

A Simple Key

to the

Potential Vectors of CaLsol

Mairi Carnegie, Alex Greenslade & David Ouvrard



Forewing

Trifurcate wing

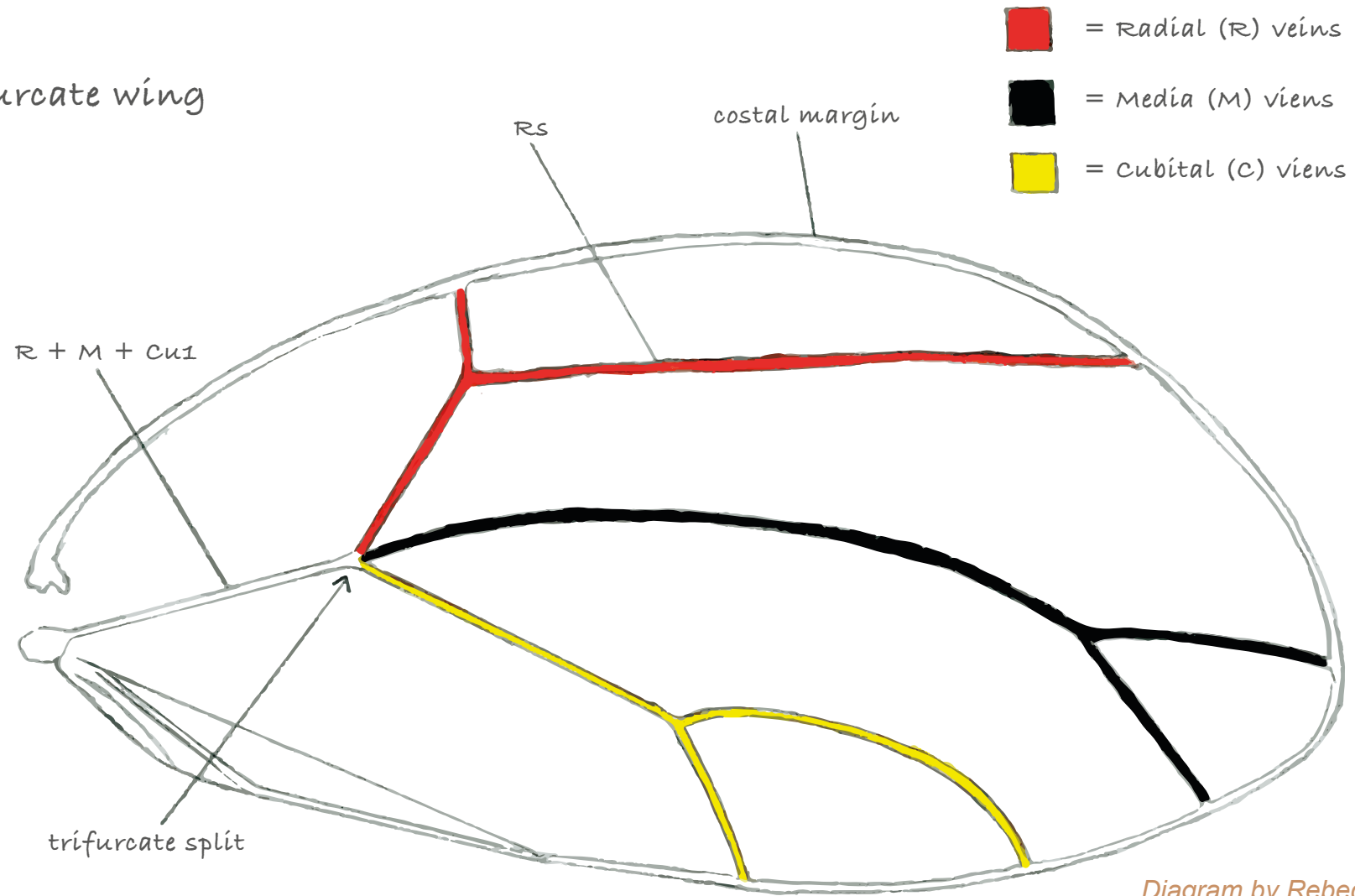


Diagram by Rebecca Cairns

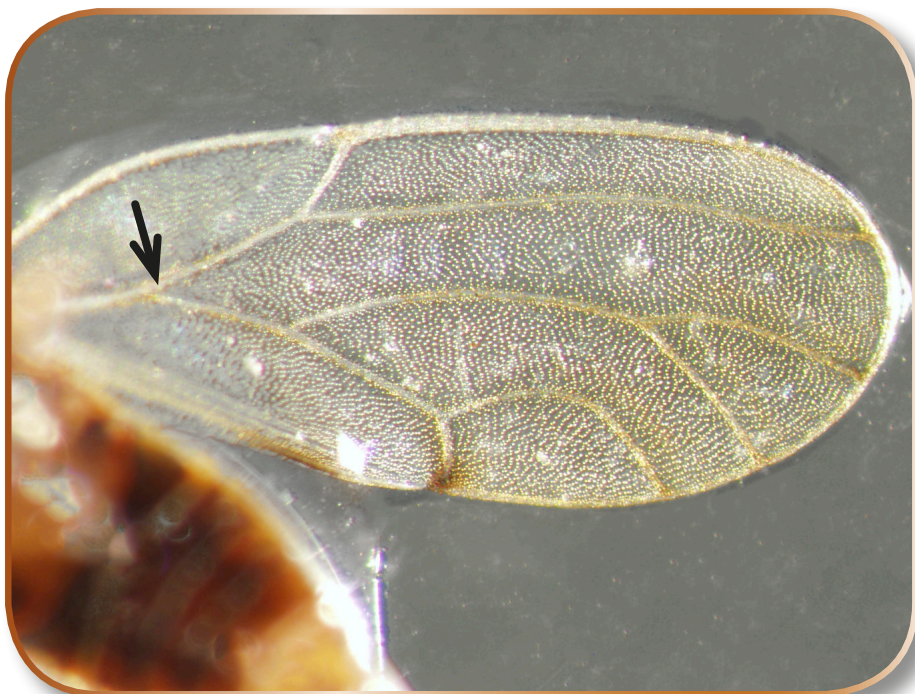
1. Vein R, M & Cu1

Is it...

a. Forewing vein R, M & Cu1 bifurcate.

or

b. Forewing vein R, M & Cu1 trifurcate.



...Not of concern



...go to step 2

Hind leg

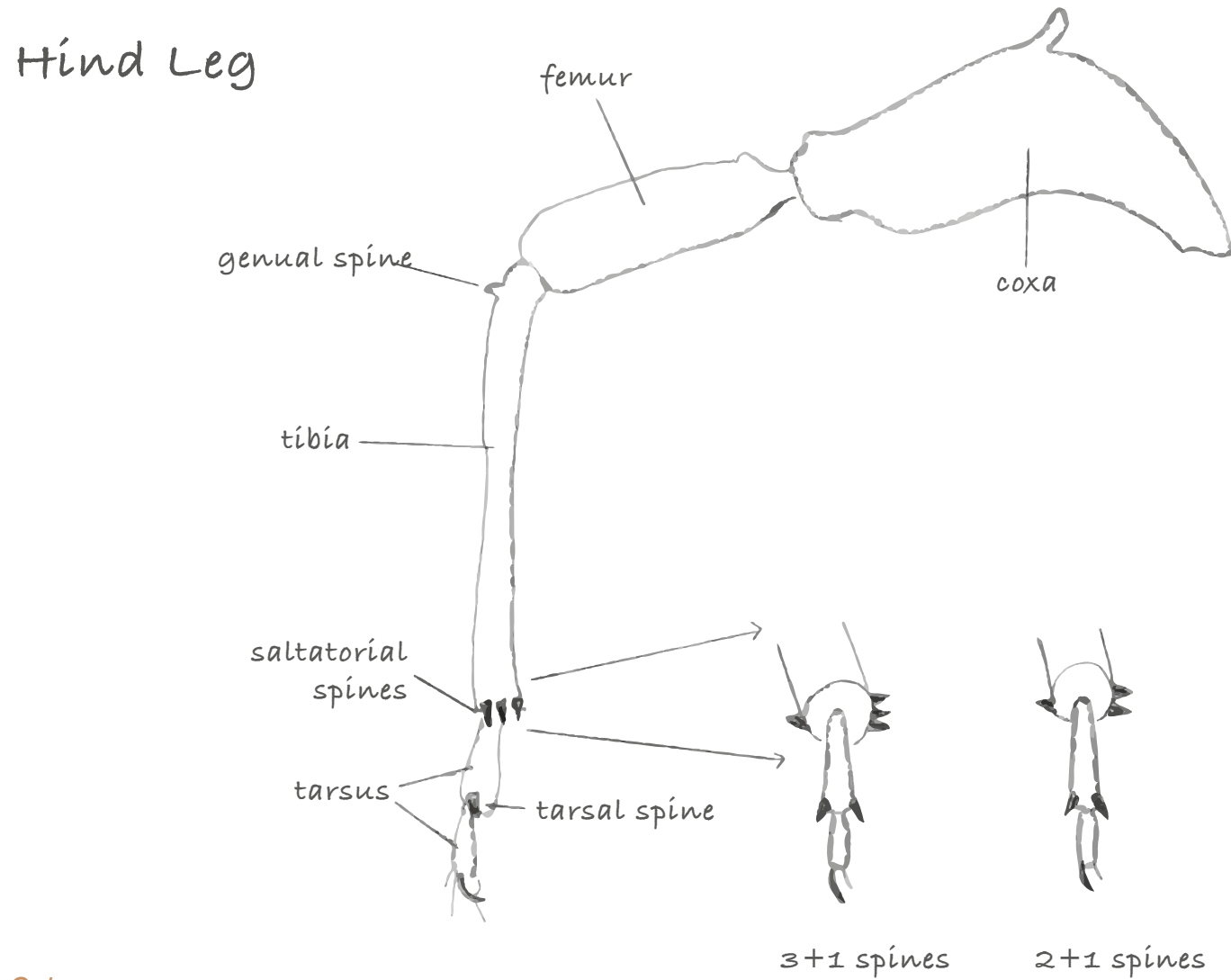


Diagram by Rebecca Cairns

2. Hindleg Metatibia apically

Is it...

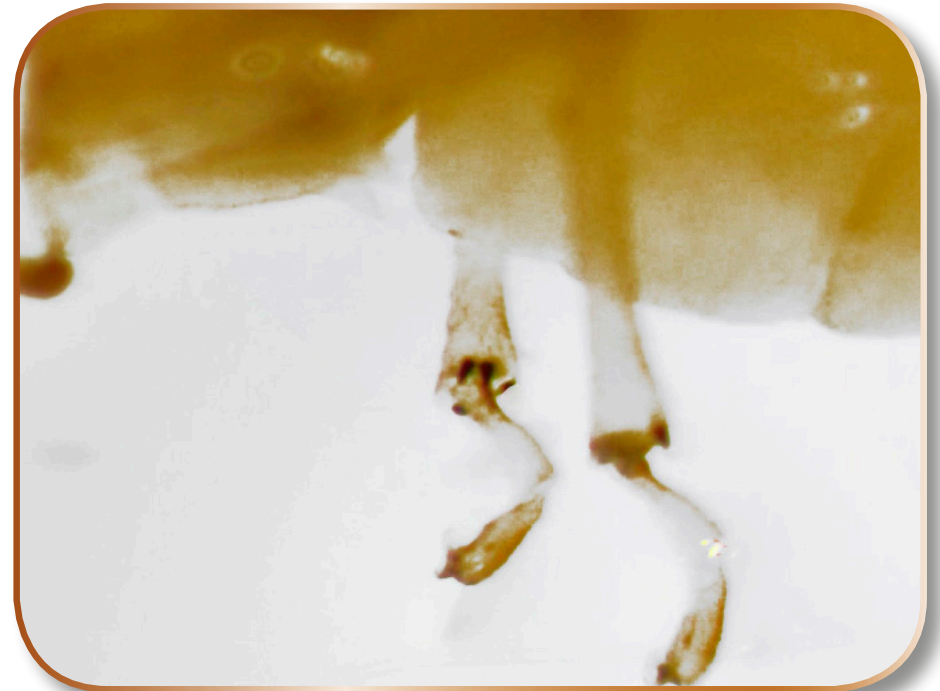
a. Hindleg Metatibia apically with 3 + 1 saltatorial spines (single spine round other side).

or

b. Hindleg Metatibia apically with 2 + 1 saltatorial spines (single spine round other side).



...Not of concern



...go to step 3

Forewing



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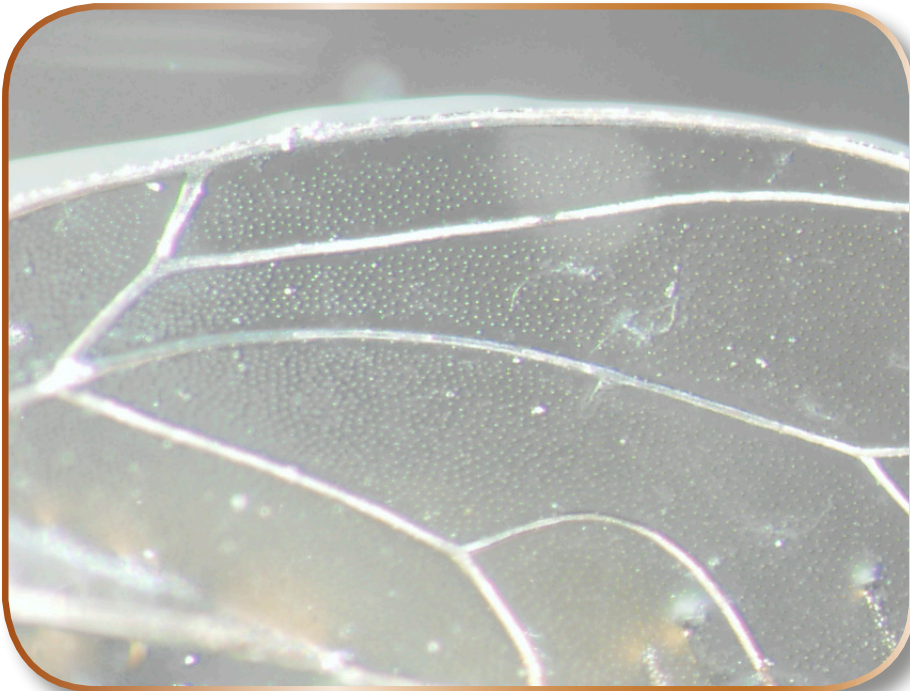
3. Forewing surface spinules

Is it...

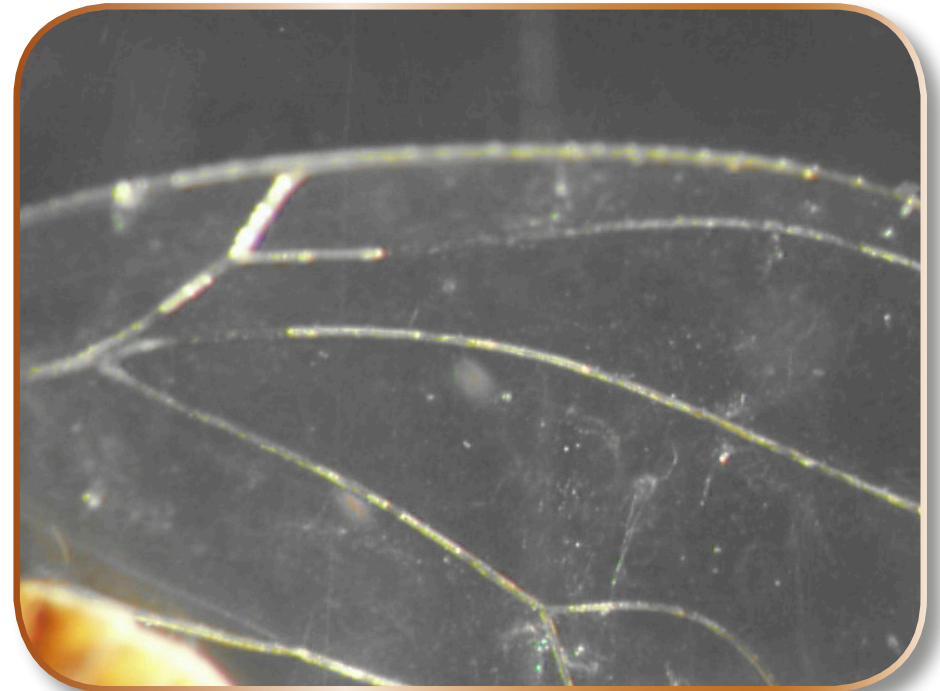
a. Forewing with surface spinules present.

or

b. Forewing with surface spinules absent.



...go to step 4



...go to step 8

Forewing

Trifurcate wing

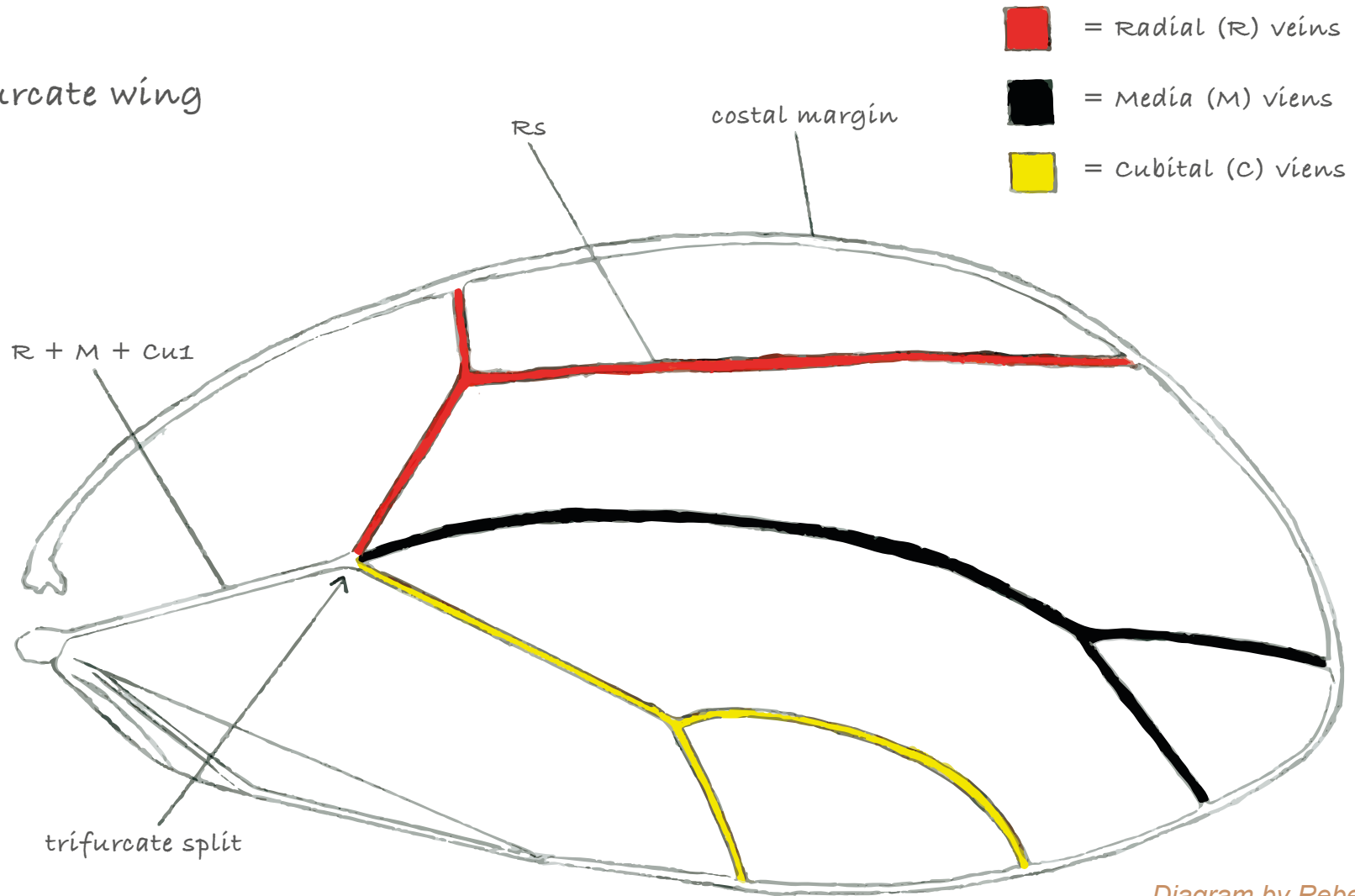


Diagram by Rebecca Cairns

4. Vein Rs reaching costal margin

Is it...

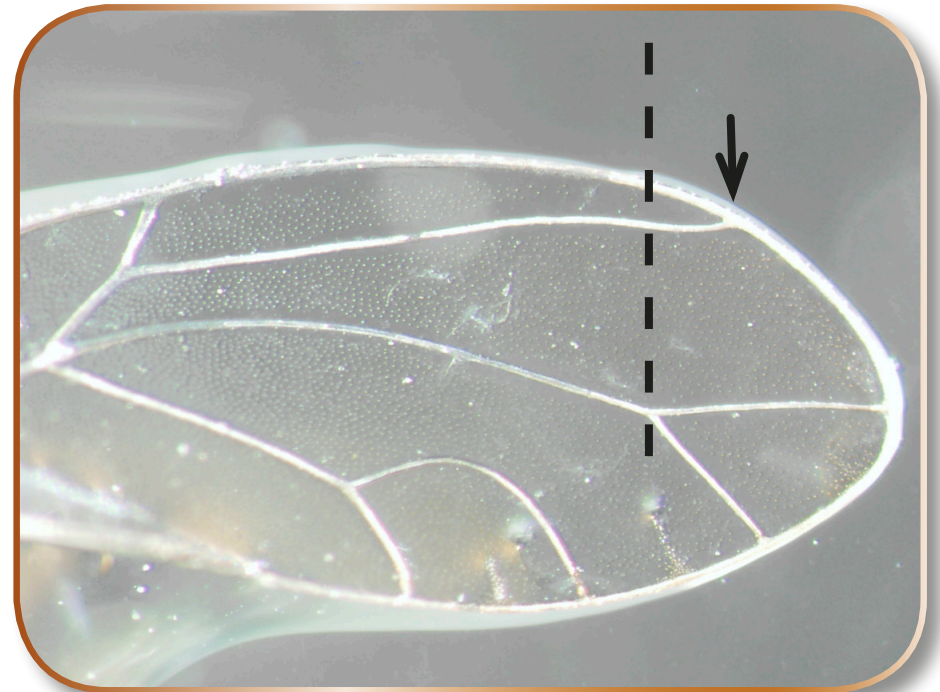
a. Vein Rs reaching costal margin proximally of branch in vein M.

or

b. Vein Rs reaching costal margin distally of branch in vein M.



...Not of concern



...go to step 5

Colour



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5. Body colour

Is it...

a. Body colour orange, reddish, brown or black; **or** forewings distinctly yellow; **or** abdominal venter conspicuously pale.

or

b. Body colour yellow or green. Forewings colourless or only faintly yellow.



...Not of concern



...go to step 6

Size



This graphic (created by Sylvia Breslin) is derived from the cover image supplied and copyrighted by David Ouvrard .

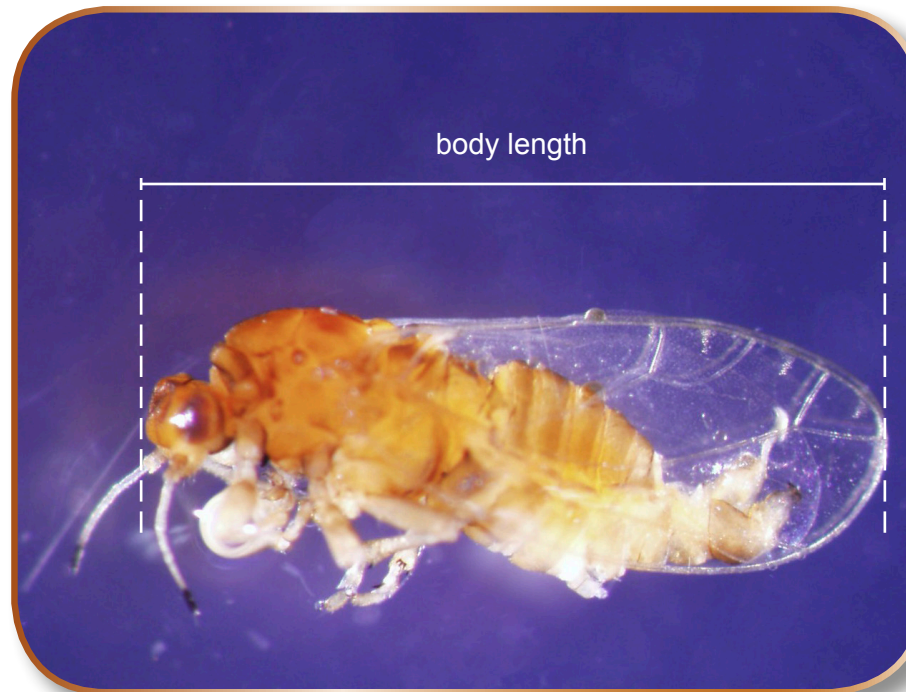
6. Body length

Is it...

a. A larger species: Length of males 2.86 – 3.38mm, females 3.00 – 3.71mm.

or

b. A smaller species: Length of males 2.57 – 3.10mm, females 2.71 – 3.10mm.



...Not of concern

...go to step 7

T. apicalis

T. anthrisci

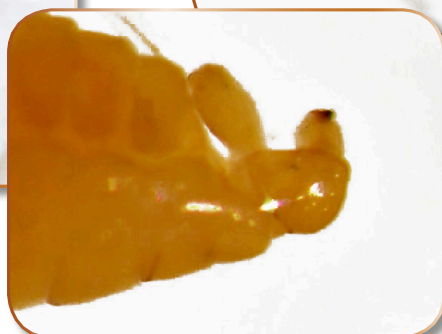
female terminalia from side



antenna



female terminalia from below



male terminalia from side

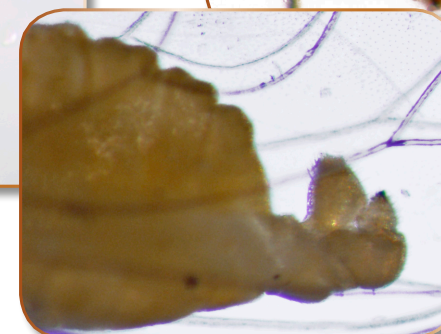
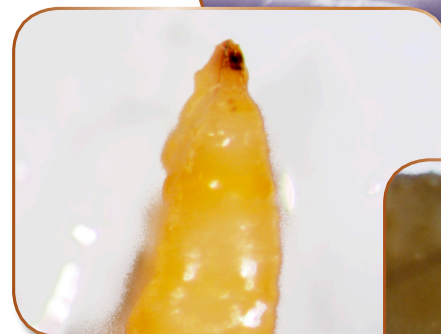
female terminalia from side



antenna



female terminalia from below



male terminalia from side

7. Male parameres

Is it...

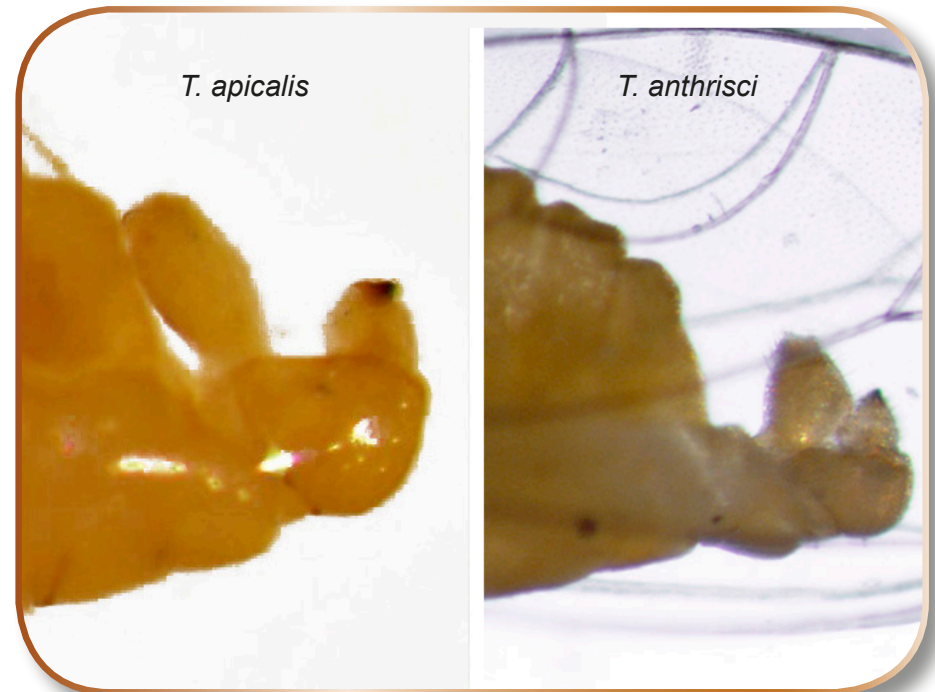
a. Male parameres are long, slender and pointed towards body.

or

b. Male parameres short and broad, with a small dark projection.



...Not of concern



...Possible *T. apicalis*, *T. anthrisci*

Forewing

Trifurcate wing

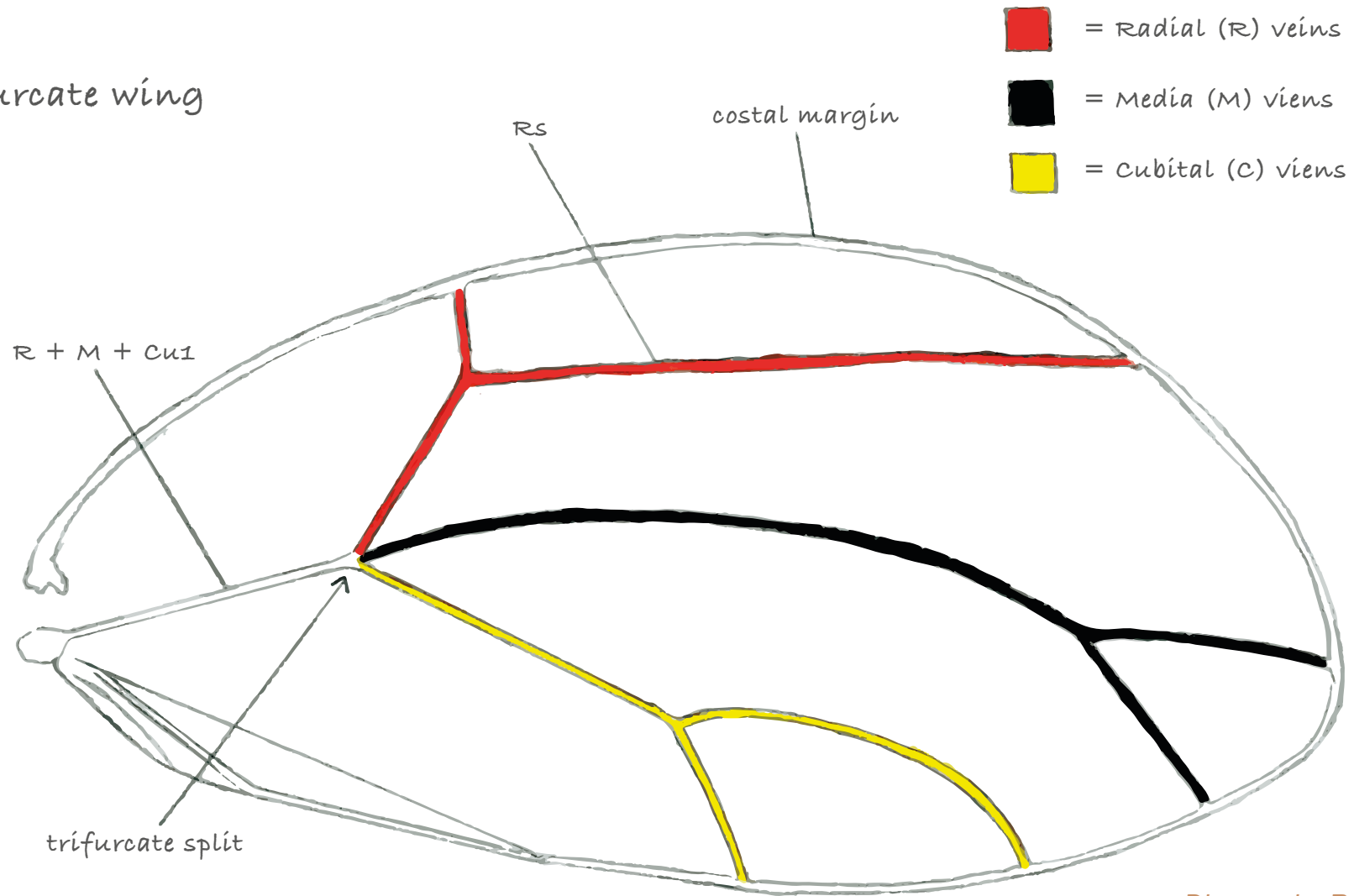


Diagram by Rebecca Cairns

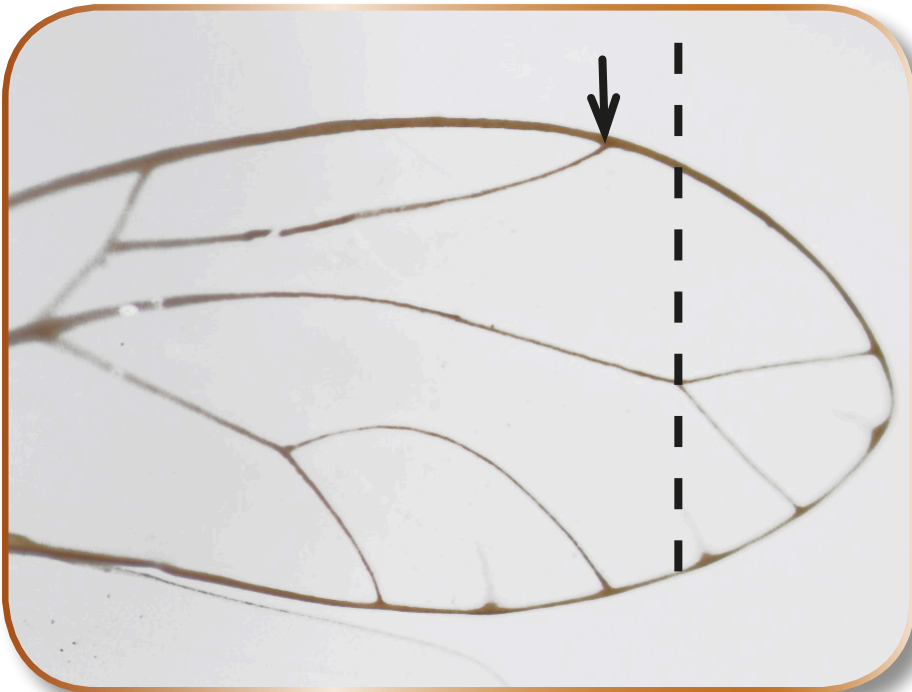
8. Vein Rs reaching costal margin

Is it...

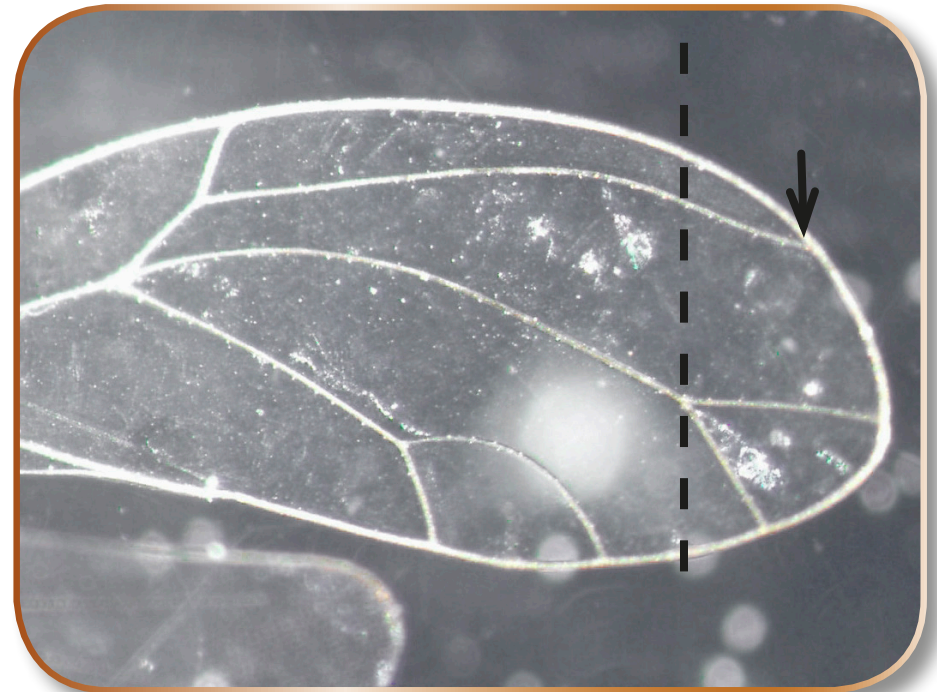
a. Vein Rs reaching costal margin proximally of branch in vein M.

or

b. Vein Rs reaching costal margin distally of branch in vein M.



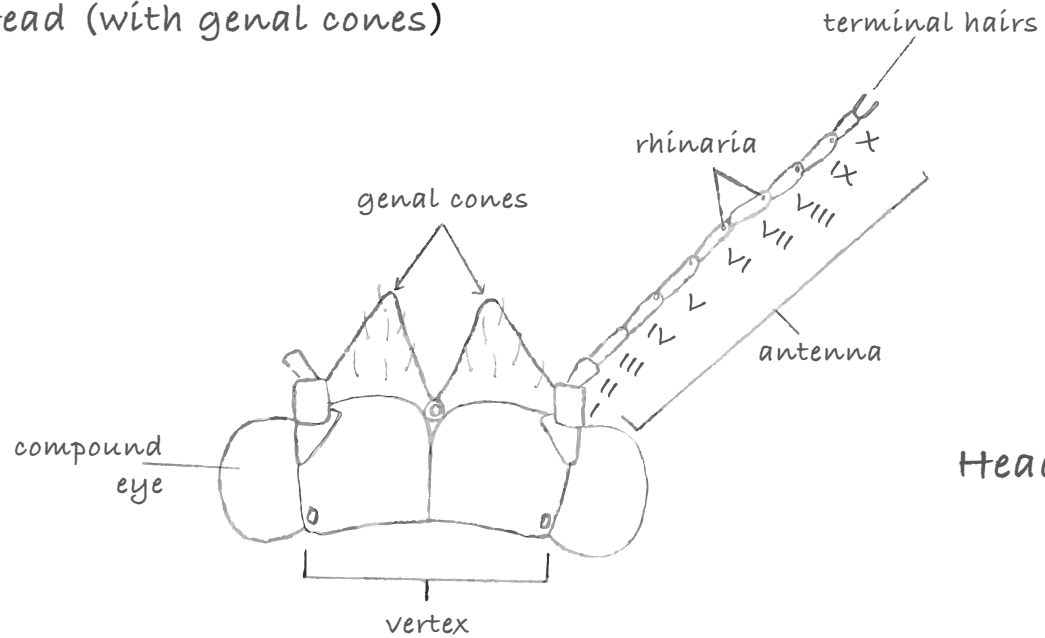
...Not of concern



...Go to step 9

Head

Head (with genal cones)



Head (without genal cones)

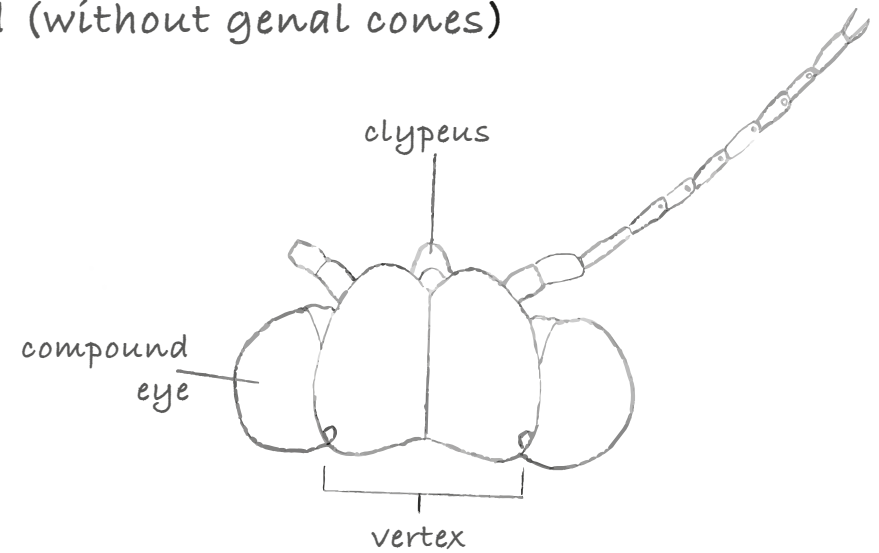


Diagram by Rebecca Cairns

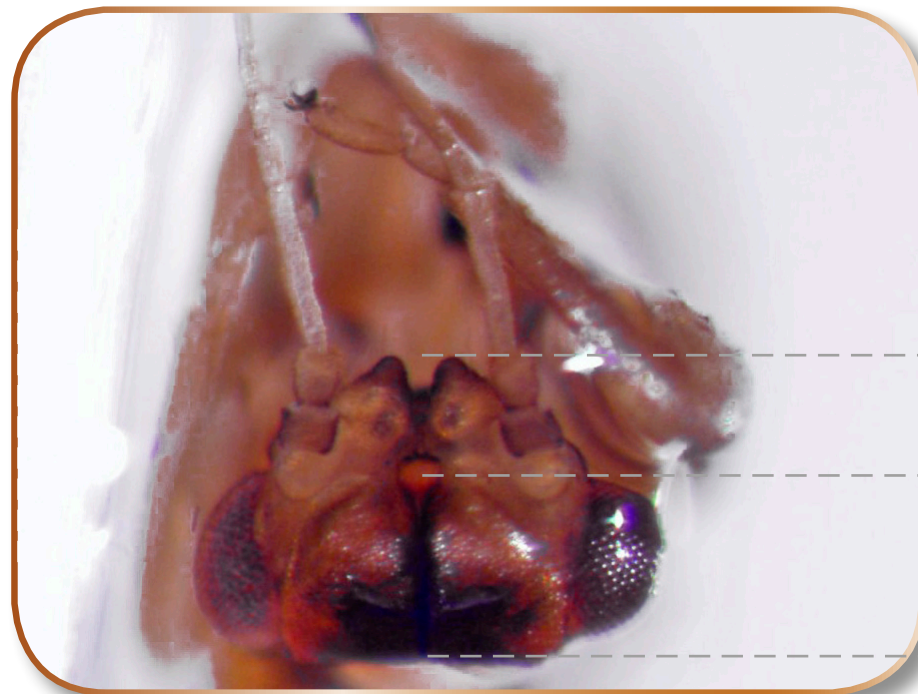
9. Genal cones

Is it...

a. Genal cones longer than half vertex length along midline.

or

b. Genal cones shorter than half vertex length along midline.



Genal cone length

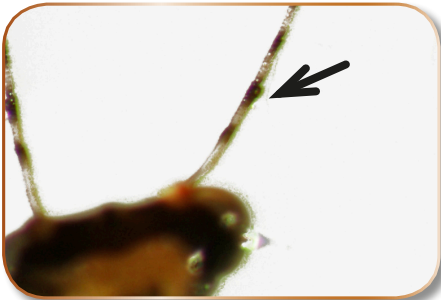
Vertex length

...Not of concern

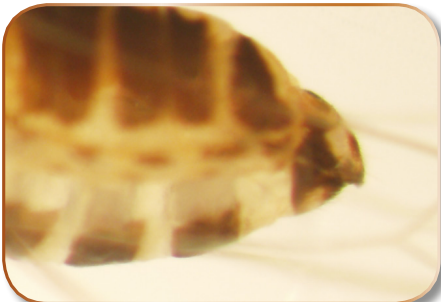
...Go to step 10

B. cockerelli

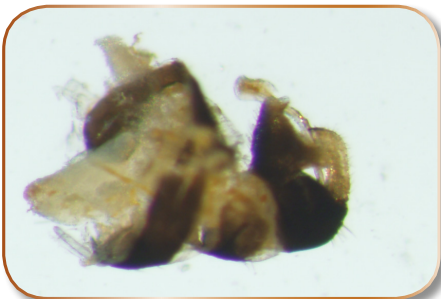
disc-shaped rhinarium



female terminalia from side

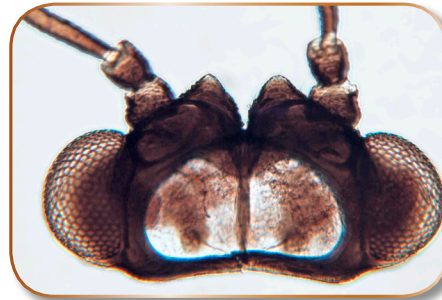


male terminalia from side

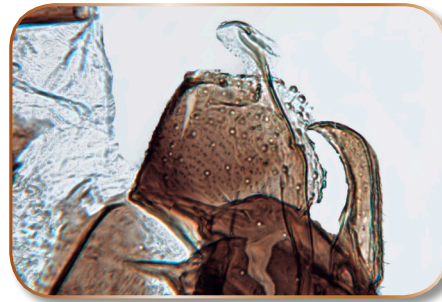


B. nigricornis

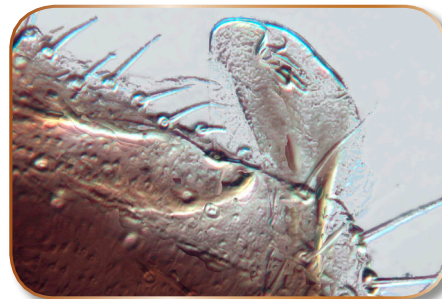
genal cones



male terminalia



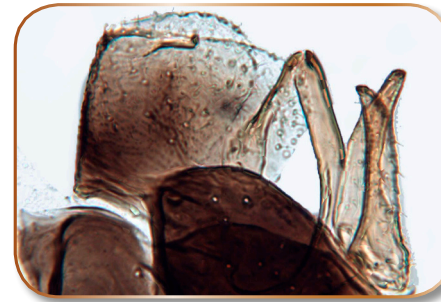
aedeagus



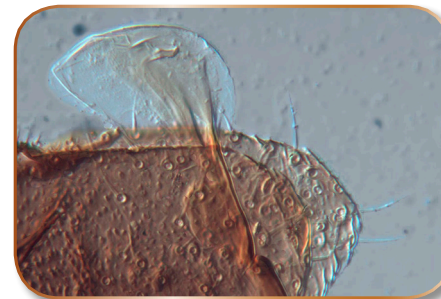
B. trigonica

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male terminalia



aedeagus

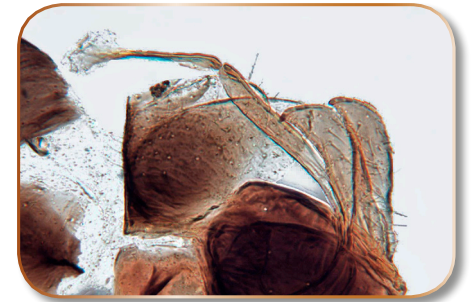


B. tremblayi

genal cones



male terminalia



aedeagus



10. Antennal segments

Is it...

a. 4–8 light basally, dark apically. Disk-shaped rhinarium on antennal segment 4.

or

b. Entirely dark, or segments 4 – 8 uniformly darkening toward apex. No disk shaped rhinarium on antennal segment 4.



...Possible *B. cockerelli*



...Possible *B. nigricornis*; *B. trigonica*;
B. tremblayi

Other useful references

Psylloidea (Homoptera) of Fennoscandia and Denmark, by F. Ossiannilsson

Royal Entomological Society Handbook – Vol 2, Part 5(a), Homoptera Psylloidea, by I.D. Hodkinson & I.M. White

Burckhardt D. & Freuler J. (2000). Jumping plant-lice (Hemiptera, Psylloidea) from sticky traps in carrot fields in Valais, Switzerland.

Burckhardt, D. (1986). Taxonomy and host plant relationships of the *Trioza apicalis* Förster complex (Hemiptera, Homoptera: Triozidae). Entomologica Scandinavica, 16(4), 415-432.

Ouvrard, D., & Burckhardt, D. (2012). First record of the onion psyllid *Bactericera tremblayi* (Wagner, 1961) in France (Insecta: Hemiptera: Sternorrhyncha: Psylloidea), new symptoms on leek crops and reassessment of the *B. nigricornis*-group distribution. EPPO Bulletin, 42(3), 585-590. doi:10.1111/epp.12005



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