Version 1 at 9 January 2022*

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 Steven Falk, whose photo collections form the backbone for this species guide:

Steven Falk's [photo collections on Flickr](#)

Other photographers included in this guide are Martin Harvey and Sylvie Herault.

In this guide the three species are presented in alphabetical order, each with a page for males, then females. The pages for males include distribution maps taken from the recording 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. 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 genus: *Villa*

Genus *Villa* contains three fairly large species, all of which are similar in appearance. They have a characteristic overall appearance with a fairly broad abdomen. They do not have the long proboscis associated with bee-flies in genus *Bombylius*.

There are differences in the markings on the abdomen and wings, but these can be hard to pick out as they can vary, and the pale airs on the abdomen can become worn away. There are differing patterns in males and females of each species, so it is important to be aware of which sex you are looking at.

© Martin Harvey



Take care – white tegulae and pale bands on abdomen can wear off with age

Fortunately there are fairly clear differences in their habitats and distribution. *Villa cingulata* is found on inland grasslands (especially on chalk), *V. modesta* on coastal sand dunes, and *V. venusta* was formerly found on inland dry heathlands (but is now feared extinct). However, given the rapid spread of *V. cingulata* in recent years the possibility of the species co-occurring in future should not be dismissed. There are additional *Villa* species on the continent that may await discovery in the UK, and specimens should be retained if any of these are suspected.

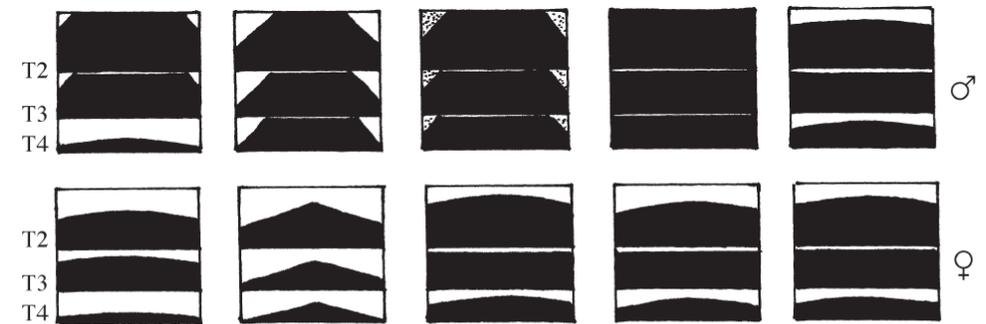
All three known species can be found in summer, from June through to August or September. *Villa* bee-flies have parasitic larvae; their hosts are not known with any certainty in the UK, but observations from other countries suggest that they are parasitoids of moth caterpillars and pupae, probably noctuid moths. Confirmation of this is required!

Both males and females have eyes that are separated on the top of the head – male eyes are a little closer together than female eyes, but this can be difficult to pick out. Usually there is a clearer difference in the colour of the tegulae (small flaps covering the wing bases): males have silvery-white tegulae, females have buff-brown.

## Summary of abdomen patterns (includes two species not yet found in the UK, *V. hottentotta* and *V. paniscus*)

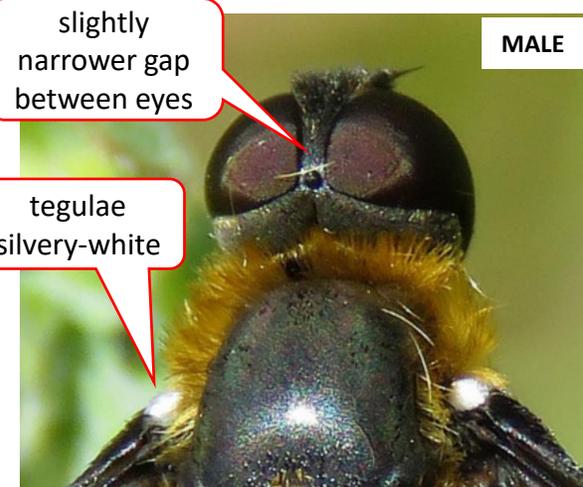
- “T2, T3, T4” = Tergite 2, Tergite 3, Tergite 4 (“tergite” = top surface of abdomen segments)
- Males in top row, females in bottom row

Diagram from *British soldierflies and their allies*, by Alan Stubbs and Martin Drake

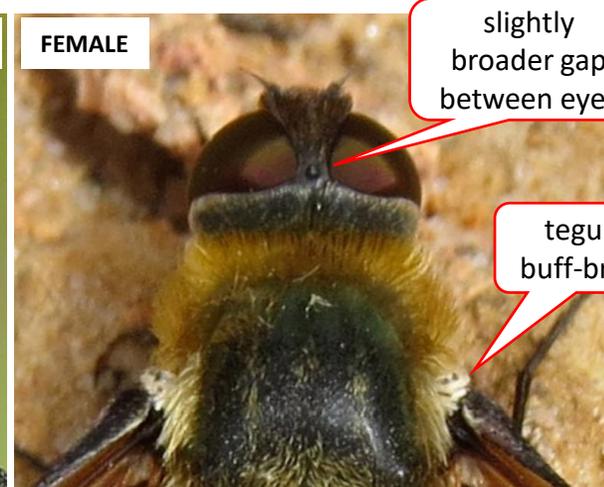


*cingulata* [*hottentotta*] *modesta* [*paniscus*] *venusta*

Idealised typical abdomen patterns in *Villa*



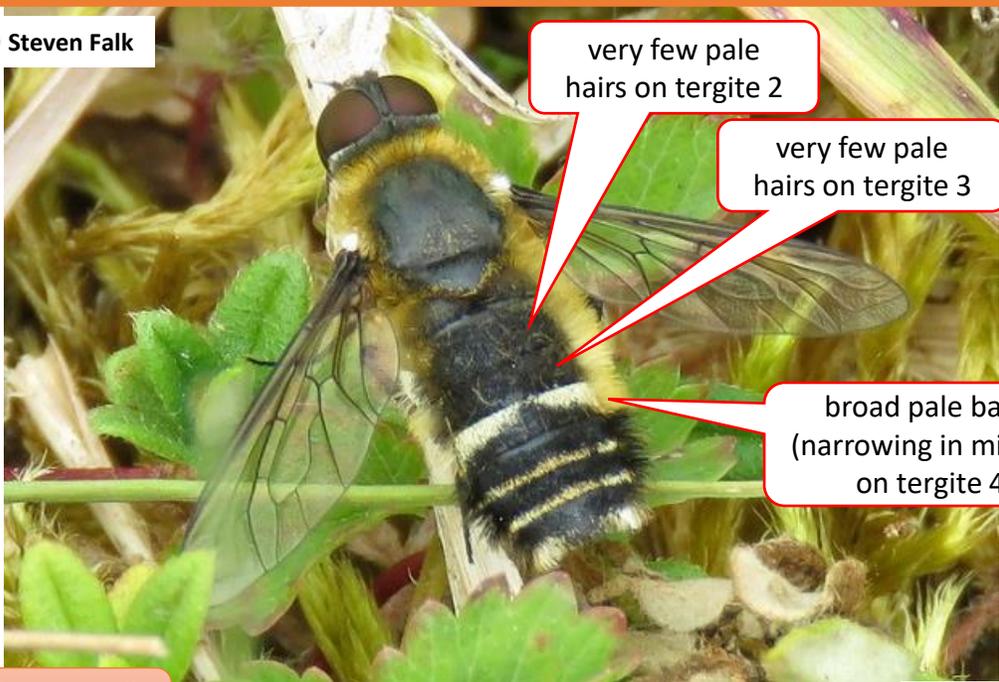
MALE



FEMALE

© Steven Falk

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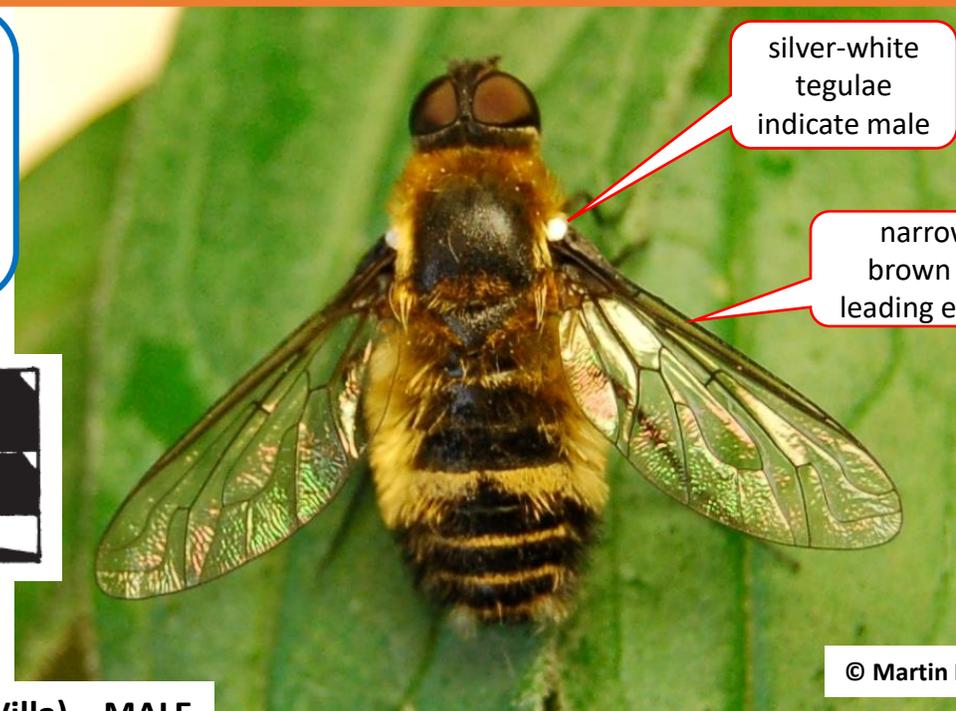
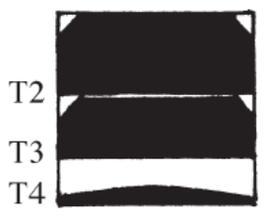


very few pale hairs on tergite 2

very few pale hairs on tergite 3

broad pale band (narrowing in middle) on tergite 4

Usual habitat: grassland, especially chalk downlands but has recently been spreading into neutral and acidic grasslands as well



silver-white tegulae indicate male

narrow band of brown shading at leading edge of wings

© Martin Harvey

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### *Villa cingulata* (Downland Villa) – MALE



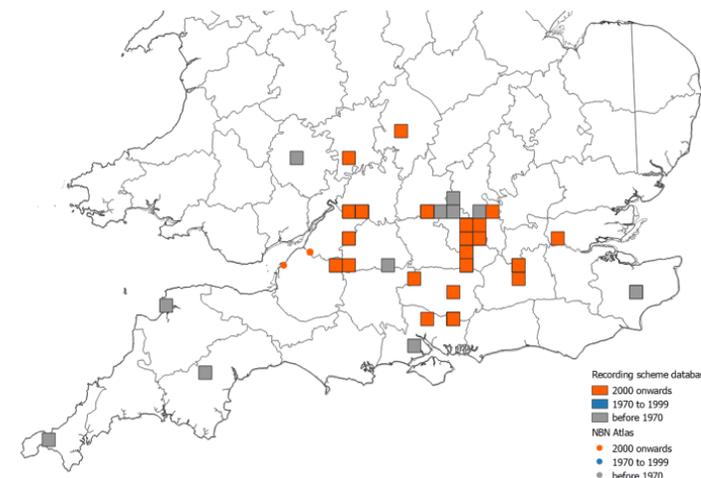
Take care – white tegulae and pale bands on abdomen can wear off with age

© Steven Falk



© Martin Harvey

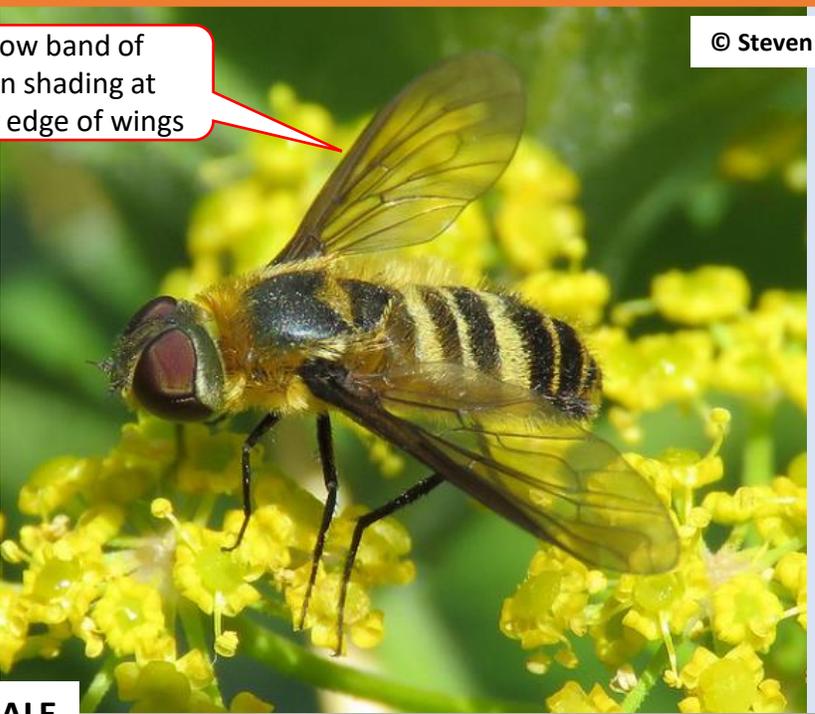
- ID difficulty: 3
- Flight period: Jun to Aug, peak mid Jul to mid Aug
- GB threat: Least Concern • GB rarity: Nationally Rare
- southern England
- grassland, usually calcareous
- No. of records: 93 • % since 2000: 83%





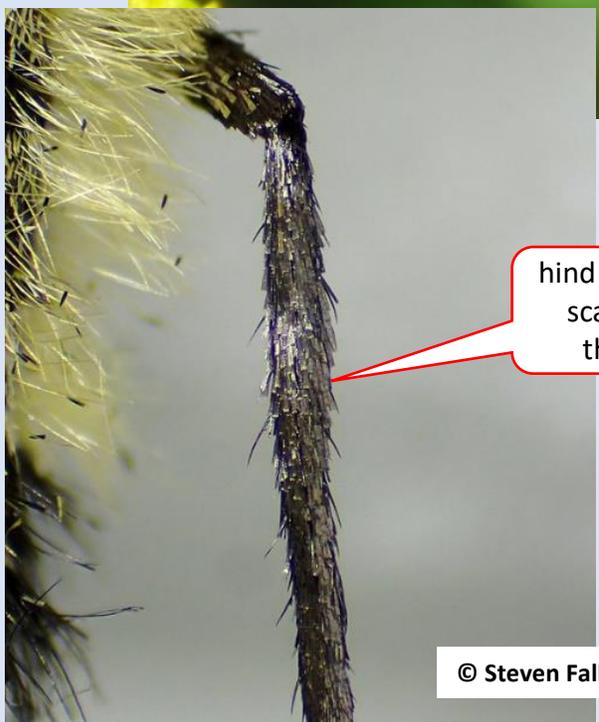
buff tegulae indicate female

narrow band of brown shading at leading edge of wings



[Steven Falk link](#)

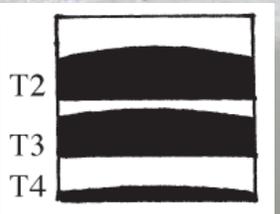
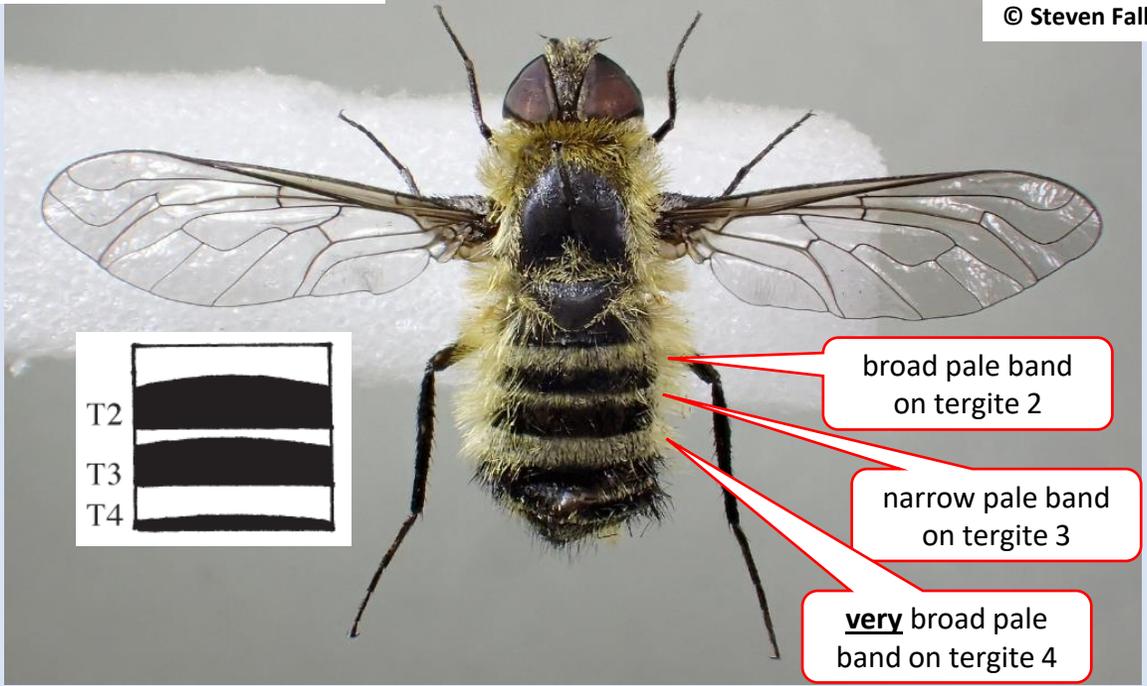
***Villa cingulata* (Downland Villa) – FEMALE**



hind tibia with flat scales shorter than spines

Take care – pale bands on abdomen can wear off with age

Usual habitat: grassland, especially chalk downlands but has recently been spreading into neutral and acidic grasslands as well



broad pale band on tergite 2

narrow pale band on tergite 3

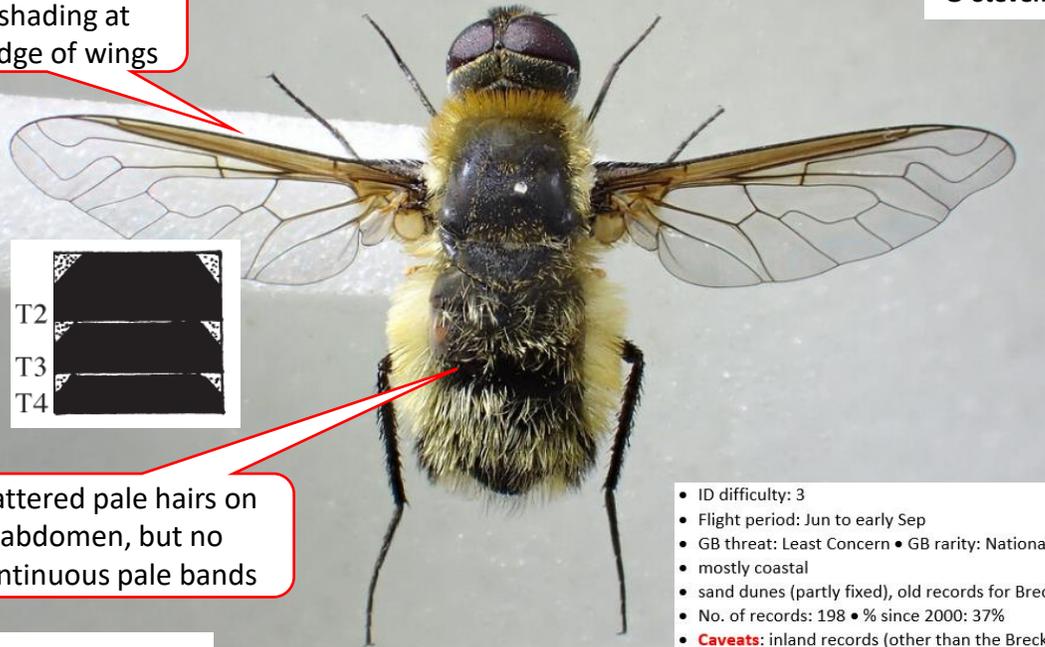
**very** broad pale band on tergite 4

© Steven Falk



[Steven Falk link](#)

narrow band of brown shading at leading edge of wings



© Steven Falk

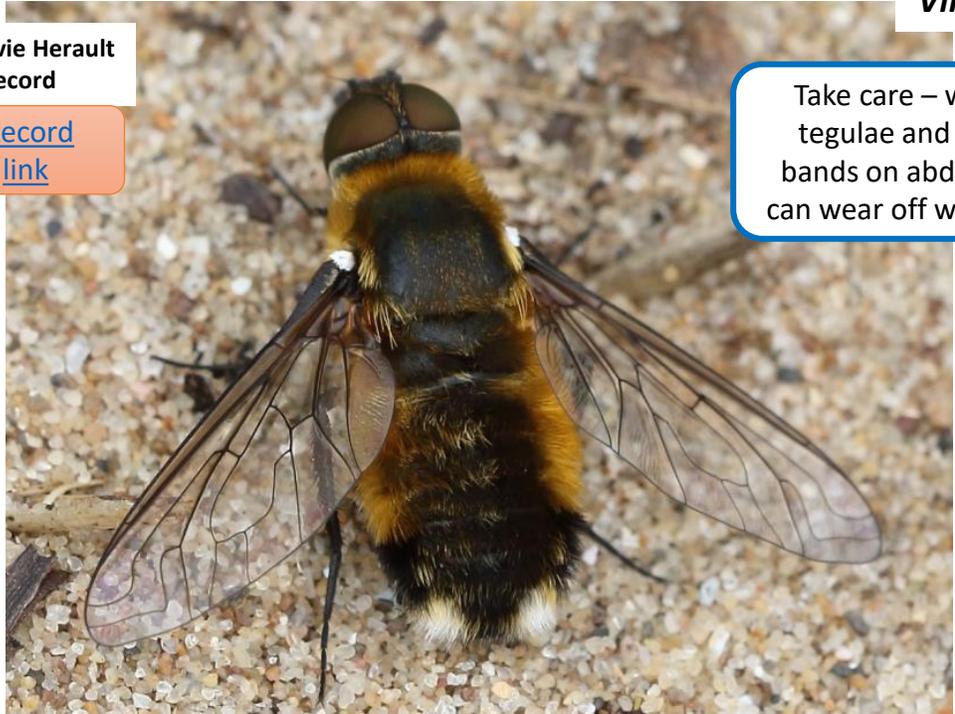
scattered pale hairs on abdomen, but no continuous pale bands

- ID difficulty: 3
- Flight period: Jun to early Sep
- GB threat: Least Concern • GB rarity: Nationally Scarce
- mostly coastal
- sand dunes (partly fixed), old records for Breckland
- No. of records: 198 • % since 2000: 37%
- **Caveats:** inland records (other than the Brecks) are probably erroneous

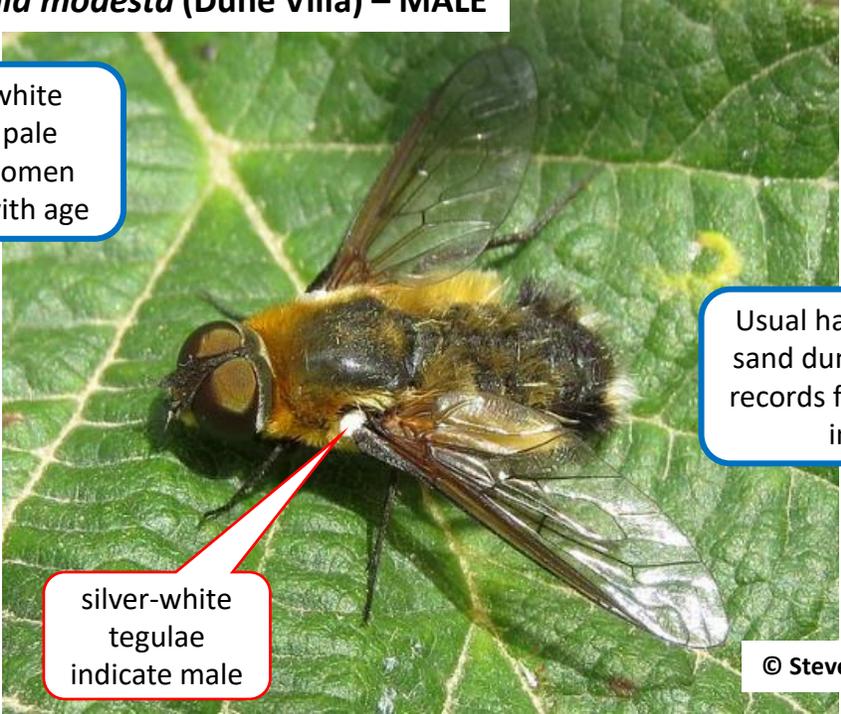
*Villa modesta* (Dune Villa) – MALE

© Sylvie Herault via iRecord

[iRecord link](#)



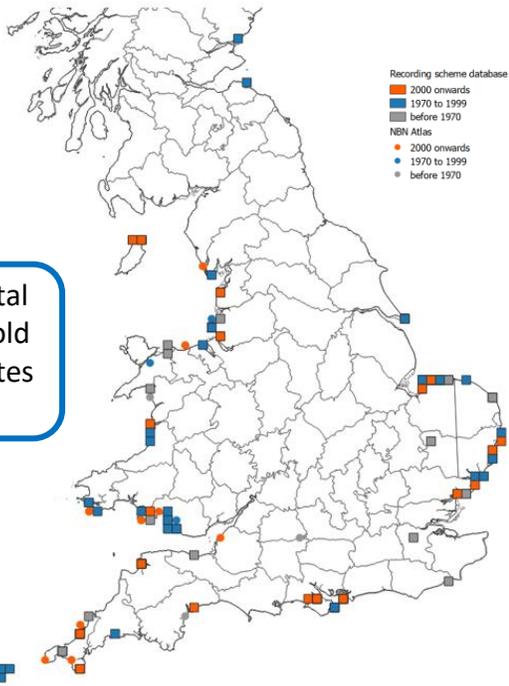
Take care – white tegulae and pale bands on abdomen can wear off with age



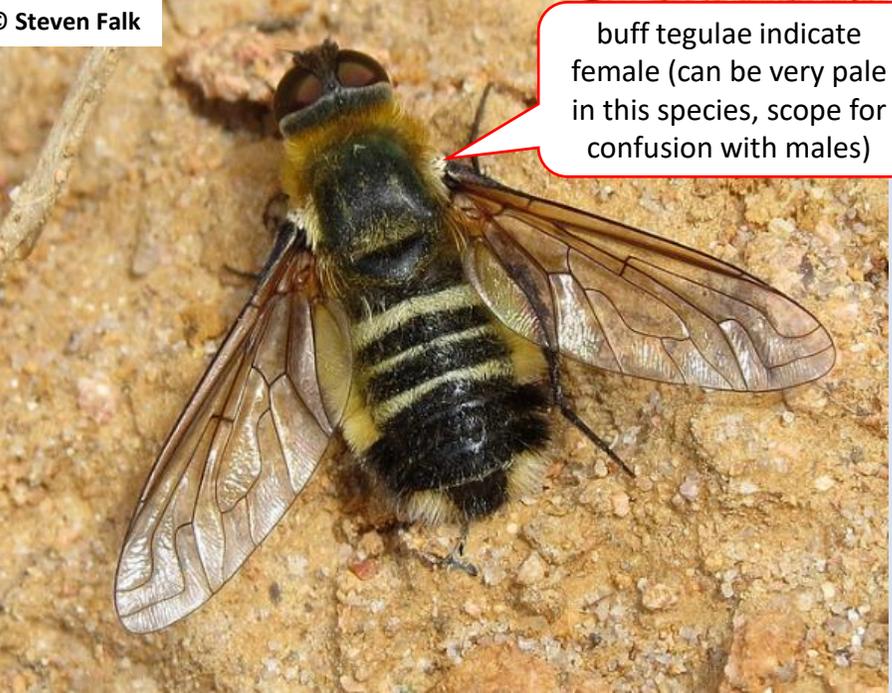
silver-white tegulae indicate male

Usual habitat: coastal sand dunes (a few old records for sandy sites inland)

© Steven Falk



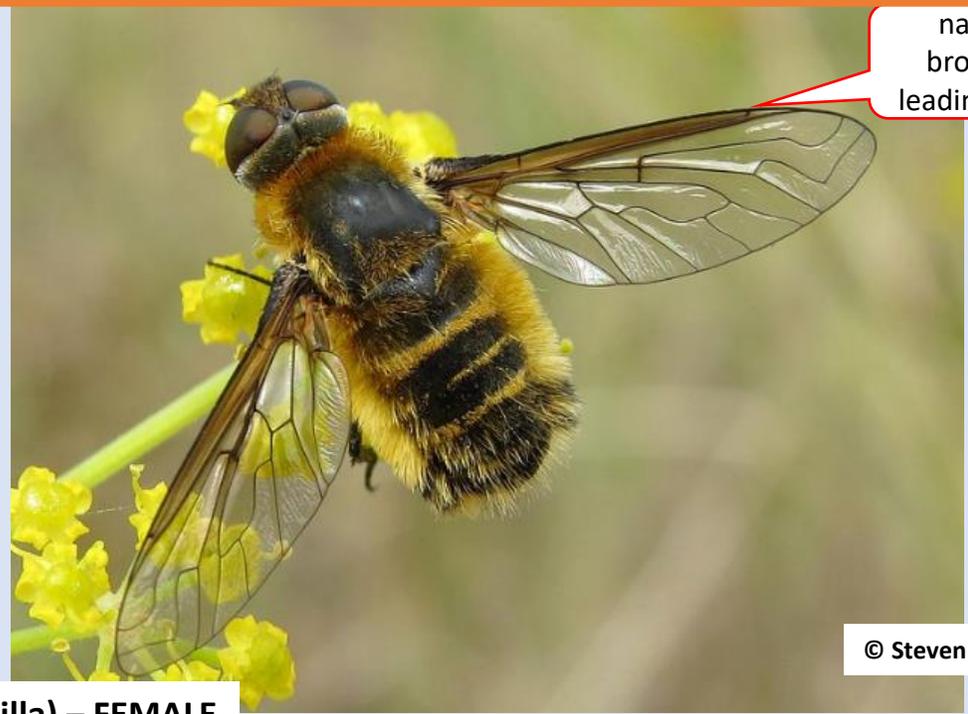
© Steven Falk



buff tegulae indicate female (can be very pale in this species, scope for confusion with males)

Usual habitat: coastal sand dunes (a few old records for sandy sites inland)

[Steven Falk link](#)



narrow band of brown shading at leading edge of wings

© Steven Falk

***Villa modesta* (Dune Villa) – FEMALE**

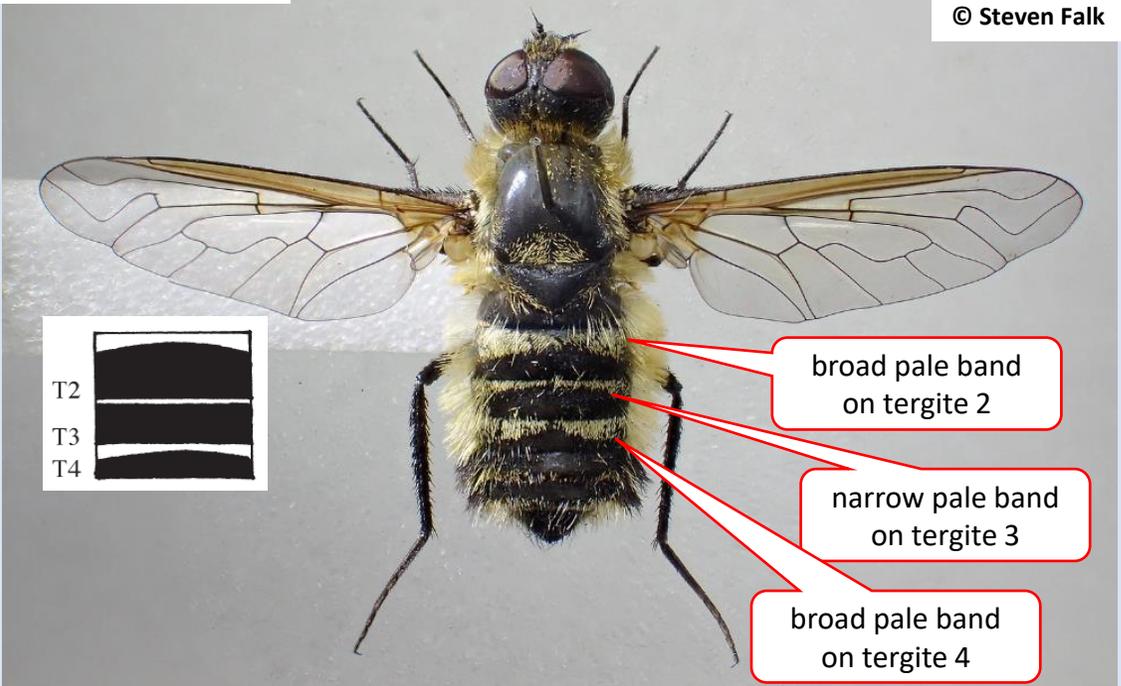


hind tibia with flat scales as long as spines

Take care – pale bands on abdomen can wear off with age

© Steven Falk

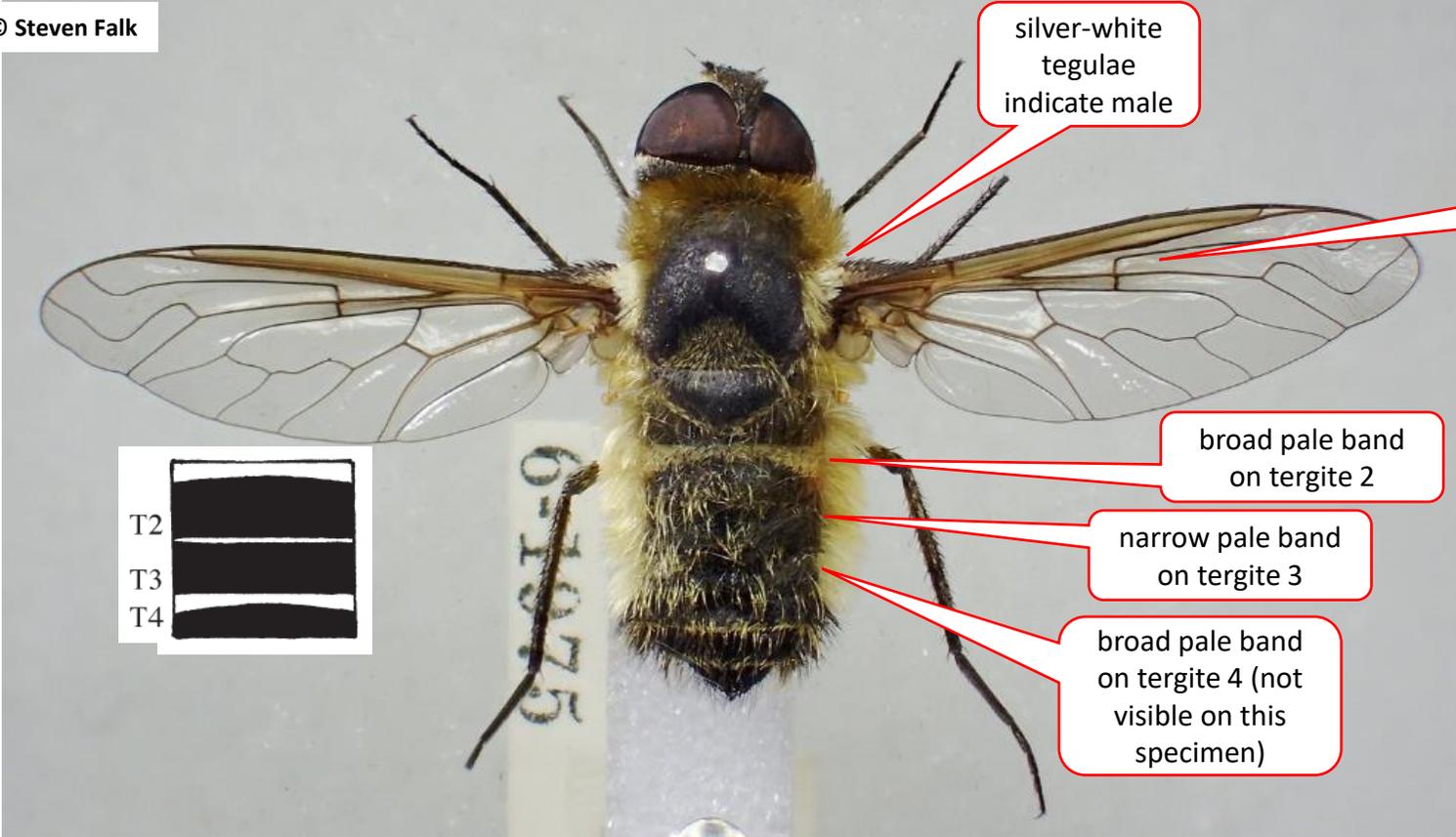
© Steven Falk



broad pale band on tergite 2

narrow pale band on tergite 3

broad pale band on tergite 4



silver-white tegulae indicate male

brown shading at leading edge of wings stretches further backwards

broad pale band on tergite 2

narrow pale band on tergite 3

broad pale band on tergite 4 (not visible on this specimen)

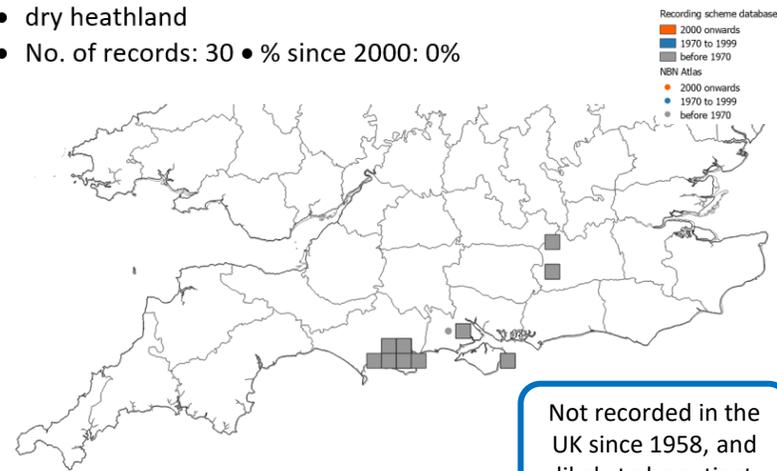
Take care – white tegulae and pale bands on abdomen can wear off with age

- ID difficulty: 4
- Flight period: mid Jul to late Aug
- GB threat: Critically Endangered • GB rarity: Nationally Rare
- southern England
- dry heathland
- No. of records: 30 • % since 2000: 0%

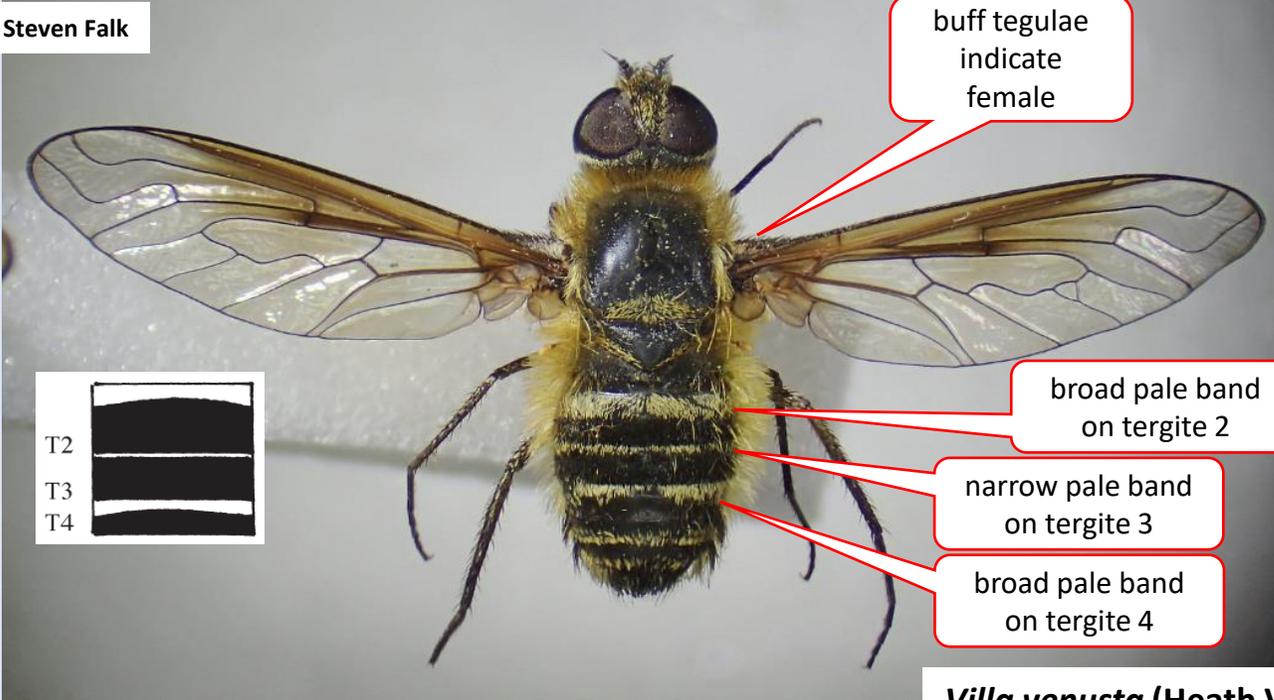
***Villa venusta* (Heath Villa) – MALE**

[Steven Falk link](#)

Habitat: used to be found in dry heathlands



Not recorded in the UK since 1958, and likely to be extinct



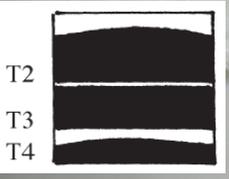
buff tegulae indicate female

broad pale band on tergite 2

narrow pale band on tergite 3

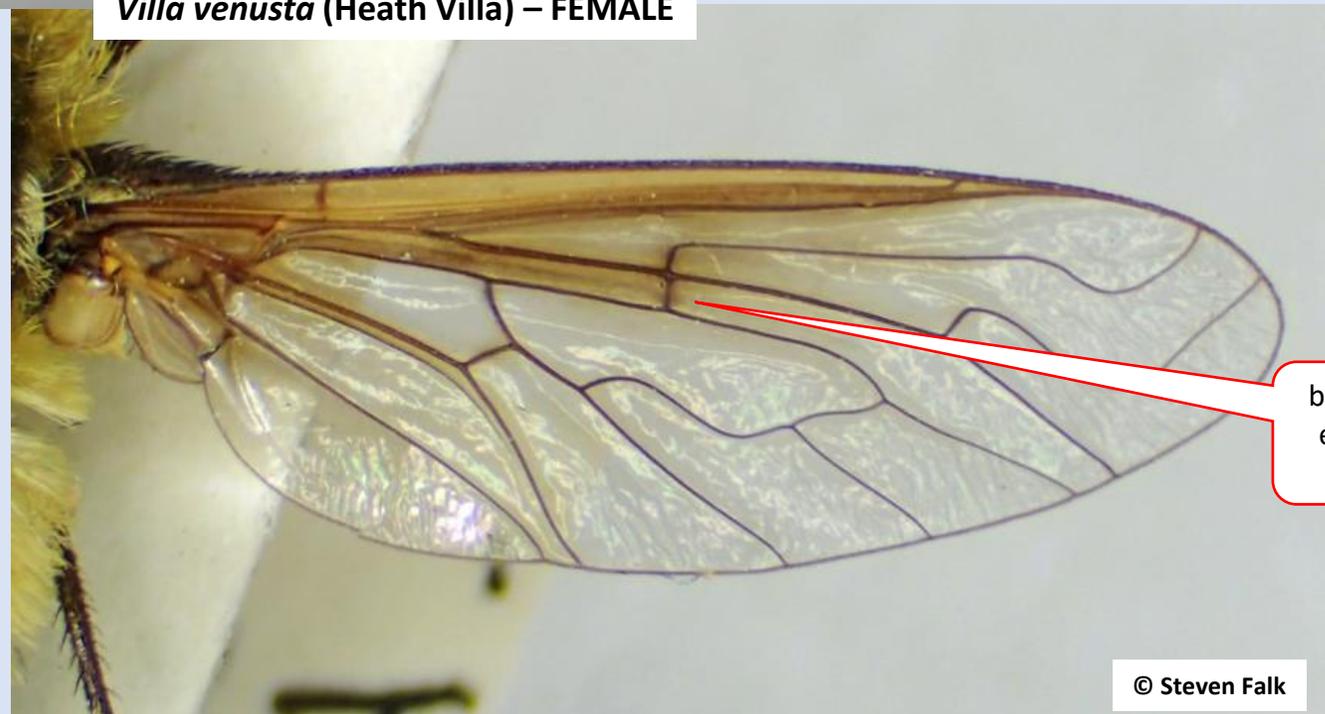
broad pale band on tergite 4

Take care – pale bands on abdomen can wear off with age



*Villa venusta* (Heath Villa) – FEMALE

[Steven Falk link](#)



brown shading at leading edge of wings stretches further backwards

Habitat: used to be found in dry heathlands

additional image on [Diptera.info](#)

Not recorded in the UK since 1958, and likely to be extinct