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Intended use of resource / data

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**Title of resource**

GN_02: Key characteristics of *Culicoides* biting midges

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**Description**

Distinguishing *Culicoides* from other Ceratopogonids. Protocol from the Gnatwork Bangladesh workshop, September 3-6th 2018.

**Intended use**

Scientific research use and training purposes.

**Restrictions on use**



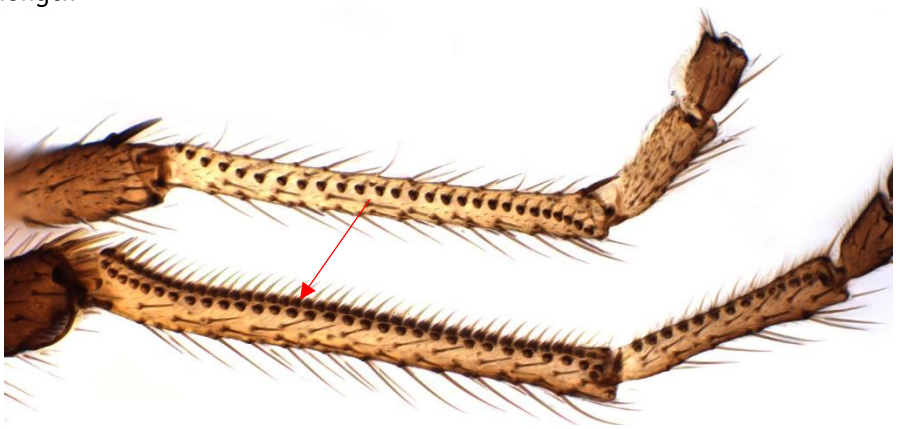
**Resource history**

N/A

# GN_02: Key characteristics of *Culicoides* biting midges

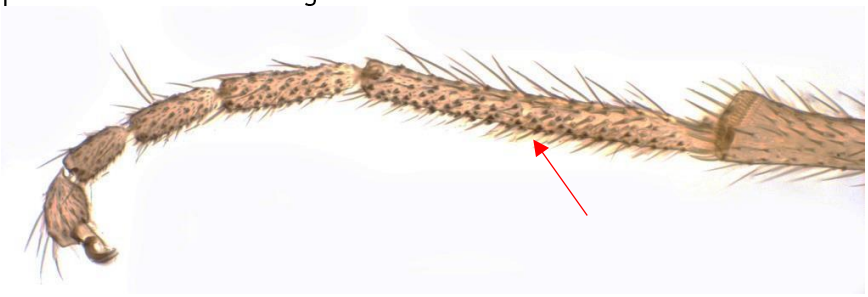
**Distinguishing *Culicoides* from other Ceratopogonids**

1. *Culicoides* do not have the hind first tarsomere with a row of evenly-spaced palisade setae of even length



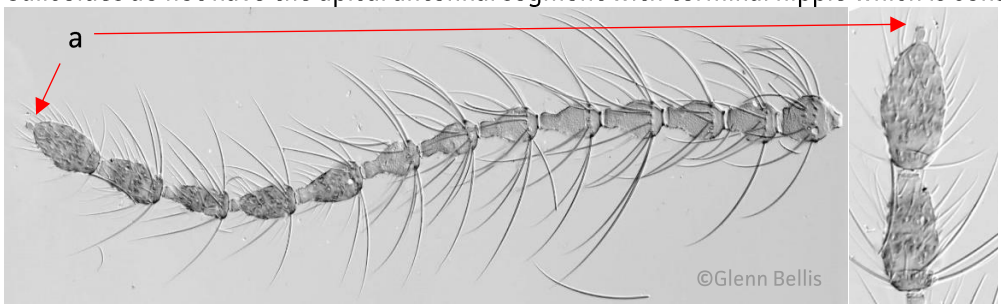
Non-*Culicoides* with evenly-spaced palisade setae of even length
Source: Glenn Bellis

*Culicoides* do have the hind first tarsomere with scattered setae and without a row of evenly spaced palisade setae of even length



*Culicoides* with non-evenly-spaced palisade setae
Source: Glenn Bellis

2. *Culicoides* do not have the apical antennal segment with terminal nipple which is constricted basally

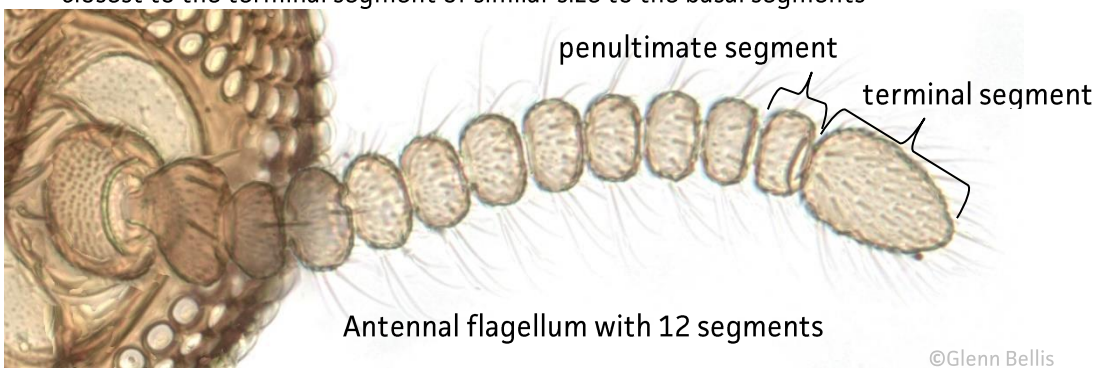



Non-*Culicoides* with terminal nipple
Source: Glenn Bellis

*Culicoides* do have the apical antennal segment rounded or tapered but without a terminal nipple

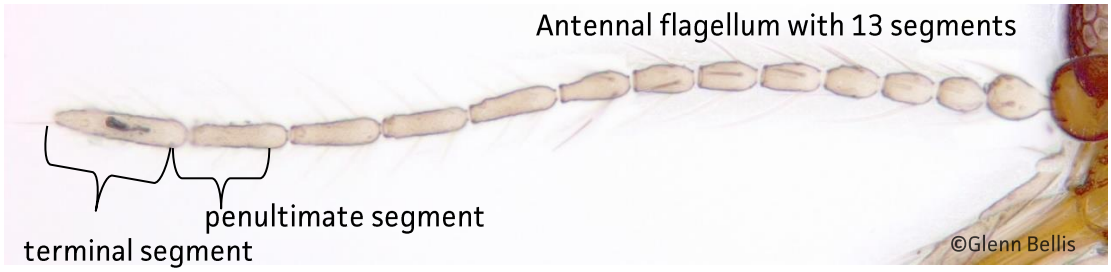

*Culicoides* without terminal nipple
Source: Glenn Bellis

3. *Culicoides* do not have the female antennal flagella with less than 13 segments, or have the four closest to the terminal segment of similar size to the basal segments



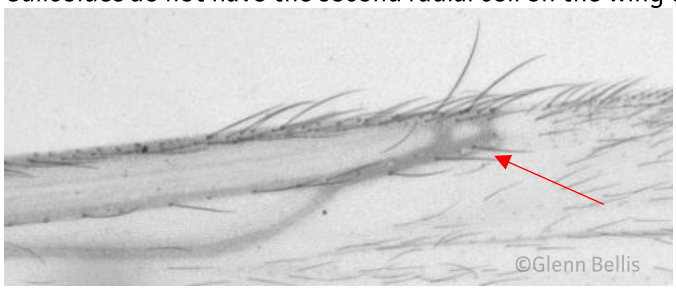

Non-*Culicoides* female antennal flagella
Source: Glenn Bellis

*Culicoides* do have the female antennal flagella with 13 segments and the four closest to the terminal segment are each longer than the 8 basal segments



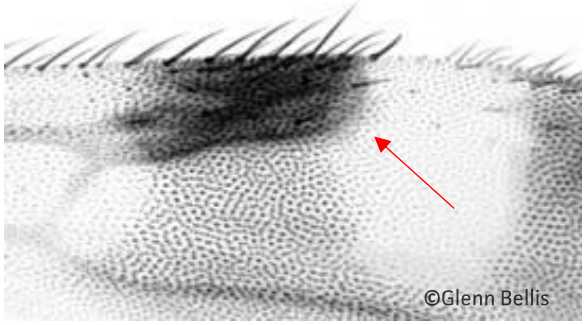

*Culicoides* female antennal flagella
Source: Glenn Bellis

4. *Culicoides* do not have the second radial cell on the wing truncate apically



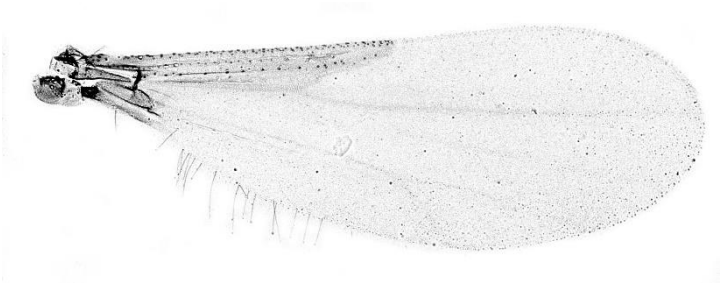

Non-*Culicoides* wing
Source: Glenn Bellis

*Culicoides* do have the second radial cell on the wing rounded apically




*Culicoides* wing
Source: Glenn Bellis

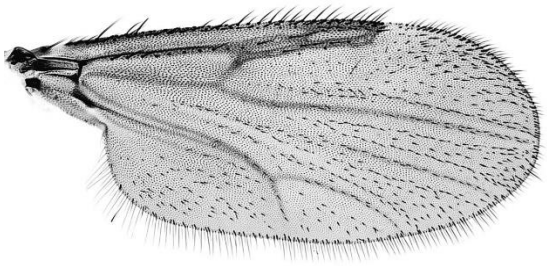
5. *Culicoides* do not have entirely transparent wings

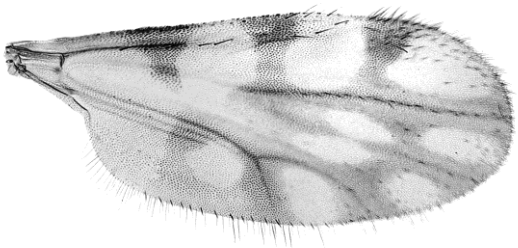


Non-*Culicoides* wing
Source: Glenn Bellis



*Culicoides* do have grey wings, most species also have pale patches against the grey background





*Culicoides* wings
Source: Glenn Bellis