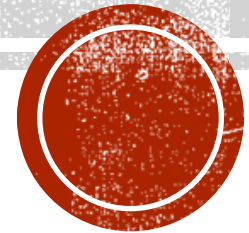


EASY IDENTIFICATION GUIDE FOR THE IDENTIFICATION OF *CULICOIDES* MIDGES

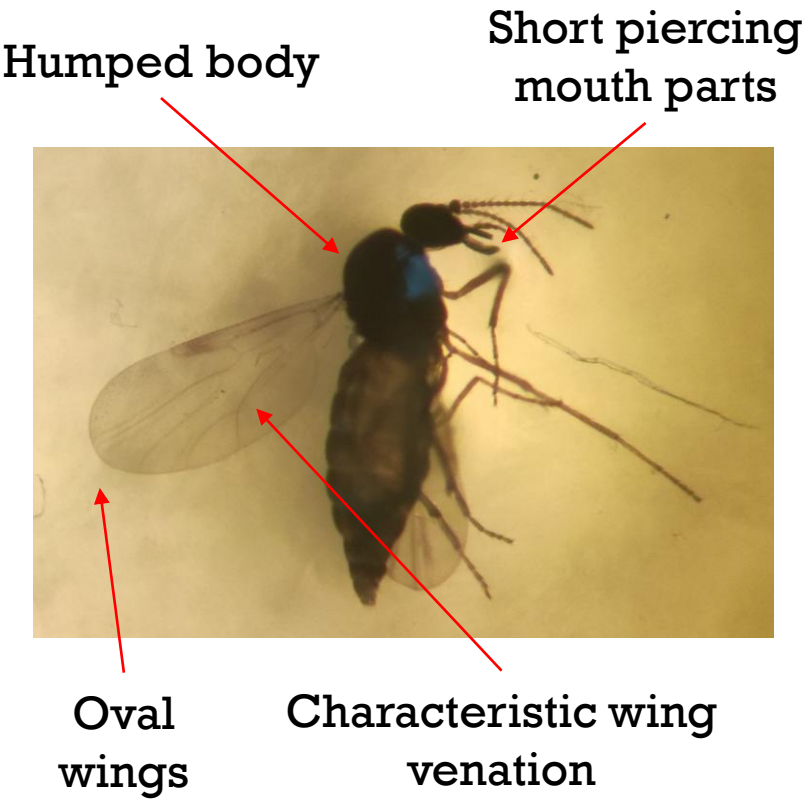
Angela Valcarcel, Elsie Isiye, Thomas Curran, David O'Neill, Theo De Waal, Aidan O'Hanlon, James O'Shaughnessy, Gerald Barry, Nicole Keohane McCarthy, Audrey Jenkinson, Akke Vellinga, Alan Johnson, Sarah Costello, Damien Barrett, Tim Ashmore, Bruce Thompson, Nick Berry and Denise O'Meara and Annetta Zintl



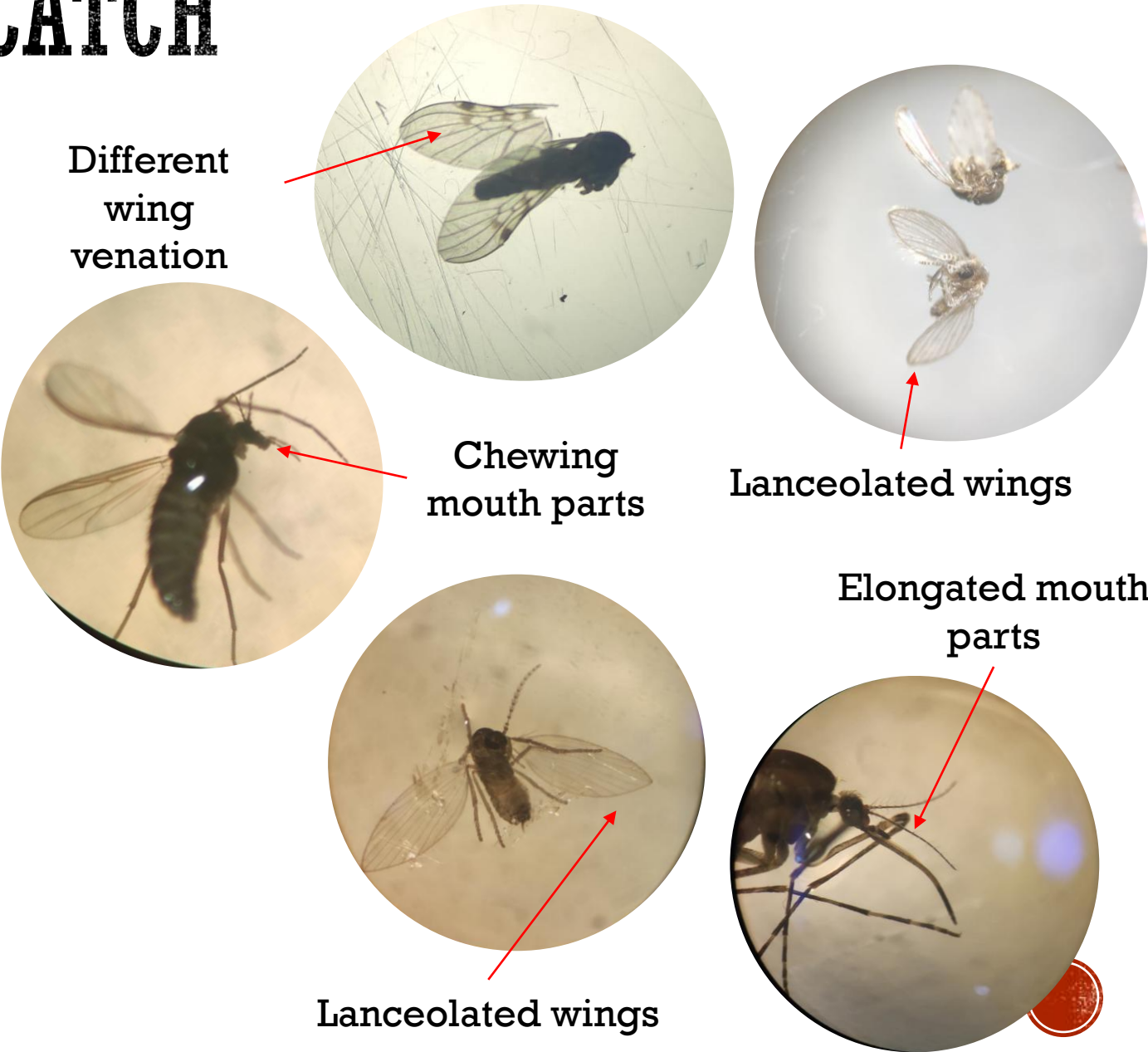
SORTING OUT THE BY-CATCH

By-catch

Culicoides midge



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SORTING OUT THE BY-CATCH – MOUTH PARTS

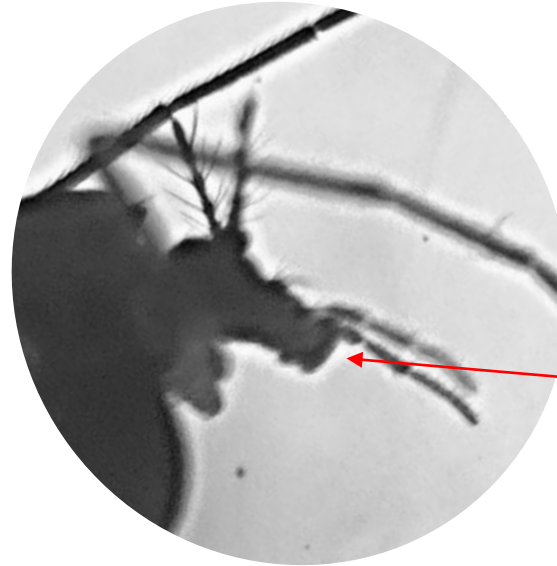
Culicoides midge

Short piercing
mouth parts

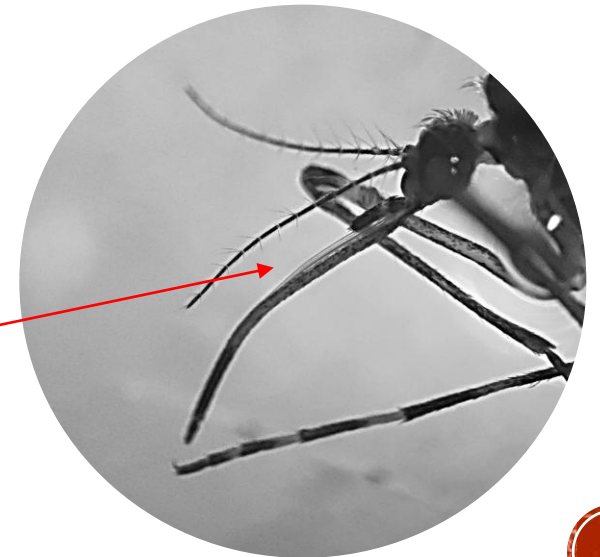


By-catch

Chewing
mouth parts



Elongated mouth
parts



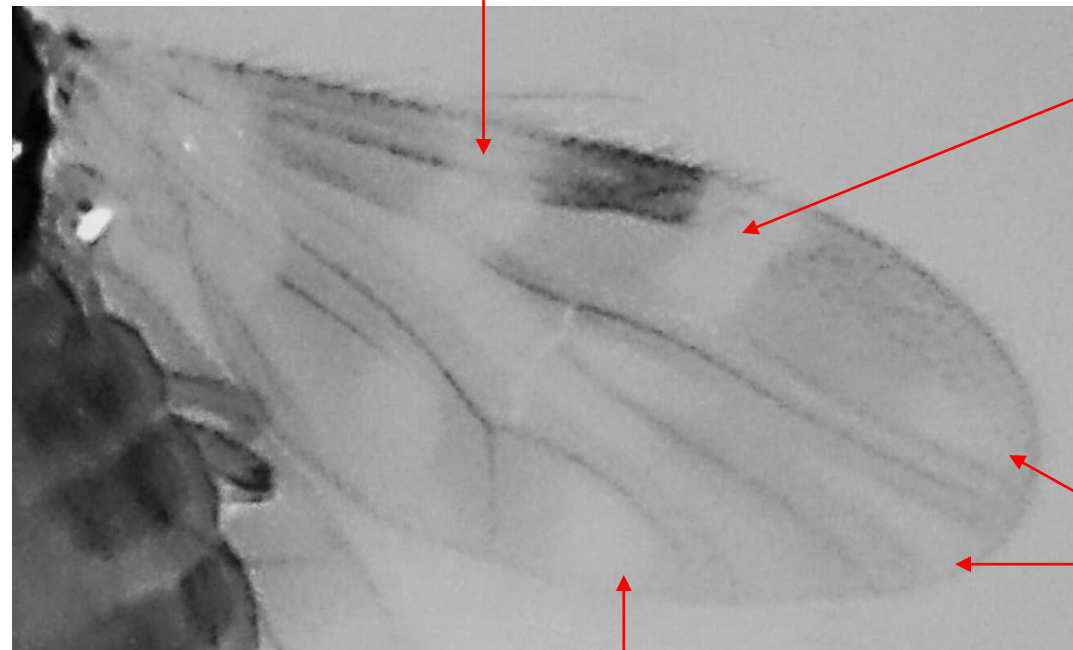
IDENTIFYING *CULICOIDES SPP*

- Obsoletus group
- Pulicaris group
- *Culicoides nubeculosus*
- *Culicoides impunctatus*
- *Culicoides festivipennis*
- *Culicoides salinarius*
- *Culicoides circumscriptus*
- *Culicoides imicola* (absent from Ireland)
- Other



THE *CULICOIDES* OBSOLETUS GROUP

- Small body size
(1.5 – 2 mm)



Pale band

Pale elongated spot

Faint pale spots at the
tips (undefined)

Pale cell

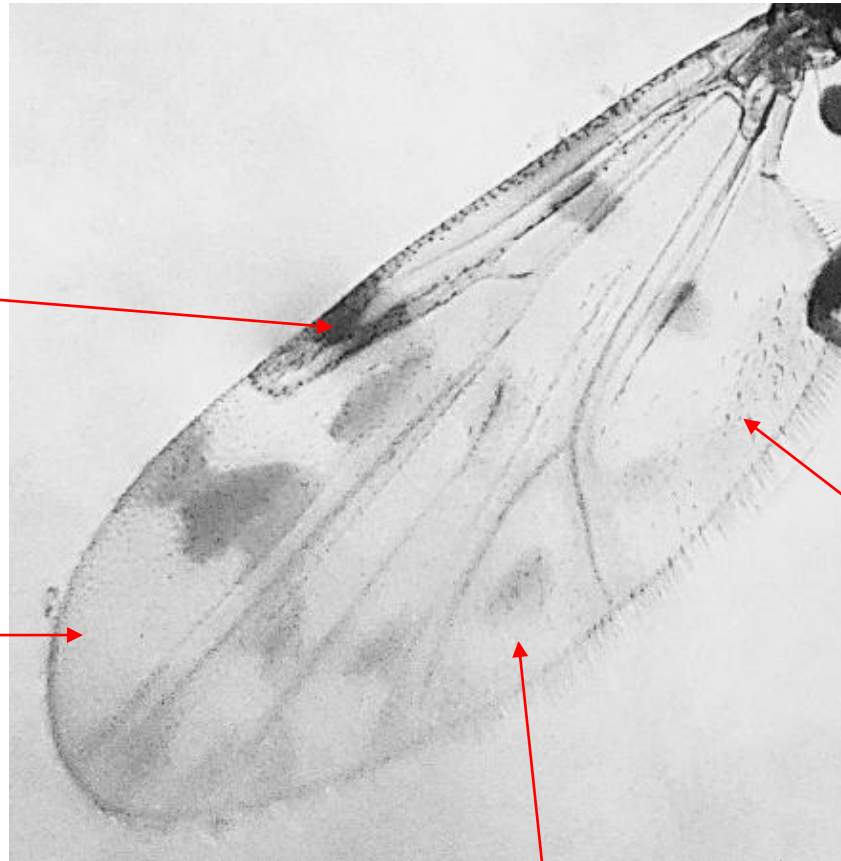


THE *CULICOIDES* PULICARIS GROUP

- Large body size
(2.5 – 3 mm)

Well-defined
darker spot

Big pale
spot



Pale cell with a dark dot on top
and spot or banana-shaped
dark band at the bottom*

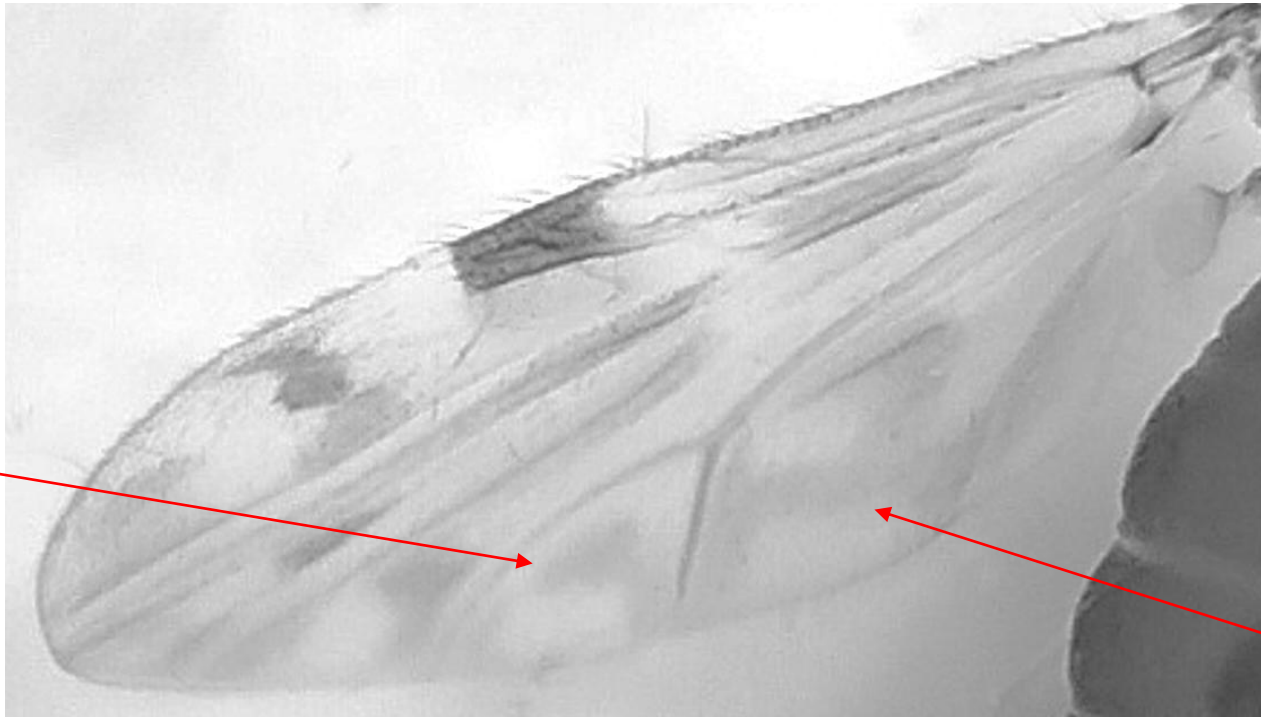
* this pigmentation may be more or less
defined



CULICOIDES NUBECULOSUS

- Very large body size (3.5 mm)
- Similar to Pulicaris group but...

Pale cell
with “<”
shaped spot



Pale cell with
distinctive dark
pattern



CULICOIDES IMPUNCTATUS

- Medium body size
(2 mm)
- Similar to Pulicaris group but...

Pale cell
without dark
dot/spot

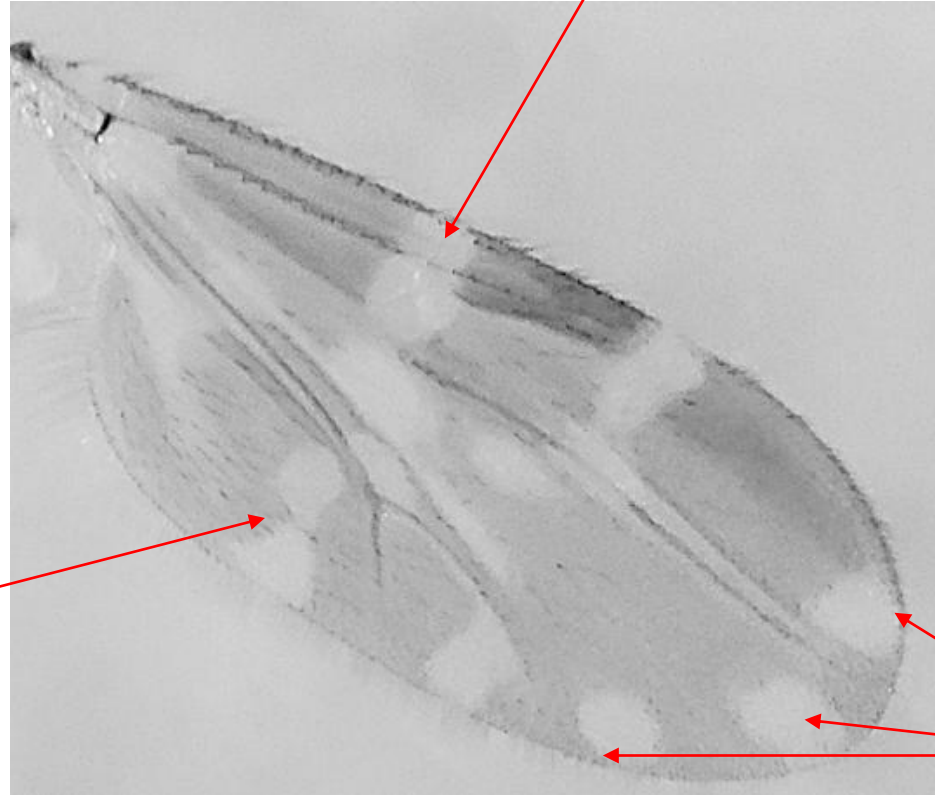


CULICOIDES FESTIVIPENNIS

- Medium body size
(2 mm)

Small round
pale dot

2 small round pale
dots well defined



Small round pale
dots at the tips



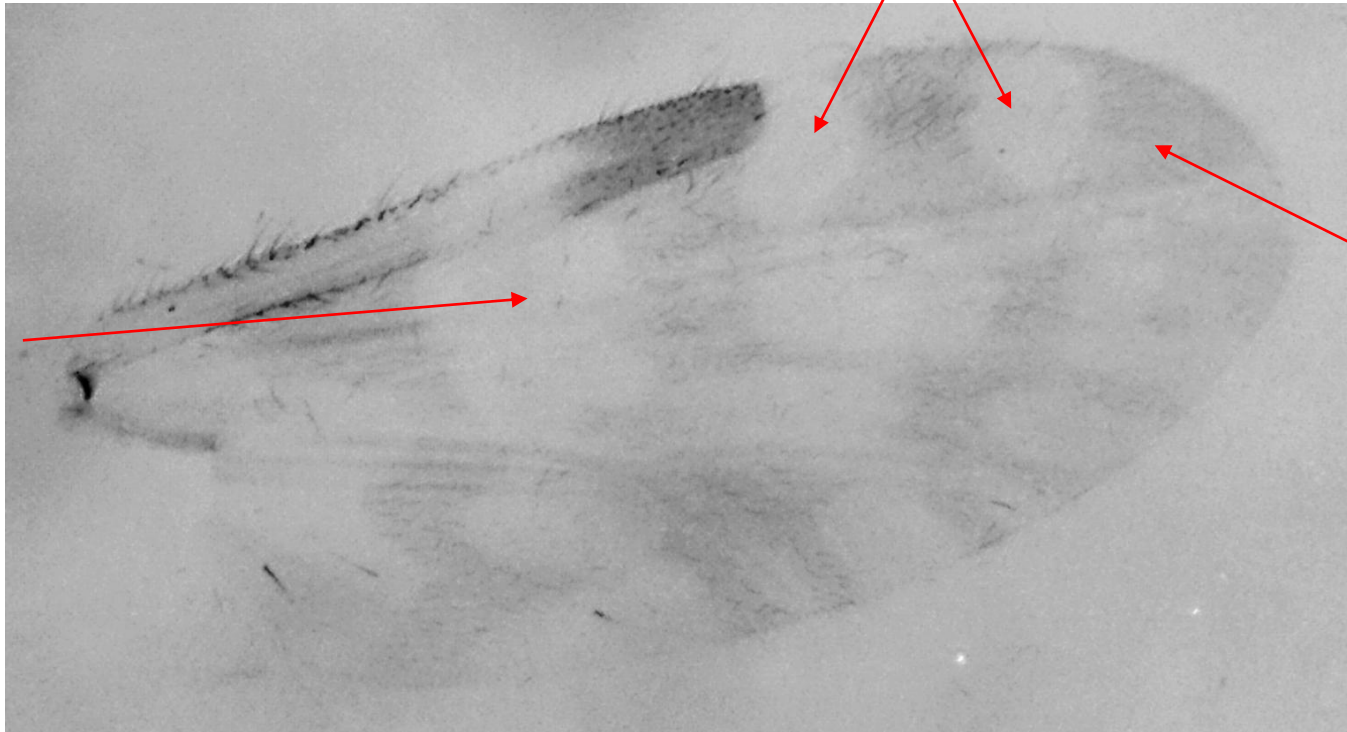
CULICOIDES SALINARIUS

- Medium body size
(2 mm)



Two big round spots

Big round pale dot



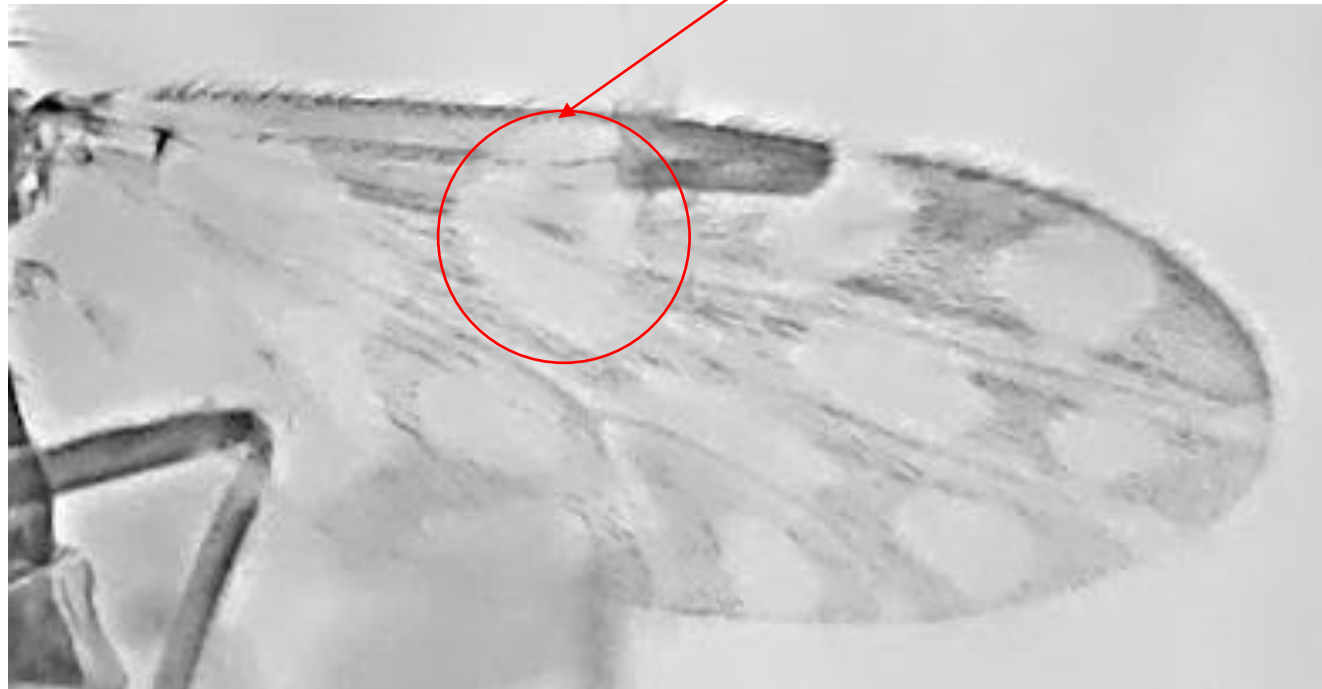
No pale dots at the tips



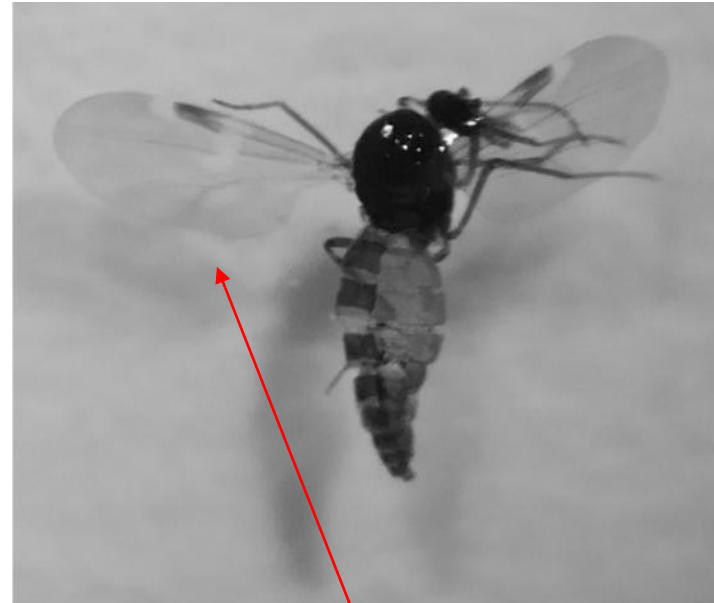
CULICOIDES CIRCUMSCRIPTUS

- Medium body size
(2 mm)

Concentric circles,
pale on the outside
and dark spot on
the inside



'OTHER' *CULICOIDES* SPP



Absence of wing pattern
or very few spots

Need of other
morphological traits or
molecular techniques



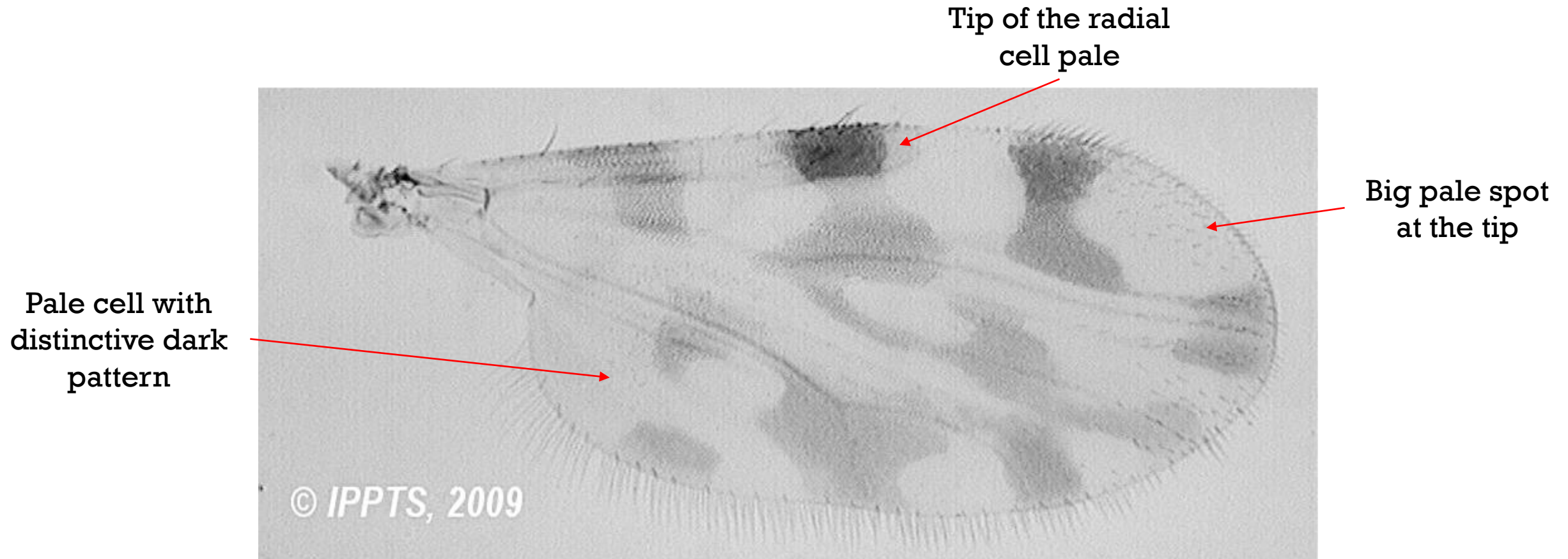
CULICOIDES IMICOLA

NB

C. imicola has not been identified in Ireland to date but because it is the main vector for Bluetongue virus it has been included in this guide



CULICOIDES IMICOLA



ACKNOWLEDGEMENTS

We would like to thank the Department for Agriculture, Food and the Marine for their financial support. Great thanks also goes to colleagues who helped to trap midges for this project and to landowners and farm managers for giving us access to their land.

